

THE IMPORTANCE OF COUNTRY OF ORIGIN IN PURCHASING INDUSTRIAL PRODUCTS: THE CASE OF THE VALVES INDUSTRY IN IRAN

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1 Abstract

Country of Origin (COO) is an extrinsic cue, often used to judge the quality of foreign products. Its effects have remained relatively unexplored in the context of industrial marketing. Our research integrates the industrial buying behavior and COO literature, using conjoint analysis as the research method. Respondents were the key DMU members of Iranian companies that purchase steam valves. Our findings, besides confirming the insightful use of conjoint analysis in a B2B context, evaluate the relative importance of COO effects in preference evaluation for industrial buyers, indicating COO has an average relative importance of 24%, Brand 31.5%, Price 21%, Reputation of retailer 13.5%, and Guarantee 10% in this case. This has significant implications for deciding on forming joint ventures, as well as for market segmentation, product positioning, and advertising strategies for both international and domestic industrial marketing managers.

Keywords: B2B, Business-to-business marketing; Industrial buying behavior, Extrinsic cues; Country of Origin(COO); Supplier Selection Criteria; Iran.

1 Introduction

Extrinsic cues, such as brand name and country of origin, affect the way buyers perceive products (Ahmed & Astous, 1995). Because of the increasing globalization and use of the internet, a greater exposure to COO cues exists. Country of origin and its effect on consumer behavior is one of the most popular areas of research in international marketing (Bradley, 2002), but research efforts in the industrial context remain relatively modest (Dzever & Quester, 1999). The question arises as to whether and to what extent industrial buyers, who according to Bendixen et al. (2004, p.371) “are rational trained professionals and normally operate within buying centers”, can be influenced by country of origin images.

Many researchers, such as Zain & Yasin (1997) indicate that studying the importance of country of origin has several implications for international and domestic marketing strategy, e.g. marketers need to know how customers react differently to a foreign branded product such as a LG TV made in China as opposed to a LG TV made in Korea, and how their reactions change if respondents are also given information about prices, guarantee and other attributes of the alternatives.

To better show the importance of country of origin, we cite the suggestion of Baker& Currie (1993) that country of origin should be considered a fifth element of the marketing mix besides product, price, promotion and distribution. Verlegh&Steenkamp (1999) argue that country of origin is not only a cognitive cue for product quality, but also relates to emotions, identity, pride and autobiographical memories and is not “*just another*” cue. Perhaps that is why such a large body of research exists on country of origin.

This study is unique in several ways. First, most country of origin studies have been done for developed or newly developed countries; a few include developing countries as either the main population or the sourcing country, such as Lebanon (Ahmed et al., 2010), Bangladesh (Chowdhury, 2010), Ghana (Opoku&Akorli, 2009), Malaysia (Ghazali et al., 2008), Vietnam (Speece& Nguyen, 2005), Nigeria (Okechuku & Vincent, 1999), and Uzbekistan (Zain&Yasin, 1997). There are very few studies of middle eastern countries which have been dramatically targeted by international companies in recent years for their oil resources. Secondly, studies of industrial products are scarce; our study is unique for its industrial context, integrating the discussion of the COO construct from the field of international marketing with supplier selection from the field of industrial marketing. Thirdly, our study uses conjoint analysis for examining the joint effects of different variables, rather unusual in the B2B context.

1. Theoretical Background

2.1 COO effects

Buyers evaluate products based on their assessment of product *cues*, which are either *intrinsic*, i.e. inherent in physical composition such as taste and design; or *extrinsic*, i.e. otherwise related to the product, such as brand name, price, and country of origin (Ahmed &d’Astous, 1995). Ahmed &d’Astous comment that country of origin is an extrinsic information cue allowing buyers to make inferences about intrinsic value. The effect of COO is the impact that perceptions about a country have on evaluations of that country’s products (Nebenzahl et al., 1997)

In recent years, arguments have been made doubting the prevalence of a COO effect (Samiee, 1994), but empirical evidence shows that the effects persist (See Ahmed et al., 2010, Ahmed et al., 2002B, Ahmed &d’Astous, 2008, Chowdhury, 2010, and Liu & Johnson, 2005). Ahmed &d’Astous (1995) and Chetty et al. (1999) note that because of the ungeneralizability of previous results, COO needs to be examined on a product-by-product basis.

There are a substantial number of studies on COO effects, most of them supporting the significant effect of COO, and several meta-analyses of the COO literature have been carried out (See Al-Sulaiti& Baker, 1998;Chéron&Propeck, 1997; Dinnie, 2004;Josiassen&Harzing, 2008; and Verlegh&Steenkamp, 1999). Ahmed et al. (2002A, p.389) note that “COO effects on product evaluations have been studied extensively and it is now a mature research topic.”Josiassen&Harzing(2008) argue that COO is still a relevant and viable area of research, but the researcher need to address several critical challenges.

What we found is that in spite of so many studies in the COO literature, there are some important shortcomings as listed below, which this study attempts to redress.

1. There is little research regarding how strong the COO effect is in the presence of other product attributes.
2. Most early studies used only a single cue.
3. There area limited number of studies in the *industrial* area; and even those few did not consider industrial products and the basics of industrial buying behavior such as the customers' DMU.

Although many studies suggest that COO affects product evaluations, little is known about how strong the effect is in the presence of other product attributes (Okechuku, 1994). Only a few studies have addressed this issue (See group1 in Table 1).

A second shortcoming of previous research cited by many authors such as Ahmed et al. (2002A), Ahmed & d'Astous (1995), and Srinivasan et al. (2004) is the issue of methodology. Most early studies used only a single cue, in which COO was the only information provided to respondents. Focus on COO as an isolated information cue raises demand bias and serious external validity concerns (Srinivasan et al., 2004). Other researchers doing multi-cue studies used several different methodologies, which limits comparison of the various findings. To overcome both shortcomings, *conjoint (trade-off) analysis* can be used. As Ahmed & d'Astous (1995) and Klenosky et al. (1996) point out, although using this method is proposed in the literature, few studies have followed this advice; some exceptions include Ahmed et al. (2004), Ahmed & d'Astous (1995), Klenosky et al. (1996), Okechuku & Vincent (1999), Okechuku (1994), Opoku&Akorli (2009), Speece& Nguyen (2005), and Veale & Quester (2009) (See group1 in Table 1). To illustrate the insight that conjoint analysis provides, Okechuku (1994) has identified the way in which single cue studies over-emphasize the importance of COO.

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Group 1 in Table 1 shows a series of papers studying COO by doing conjoint analysis. A study by Ahmed et al. (2004) examines the influence of COO relative to other product attributes in consumers' evaluation of coffee and bread, using conjoint analysis. They conclude that in the presence of price and brand, the impact of COO is weak and brand becomes the determinant factor. Klenosky et al. (1996) studied the joint effects of COO information, price-discount level and advertising intensity level, concluding that Czech consumers were most sensitive to a product's COO. Okechuku (1994) used conjoint analysis to investigate the relative importance of COO in the United States, Canada, Germany and the Netherlands. The results showed that the average importance of COO was 22% for TV sets. Speece& Nguyen (2005) studying the COO effect, designed a conjoint study with five factors: brand, price, shape, language of manual, and sound function for TVs. They believed that brand cannot be separated from COO, and considered them to be bound together, so treat Japanese/Korean brands as Japanese/Korean COO, and brand (which also accounts for COO) came out to be the most important feature with 68 percent of importance.

The study done by Opoku&Akorli, 2009 in Ghana using conjoint analysis concluded that country of origin is more important than price and other product attributes, brand, quality, and taste, for rice, clothing and textiles. The study of Veale & Quester, 2009 shows that even for a product as low involvement as cheese, price was clearly found to be the most important

attribute contributing to perception of quality and COO also had a substantial influence on respondents' evaluation making them to conclude that reliance on the extrinsic cues remain extremely robust even when all intrinsic cues (through sensory experience) were available for respondent evaluation. Ahmed & d'Astous (1995), comparing the behavior of household and organizational buyers, where fax machines and computer systems were chosen for organizational buyers, concluded that COO affects the perceptions of both.

In a very useful conjoint experiment done by Bendixen et al. (2004), the importance of the brand relative to other purchase criteria was studied, an approach similar to that which we have adopted to evaluate the importance of COO (See group 3 in Table 1). The subjects were DMU members of industrial companies in South Africa that purchased electrical equipment. Attributes were brand, price, delivery time, technology, and the lead-time for spares. Results suggest that price and delivery were more important than brand equity. This is one of the rare studies of perceptions across DMU members, but does not include COO.

The third shortcoming, frequently cited in the literature (e.g. by Chetty et al., 1999 and Dzever & Quester, 1999), goes back to the little attention paid to COO effects within industrial marketing; however, some researchers have revealed COO effects in industrial contexts (See Bennett & Zhao, 2004; Bradley, 2001; Chetty et al., 1999; Dzever & Quester, 1999; Güdüm & Kavas, 1996; Kraft & Chung, 1992; and Quester et al., 2000). Nevertheless, the meta-analysis done by Verlegh & Steenkamp (1999) concludes that COO effect does not differ between industrial and consumer purchasing. Studies in industrial areas are not only low in number compared to consumer studies, but also, as Güdüm & Kavas (1996) state, most of these limited number of studies were criticized because consumer products were evaluated by businessmen (See group 2 in Table 1). Güdüm & Kavas (1996) tried to determine Turkish industrial buyers' attitudes towards national and foreign suppliers. Results indicate that Turkish industrial purchasing managers perceive German and Japanese suppliers more favorably than US and national suppliers on most of the marketing quality dimensions. In some other rare studies considering industrial products Quester et al. (2000), Chetty et al. (1999), and Dzever & Quester (1999) conducted studies for machine tools and component parts in New Zealand and Australia, New Zealand, and Australia respectively. They all concluded that COO effects do exist; however, they did not consider the industrial buying behavior context such as customers' DMU. Kraft & Chung (1992) from their previous studies concluded that country of origin is a major variable in organizational importers' evaluations of foreign suppliers and products. Bradley (2001) considered industrial products in the electrical and electronics industry. He found the country effect was to be weaker, dominated by the company effect, although there were also interaction effects. Bennett & Zhao (2004) considered the issue of quality and reliability when machine tool technology is transferred between suppliers and acquirers in countries with different levels of development, China and UK. They found that impressions about product quality and reliability can depend as much on perceptions about brands and country of origin as on data regarding performance and failures. Their study clearly showed the importance of country of origin effects on quality perceptions.

What makes the area more complex for our study is that for our frame of reference we did not find any studies that take into account all three issues simultaneously, i.e. investigating the relative importance of COO, using conjoint analysis as the methodology, within the context of industrial buying behavior.

2.2 *Supplier Selection Criteria*

In Supplier selection area the thorough literature reviews of Garfamy (2004) and Shahadat (2003) as well as the studies of Bendixen et al. (2004) and Petroni&Braglia (2000) are a good basis for our study. According to Garfamy (2004), each study used different choice criteria, acknowledged by Petroni&Braglia (2000) that vendor selection decisions vary according to the purchasing situation and the industrial seller must identify which attributes are important. Analyzing the available secondary data in the choice criteria literature, a large number of potentially applicable attributes were listed including Country of origin, price, brand name, guarantee, packing, reputation of retailer, on-time delivery, product range, and quality of supplier's catalogue and literature.

2. Methodology

As Bilkey&Nes (1982) point out, to avoid overestimating COO effects, other extrinsic information cues should be presented alongside COO. Conjoint analysis overcomes the problem by representing respondent choice as a multi-attribute judgment (Okechuku, 1994). Most important of all for B2B contexts, conjoint analysis, unlike most statistical procedures, does not require a large sample size (Nairn et al., 2004; and Auty, 1995).

2.3 *Selection of the field of experiment*

The setting used was the market for steam valves within the utilities industry. The chosen equipment is a pressure reducing valve, because it is purchased exclusively by industrial buyers; is widely used in a variety of industries; it is sufficiently costly that its purchase will require careful cognitive consideration; many competing domestic and foreign brands are available; and we have ready access to information in this industry. Most consulting engineers are familiar with such products, so we can consider them as a modified rebuy.(Robinson et al., 1967)

2.4 *Population*

The population consists of DMU members of companies in Iran involved in purchasing steam valves. They belong to a wide range of industries, including construction projects of large buildings, hospitals or factories, which need steam for heating purposes, and factories needing them for their production lines. The DMU for projects under construction are typically the consulting engineer, contractor, and project manager, whereas for operating factories it tends to be the technical manager, the buyer him/herself, and possibly the president. Construction projects represent most of the customers. Because of the major role of consulting engineers in the decision-making process, we have considered them as the main customer. Consulting engineers usually work in engineering consulting companies.

3.1 Sample

A complete list of Iranian engineering consulting companies was available in a volume of the Journal of Iran HVAC; this was used as our sampling frame. The sample of 50 named consulting engineers was selected by a simple random process. The sample size, according to Bendixen et al. (2004), is normally over 30 in conjoint studies.

3.2 Conjoint Analysis

The first step involves identifying the salient attributes and their levels (Malhotra & Birks, 2003); this is the most critical stage in a conjoint study (Auty, 1995), as explained below.

Derivation of variables, first stage of study

With industrial respondents who are not being paid for their participation, using four attributes is best, with Auty (1995) arguing that five should be the maximum. We used the suggestion of Naudé & Buttle (2000) that we can be sure of selecting the appropriate attributes by getting the respondents to generate the initial attributes themselves, and then selecting only the most common among them. Coming to the attributes Country of origin, price, brand name, guarantee, packing, reputation of retailer, on-time delivery, product range, and quality of supplier's catalogue and literature from the choice criteria literature now we need to shorten the list, so we carried out qualitative in-depth interviews (see Naudé & Buttle, 2000, and Nairn et al., 2004). Interviews were undertaken with five experts in the field of buying steam valves, in order to identify the attributes which were important to these experts. Respondents were the key role players, consulting engineers. They were asked to indicate the most important attributes, and were also asked about our list of attributes drawn from the supplier selection literature.

All the respondents indicated that brand, COO, price, guarantee, and reputation of retailer were important features when buying a steam valve. The resulting search model is shown in figure 1.

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Selection of levels of attributes

The number of attribute levels determines the number of stimuli to be evaluated by the respondents (Malhotra & Birks, 2003); this should be kept as low as possible in order to prevent fatigue in the respondents (Auty, 1995, and Malhotra & Birks, 2003). Auty (1995)

notes that three or four levels works well. The range of attribute levels should be somewhat greater than those in the marketplace but not so large as to have an impact on believability (Malhotra& Birks, 2003). As in study by Auty (1995), the levels were determined by the product's marketing managers, because of their familiarity with the products on offer in the market place. Table 2 shows the attributes COO, Brand, Price, Guarantee, and Reputation of retailer and their levels for our study.

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3.3 *Conjoint Analysis Experiment*

The second stage is constructing the stimuli, i.e. combinations of attribute levels (Malhotra& Birks, 2003) for presentation to respondents, and choosing between full profile or paired comparisons. In paired comparisons, respondents are asked to evaluate pairs of alternatives, while in the full profile method, a set of complete profiles of all attributes are evaluated (Nairn et al., 2004).The full-profile approach is more common (Malhotra& Birks, 2003). Auty (1995) suggests paired comparisons artificially isolate trade-off matrices. For greater realism and because fewer cards are needed, the full profile approach was adopted. A full factorial design entailed 540 combinations, but by special factorial design we decreased them to 25 profiles.

In the third stage we decide whether respondents should rate or rank the stimuli (Nairn et al., 2004). Malhotra& Birks (2003) indicate that rankings involve relative evaluations of the attribute levels, while in rating the judgments are typically made independently. Proponents of ranking data believe that such data accurately reflect the behavior of consumers in the marketplace, while advocates of rating data believe this is more convenient for the respondents (Malhotra& Birks, 2003). In ranking, respondents may simplify the task by considering only one or two of the total attributes; in rating inconsistencies are across product ratings because respondents do not have to look back to see how they rated a similar product earlier (Auty, 1995). Malhotra& Birks (2003) note that one criterion for choosing between the two methods should be acceptability to the respondent.

Rating scales are preferred by most commercial users, as also noted by Auty (1995), probably because of the greater design flexibility in terms of numbers of cards, and the relative simplicity of the task (Malhotra& Birks, 2003). We therefore decided to use rating.

3.4 *Questionnaire Construction*

The questionnaire was divided into two parts. The first part was for recording the results of conjoint analysis (See figure 2) and the second part consisted of four questions designed to determine the respondent's demographic characteristics, asking about age, gender, experience and education.

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3.5 *Validity*

As Figure 2 shows, we carefully explained to respondents how to complete the questionnaires, giving an example. As they were not familiar with filling in a conjoint questionnaire, we explained that some profiles may be hypothetical and do not exist in the real market, in which case they should just imagine how they would rate such a product if it did exist. As Auty (1995) suggested, because of the low number of industrial buyers, instead of piloting, we talked informally to respondents before designing the survey, and then went back to managers to refine the information. Another important way to increase the response rate was to include the logos of universities, Lulea University of Sweden and TarbiatModares University of Iran, and to indicate that the study was guided by international expert professors.

3.6 *Data Collection Details*

Data collection was via mail survey in which traditional paper questionnaires were delivered by fax and courier. Participants were first informed about the study by telephone. For companies located in Tehran, questionnaires were distributed and then collected after two days by the courier service, unless in our follow-up phone calls we agreed on another date. For companies outside Tehran, this task was done through fax. Of the 50 questionnaires, 37 were returned; of these, four were unusable due to errors respondents made in recording their conjoint analysis data.

4. **Results**

Data was analyzed using SPSS in terms of utility and importance. The utility or part-worth of an attribute is an indication of a respondent's preference for that attribute level (Nairn et al., 2004). The importance of a particular attribute is the percentage of the total decision ascribed to that attribute (Auty, 1995). Analysis was done at the aggregate level.

4.1 *Results*

Relative Importance of COO

Table 3 shows the profiles of respondents.

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All the respondents had more than 3 years of experience. More than sixty six percent had ten or more years experience in this field. Since all the consulting engineers had technical background and education, we didn't mention education level.

Table 4 shows the utilities for each level and the relative importance of each attribute. The best offering that can be constructed is the one that maximizes the utility score on each attribute: Country of origin to be Japan (0.51), brand to be SPIRAX (1.62), with the price of 200000 Tomans (1.2), with a very good reputation of retailer (0.93), and 10 years guarantee (0.52) results in an overall utility of 4.78.

Overall, the Brand was found to be the most important attribute, followed by Country of Origin, Price, Reputation of retailer, and Guarantee, respectively. Brand has a relative importance of 31.5%, COO of 24%, Price of 21%, Reputation of retailer of 13.5%, and Guarantee of 10%(See Figure 3). These weights are, of course, averages across respondents and may be more or less for individual respondents.

Respondents preferred the Japan to England, South Korea and Iran as the source country, regardless of the brand name, price or any other considerations. Japan tied for first place, ahead of England as preferred sources. Based on the part-worth utilities of the brands included in the conjoint profiles, respondents preferred the Spirax brand the most, followed by Jokwang and disliked Miyawakee, Kamrad, and Idea.

The part-worth function values for each attribute given in table 4 are represented in the graph in figure 4. The overall results for the attributes price and reputation are rational in that higher utility is achieved by the "better" level of each attribute. Surprisingly, the effect of guarantee was not linear, there being a dramatic difference according to whether the guarantee was for "5 years" or "10 years";even more surprisingly, respondents disliked the "5 years" guarantee more than the "2 years" one. The effect of reputation of retailer and price were basically linear.

For the Reputation, the difference in utility levels between "very good" and "fair" is only slightly more than that between "fair" and "you don't know it". A similar pattern to reputation of retailer is found with price with a more difference between levels.

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Assess the reliability and validity

Generally, the conjoint method appears to be reliable in an absolute sense (Reibsten et al., 1988). Among the several procedures for assessing the reliability and validity of conjoint analysis results (See Malhotra& Birks, 2003) we evaluated the goodness-of-fit by regression analysis on the dummy variable data, using SPSS. The extent to which responses are internally reliable is indicated in the R^2 scores (Auty, 1995). Auty suggested accepting R^2 of 0.65 to indicate a good fit where it is necessary to do so for reasons of sample size. R^2 was from 0.712 to 0.864 for respondents in our study, except for one respondent who was removed from the list, indicating a good fit.

5. Conclusion, Implications, Limitations and future research directions

The relative importances indicate that COO (24%) was given more significance than price (21%) but less than brand (31.5%), making COO the second most important attribute in product evaluation. Since customers make decisions based on a few attributes, it is interesting to note that the country of origin is between the two most important attributes in preference evaluation in steam valve category in Iran.

Compared to previous studies, the discrepancy in COO's importance may be due to the difference in product category, as reported by Wall et al. (1991) that COO effects increases with the technological complexity of the product; steam valves are rather complex industrial products. The results of the study by Bradley (2001) of industrial buyers in the electronics industry showed that country effect is weaker and is dominated by the company effect, and that there is also interaction. Company image corresponds to brand in our study, so the results of our study are almost the same, indicating the importance of brand over COO. However Bendixen et al. (2004) notes that technical specialists credit brand with a higher importance than do other DMU users. Perhaps if our study was to include all DMU role players, the importance of brand and maybe COO would decrease compared to price.

Quester et al. (2000) note that in industrial marketing, identifying market perceptions and buyers' needs and attitudes remains the key to success; businesses' purchasing decisions are influenced by COO effects just as consumer decisions are, given that it is normally a human who makes the decision, and all humans are affected by non-rational influences.

5.1 *Implications*

This study has several theoretical and managerial implications and adds to the body of knowledge about the COO effect in a fast developing market. Theoretically, the study confirms the argument of Nairn et al. (2004) for using conjoint analysis and generally multivariate statistics in the B2B context, since the differences between the two marketing contexts are constituted by degree rather than form.

On the practical front, in order to better assign the resources on each cue, it is important for companies to know the extent to which each cue is involved in customers' decision making. As Ahmed & Astous (1995), Okechuku (1994), Knight (1999), and Schaefer (1997) note, the results have strategic implications for international sourcing, branding, pricing, warranty and promotion policies, product positioning, strategy development, as well as pre-testing market evaluations for new or modified products (Auty, 1995), and overall knowledge of the dynamics of international markets. They have several implications for both international and domestic marketing strategy.

Findings help international marketing managers seeking to sell their goods or do foreign investments in Iran to adjust their promotion mix. From the domestic point of view, recognizing the country image of imported substitutes can greatly benefit firms by protecting national industries (Knight, 1999). It signals to Iranian manufacturers that it is important to realize the image of Iran as a source country and if there is a negative image they should investigate how to counteract that in order to compete with foreign brands, perhaps

considering strategies of cooperation with foreign manufacturers such as licensing arrangements or, forming joint ventures so be able to sell under foreign brand names can help. Further points may be revealed from our study, for instance since guarantee had a rather small utility level, a longer guarantee period seems not to offset a negative COO. This may be due to the past experience of Iranian buyers, in which companies usually do not feel responsible for their guarantee claims, especially when we note the surprising finding that respondents disliked “5 years” guarantee more than “2 years”. This would be due to the fact that the least known and most irresponsible companies in Iran claim to offer 5-year guarantees. However these solutions may not be conclusive and further studies are required to investigate the extent to which each can be useful.

5.2 Limitations and future research directions

In order to help Iranian exporters, doing a similar study in other nations, with Iran as a sourcing country, might help them to improve their export performance. Research should study how the negative image can be reduced, for example by investigating the extent to which cutting price, guarantee strategies, or advertising intensity can compensate for COO negative image (See Speece& Nguyen, 2005, Amine et al., 2005, Verlegh et al., 2005, and Chetty et al., 1999). Investigating the moderating effect of brand familiarity on COO effects would also be fruitful effort (See Schaefer, 1997).

If resources permit, future studies can improve the accuracy by larger sample sizes, or more levels of COO and other attributes. Validity can be improved by testing the model on other industrial product categories and also uncover which aspects of products determine the importance of COO in product evaluations (Okechuku, 1994).

As suggested by Srinivasan et al. (2004), it would also be interesting to conduct longitudinal studies to track the importance of COO, especially since the time of conducting our research was simultaneous with the diplomatic challenges between Iran and other countries, especially Britain in our list. The bifurcation of COO into “manufacturing country” and “branding country” would be another fruitful endeavor (See Srinivasan et al., 2004, and Ahmed & d’Astous, 1995).

Besides, the population in future studies can include all role players (See Bendixen et al., 2004) and study how COO effects changes among different buyclasses. As suggested by Srinivasan et al. (2004), the additional complexity of teasing out the brand equity effect could be fruitful (see Bendixen et al., 2004, Chen et al., 2011, Moradi&Zarei, 2011, and Yasin et al., 2007).

On the other hand, as Bradley (2001) suggested, future studies can add some intrinsic cues to examine the interaction between the extrinsic cue, and the intrinsic company variables over which management has control (See Srinivasan et al., 2004). Most researchers discuss customers rely more on extrinsic cues; while some such as Srinivasan et al. (2004) conclude that intrinsic cues (quality) have the largest impact. However, we believe that Srinivasan et al.’s (2004) consideration of quality as an intrinsic cue is surely a matter of debate, because quality perception is itself affected by branding, COO and other variables (See Quester et al., 2000 and Dzever& Quester, 1999); Auty (1995) also mentions that brands can be used as surrogates for quality.

Finally, we recommend using other multivariate statistical techniques such as cluster analysis in B2B contexts in future (See Naudé &Buttle, 2000, Nairn et al., 2004) to help market segmentation, and define benefit segments and their relative size (Auty, 1995).

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Table 1: Classifications of studies used as frame of reference

Classifications	References
<u>Group1 :</u> - Studies COO - Conjoint analysis is used But - Not in industrial context	- Ahmed et al. (2004) - Ahmed & Astous (1995) - Klenosky et al. (1996) - Okechuku & Vincent (1999) - Okechuku (1994) - Opoku & Akorli. (2009) - Speece & Nguyen (2005) - Veale & Quester (2009)
<u>Group 2 :</u> - Studies COO - In industrial context But - Conjoint analysis is not used	- Bennett & Zhao (2004) - Bradley (2001) - Chetty et al. (1999) - Dzever & Quester (1999) GÜdüm & Kavas (1996) Kraft & Chung (1992) - Quester et al. (2000)
<u>Group3:</u> - Uses Conjoint analysis - In Industrial context But - Does not study COO	Bendixen et al. (2004)

Table 2: Attributes and their levels

COO	Brand	Price	Guarantee	Reputation of retailer
1: Iran 2: South Korea 3: Japan 4: England	1:IDEA 2:KAMRAD 3:JOKWANG(JK) 4:MIYAWAKI 5:SPIRAX	1:1200000Toman s 2:500000Tomans 3:200000Tomans	1: 2yrs 2: 5yrs 3: 10yrs	1: <i>low</i> described by statement “You don’t know it” 2: <i>fair</i> described by statement “Fair” 3: <i>high</i> described by statement “Very good”

Table 3: Profile of respondents

Characteristics	Age (old years)	Sex	Experience (years)

Categories	30-40	40-50	>50	Male	Female	3 to 5	6 to 10	>10
Frequencies	8	18	7	30	3	5	6	22

Table 4: Estimated utilities and relative importance of attributes

Attribute	Level	Utility	Relative importance (%)
COO	1: Iran 2: South Korea 3: Japan 4: England	- .5224 - .3882 .5148 .3958	24.22
Brand	1: IDEA 2: KAMRAD 3: JOKWANG(JK) 4: MIYAWAKI 5: SPIRAX	- .6098 -1.1919 .5073 - .3290 1.6233	31.46
Price	1: 1200000Tomans 2:500000Tomans 3:200000Tomans	-1.5035 .3035 1.2000	21.08
Guarantee	1: 2yrs 2: 5yrs 3: 10yrs	- .2481 - .2770 .5251	9.76
Reputation	1:You don't know it 2:fair 3:very good	- .8209 - .1092 .9301	13.48
Total			100

Figure 1: Research Model

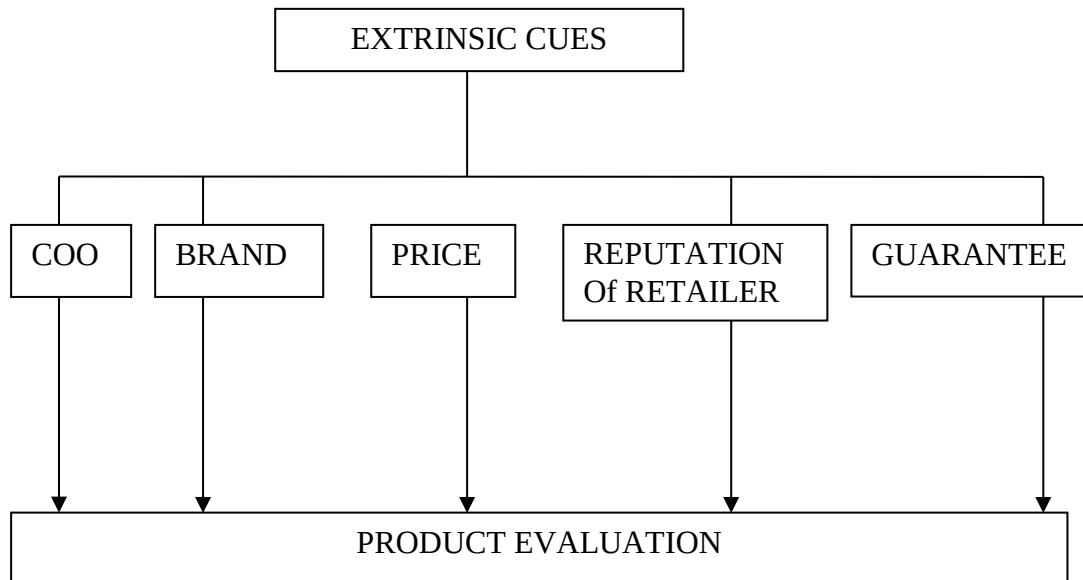


Figure 2: Example of the conjoint rating task used in the study

On the following pages are descriptions of Pressure Reducing Valves that, hypothetically speaking, might be available in Iran market. By *hypothetically* we mean that some options may not exist in Iran market. For example, if you may see the below option,

1.Brand name is: ONE, Made in: Germany, Price is :300000Tomans, Guarantee is: 10 years, Reputation of retailer is : fair

(very bad)1 2 3 4 5 6 7 8 9(very good)
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

In this section we want you to *assume* that all products are available and indicate how much you prefer each of these products using the scale below it. For each product, *circle the number on the scale that best reflects the extent you prefer the product described*. On this scale, "1" means that the product described is "extremely bad" and it is extremely unlikely to prefer it and a "9" means that the product described is "extremely good" and it is extremely likely that you prefer it. You can use any number between "1" and "9" to indicate your preference.

Please notice that there is not any true or false answer.

Now kindly fill the questionnaire based on the above instruction. 4. Brand name is: IDEA, Made in: South Korea, Price is :500000Tomans, Guarantee is: 10years, Reputation of retailer is : fair

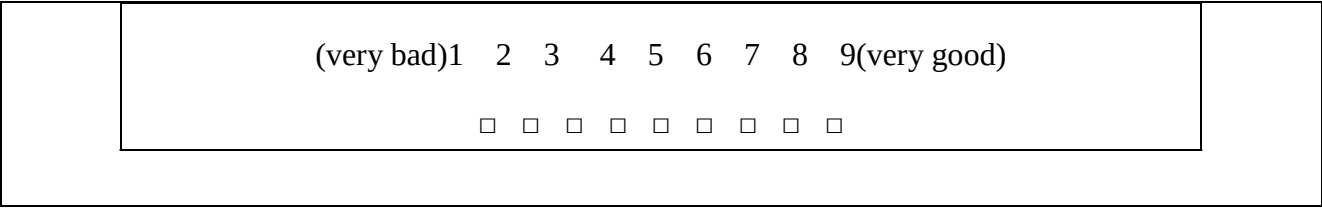


Figure 3: Relative importance of attributes

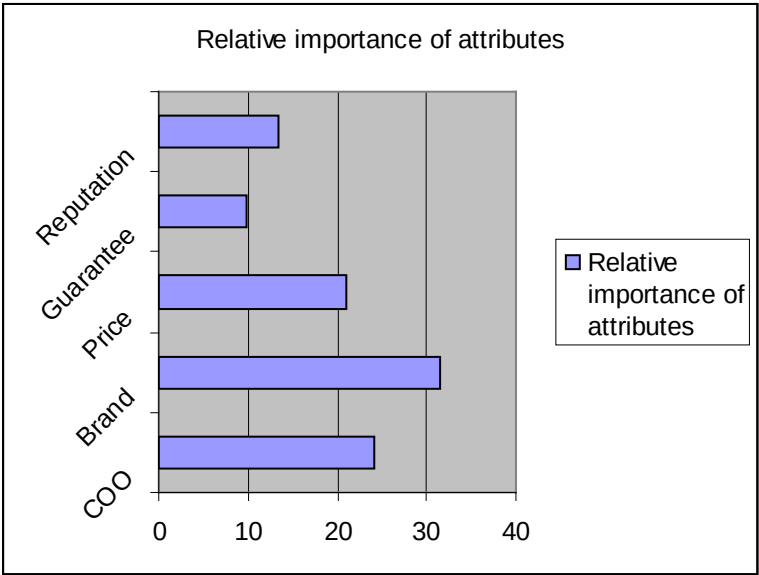
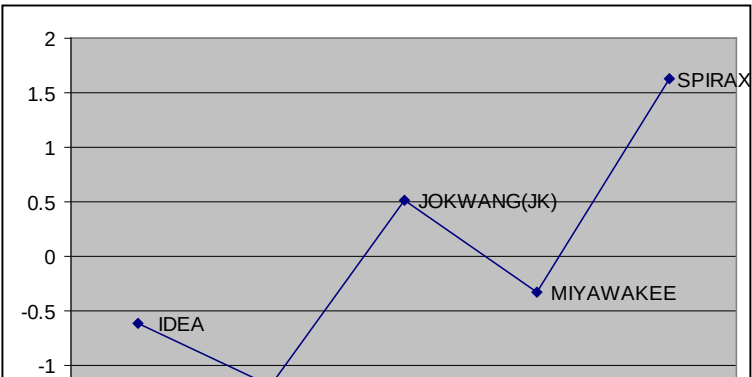
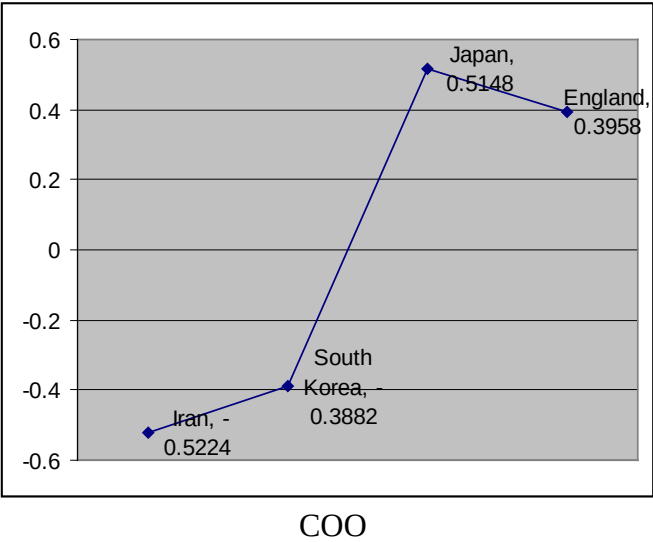
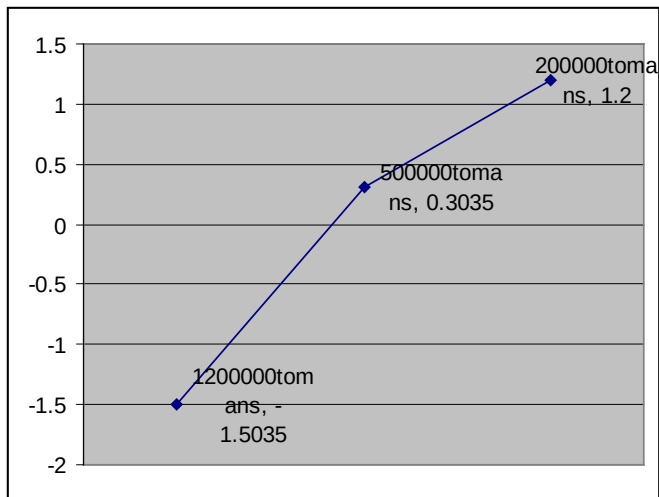
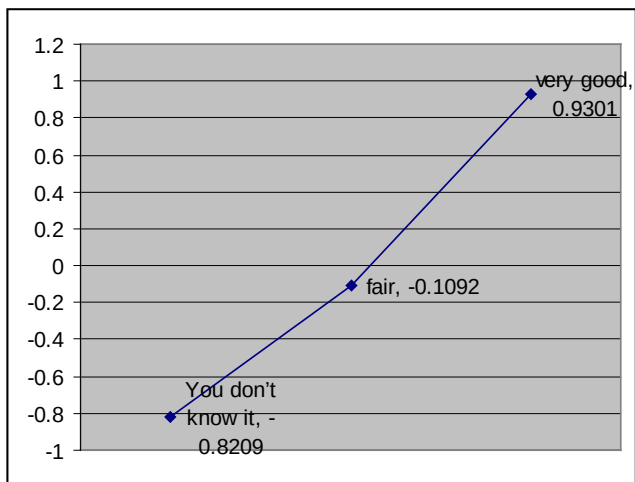


Figure 4: Part-worth functions

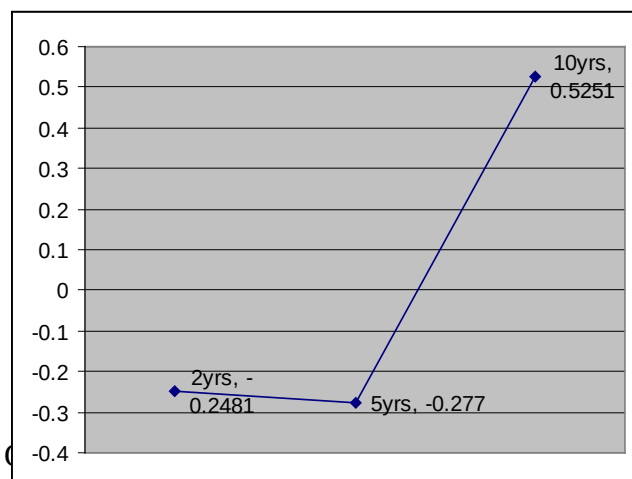




Price



Reputation of Retailer



APPENDIX: English Questionnaire

Thank you very much for your valuable time.

The below questionnaire is designed in order to investigate the important factors in purchasing steam valves in Iran market. The product which is under study is the steam pressure reducing valve.

We reckon that there are a number of attributes, each on different levels that you might consider, such as

COO: Iran, England, Japan, South Korea
 Brand name: IDEA, JOKWANG(JK), KAMRAD , MIYAWAKI, SPIRAX
 Guarantee: 2 years, 5 years, 10 years
 Price : 200000 Tomans, 500000 Tomans, 1200000 Tomans
 Reputation of retailer: You don't know it, Fair, Very good

On the following pages are descriptions of Pressure reducing valves that, hypothetically speaking, might be available in Iran market. By *hypothetically* we mean that some options may not exist in Iran market. For example, if you may see the below option,

1.Brand name is: ONE, Made in: Germany, Price is :300000Tomans, Guarantee is: 10 years, Reputation of retailer is : fair
 (verybad)1 2 3 4 5 6 7 8 9(very good)
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

In this section we want you to *assume* that all products are available and indicate how much you prefer each of these products using the scale below it. For each product, *circle the number on the scale that best reflects the extent you prefer the product described*. On this scale, "1" means that the product described is "extremely bad" and it is extremely unlikely to prefer it and a "9" means that the product described is "extremely good" and it is extremely likely that you prefer it. You can use any number between "1" and "9" to indicate your preference.

Please notice that there is not any true or false answer.

Now kindly fill the questionnaire based on the above instruction.

1.Brand name is: JOKWANG, Made in: Iran, Price is :1200000Tomans, Guarantee is: 5 years, Reputation of retailer is : fair
(very bad)1 2 3 4 5 6 7 8 9(very good)
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

2.Brand name is: SPIRAX, Made in: Japan, Price is :500000Tomans, Guarantee is: 5 years, Reputation of retailer is : fair
(very bad)1 2 3 4 5 6 7 8 9(very good)
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

3. Brand name is: JOKWANG, Made in: South Korea, Price is : 200000 Tomans, Guarantee is: 2 years, Reputation of retailer is : very good
(very bad)1 2 3 4 5 6 7 8 9(very good)
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

4. Brand name is: IDEA, Made in: South Korea, Price is :500000Tomans, Guarantee is: 10years, Reputation of retailer is : fair
(very bad)1 2 3 4 5 6 7 8 9(very good)
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

5. Brand name is: KAMRAD, Made in: Iran, Price is : 500000 Tomans, Guarantee is: 2 years, Reputation of retailer is :
You don't know it☐
(very bad)1 2 3 4 5 6 7 8 9(very good)
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

6. Brand name is: MIYAWAKI, Made in: South Korea, Price is : 500000 Tomans, Guarantee is: 5 years, Reputation of retailer is :
You don't know it☐
(very bad)1 2 3 4 5 6 7 8 9(very good)
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

7. Brand name is: SPIRAX, Made in: England, Price is : 1200000 Tomans, Guarantee is: 2 years, Reputation of retailer is :
You don't know it☐
(very bad)1 2 3 4 5 6 7 8 9(very good)
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

8. Brand name is: JOKWANG, Made in: Japan, Price is : 500000 Tomans, Guarantee is: 2 years, Reputation of retailer is :
You don't know it☐
(very bad)1 2 3 4 5 6 7 8 9(very good)
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

9. Brand name is: IDEA, Made in: Japan, Price is : 1200000 Tomans, Guarantee is:5 years, Reputation of retailer is : very good

(very bad)1 2 3 4 5 6 7 8 9(very good)
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

10. Brand name is: MIYAWAKI, Made in: Iran, Price is : 1200000 Tomans,
Guarantee is: 10 years, Reputation of retailer is :
You don't know it☐

(very bad)1 2 3 4 5 6 7 8 9(very good)
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

12. Brand name is: SPIRAX, Made in: Iran, Price is : 500000 Tomans, Guarantee
is: 10 years, Reputation of retailer is : very good
(very bad)1 2 3 4 5 6 7 8 9(very good)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

11. Brand name is: MIYAWAKI, Made in: England, Price is : 500000 Tomans,
Guarantee is: 2 years, Reputation of retailer is : very good

(very bad)1 2 3 4 5 6 7 8 9(very good)
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

13. Brand name is: IDEA, Made in: Iran, Price is : 500000 Tomans, Guarantee is:
2 years, Reputation of retailer is : fair

(very bad)1 2 3 4 5 6 7 8 9(very good)
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

14. Brand name is: KAMRAD, Made in: Korea, Price is : 1200000 Tomans,
Guarantee is: 2 years, Reputation of retailer is : fair

(very bad)1 2 3 4 5 6 7 8 9(very good)
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

15. Brand name is: JOKWANG, Made in: Iran, Price is : 500000 Tomans,
Guarantee is: 5years, Reputation of retailer is :

You don't know it☐
(very bad)1 2 3 4 5 6 7 8 9(very good)
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

16. Brand name is: SPIRAX, Made in: Iran, Price is : 200000 Tomans, Guarantee
is: 2 years, Reputation of retailer is : fair

(very bad)1 2 3 4 5 6 7 8 9(very good)
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

17. Brand name is: MIYAWAKI, Made in: Japan, Price is : 1200000 Tomans,
Guarantee is: 2 years, Reputation of retailer is : fair

(very bad)1 2 3 4 5 6 7 8 9(very good)
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

18. Brand name is: KAMRAD, Made in: England, Price is : 500000 Tomans,
Guarantee is: 5 years, Reputation of retailer is : fair
(very bad)1 2 3 4 5 6 7 8 9(very good)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

19. Brand name is: KAMRAD, Made in: Iran, Price is : 1200000 Tomans,
Guarantee is: 5years, Reputation of retailer is : very good
(very bad)1 2 3 4 5 6 7 8 9(very good)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

20. Brand name is: KAMRAD, Made in: Japan, Price is : 200000 Tomans,
Guarantee is: 10 years, Reputation of retailer is :
You don't know it ☐
(very bad)1 2 3 4 5 6 7 8 9(very good)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

21. Brand name is: IDEA, Made in: England, Price is : 200000 Tomans, Guarantee
is: 5 years, Reputation of retailer is :

You don't know it ☐

(very bad)1 2 3 4 5 6 7 8 9(very good)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

22. Brand name is: SPIRAX, Made in: South Korea, Price is : 1200000 Tomans,
Guarantee is: 5years, Reputation of retailer is :

You don't know it ☐

(very bad)1 2 3 4 5 6 7 8 9(very good)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

23. Brand name is: JOKWANG, Made in: England, Price is : 1200000 Tomans,
Guarantee is: 10 years, Reputation of retailer is : fair

(very bad)1 2 3 4 5 6 7 8 9(very good)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

24. Brand name is: MIYAWAKI, Made in: Iran, Price is : 200000 Tomans,
Guarantee is:5 years, Reputation of retailer is : fair

(very bad)1 2 3 4 5 6 7 8 9(very good)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

25. Brand name is: IDEA, Made in: Iran, Price is : 1200000 Tomans, Guarantee is: 2
years, Reputation of retailer is :

You don't know it ☐

(very bad)1 2 3 4 5 6 7 8 9(very good)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

It would be highly appreciated if you let us know some your personal information in order to come to a better conclusion of our study.

Sex: -----

Age: -----

Education level:-----

Job Title: -----

Your experience in this field:-----

If you are interested to be informed of the result of this study, kindly advise us your email address or telephone number that enables us to contact you.

We would like to know your valuable comments; you can contact us through below email address.

Seymir-3@student.ltu.se or S_H_mir_t@yahoo.com

Thank you once more for your kind co-operation.

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UNDERSTANDING RECENT WIRELESS AND MOBILE TECHNOLOGICAL CHANGES FOR BUSINESS MANANGEMT PRACTISES

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Abstract

The business world is continuously changing with interpretation of technological moderations. Wireless and mobile technological sector has been gradually enriched with newer innovations. This study understands the pattern of changes exists in wireless and mobile technology and effects on a business organization's tactical development and potential course. This study has selected the Motorola Inc. as case due to its long established presence in the wireless and mobile technological domain. Also, consumer relationship, business process and strategic formulation at Motorola are significant as the firm operates in dynamic and highly competitive wireless and mobile technological industry. The study is qualitative by nature and has depended mainly on literatures with face to face interviews. Results show that the wireless and mobile technology can have immense affectivity in a business organization's activity. Even though, Motorola Inc. with its' strong technological innovation and backups has ensured solid market position, there are still scopes to learn the business market potentials. In many cases, Motorola Inc. has not been able to capitalize the offerings. Based on findings, this study has suggested recommendations for this wireless and mobile technological giant. Specific approaches can only help business organizations like the Motorola Inc. to appear as the market leader.

Keywords: Business Strategy, Consumer, Wireless and Mobile technology, Process Automation, Cloud infrastructure and Convergence

Introduction

Innovative thinking and technological capability across management function is the core to remain and grow within intense competition in global market place. The technology industry increasingly involving along with all other industries, as ICT (information and communication technology) successfully transforms managerial functions from top-level strategy to field-level implementation. Today's internet based market structure embeds technology in to the total business system. MIS (managerial information system) provides insights through business analytics for corporate strategy. As part of the business process, and production to business management cycle, quality control to inventory & customer relationship management etc. CRM (customer relationship management) is managed by wireless and mobile and mobile devices to captures, process and access into information in real time for competitive advantage. However, these are all critical to adopt, manage and upgrade. Organization requires resources and capabilities to take the advantage within these complex environments and to relevant to the business partners and customers. This study has considered Motorola Inc. as case for this study. The purpose of this research is to understand recent wireless and mobile technological changes and to explore the dynamics within business management practises. This has also suggested recommendations to improve performances of the Motorola Inc.

Literature Review

2.1 Wireless and mobile Technologies in Business Context

Digital consumers are the by products of wireless and mobile phone connectivity technology (Abernathy & Clark, 2007). Literatures show the impact of new media on consumer relationships, through the rise of new media channels such as Facebook, Youtube, Google, and Twitter, which enable customers to take a more active role as market players reach almost everyone anywhere and anytime through the power of internet based wireless and mobile devices (Khalifa & Shen, 2008). The rise of digital era creates digital life and digital consumers at personal and enterprise level, which also created a significant change in traditional consumer behaviours. This kind of consumer behaviour drives organizations to re-engineer company processes, product design, and quality of experience, pricing configuration, delivery mechanism and medium of marketing communication (Infosys, 2012). Organizations are enhancing their products and services portfolio under wireless and mobile technology and replacing PCs by smartphones and tablet devices through broadband enabled wireless and mobile technology to create new business opportunity, digital contents, devices and infrastructures (Dhir, 2004). It is emerged from existing phenomena that technology based industries are enhancing their services and products under different models to develop total digital echo system through the power of wireless and mobile and mobile internet access (Fotheringham & Sharma, 2008). From entertainment to business operations, these contents are increasingly used and changing consumer behaviours.

2.2 Recent Changes and the application of Wireless and mobile Technologies for Business Management

Organizational success depends on its strategic flexibility, customer satisfaction & operational efficiency (Weber, 2012). Recent changes in the market structure, management and customer behaviour based on technology impacted almost everything in different ways (Daim, et al., 2012). Successful deployment of strategy alignment with internal resource capabilities and changes in external environment enhance competitiveness and maximize profitability (Deighton & Kornfeld, 2007). This section will focus on wireless and mobile and mobile technologies increasing involvement within operational processes, customer relationship and whether it is influencing business strategy or not. ICT (information and communication technology) is transforming and reshaping operational processes, management practices, customer services and actively participate in the process of corporate and business level strategy through past performance and business analytics (Forrester, 2012; Mohapatra, 2009). Conventional strategic approaches also influenced and transformed by technology to formulate, articulate and implement more effective ways to achieve business objectives and sustainable financial performance (Hax, 2010).

2.3 Case Study of the Motorola Inc.

Consumer focused management at Motorola is very important like any other global scale enterprise (Alexa internet, Inc., 2012). According to the operation and product portfolio, two types of consumers at Motorola including enterprise and individual consumers (Wansink, et al., 2012).

As the new market structure developed through the power of internet based wireless and mobile and mobile infrastructure and devices, Motorola is becoming more strategic towards its consumer specification for more focus on enterprise level consumers and individual consumers. It separated its operation by dividing itself in to two individual entities namely Motorola Solutions and Motorola Mobility in January 2012, to strategically focus on enterprise level consumers of wireless and mobile and mobile infrastructure under Motorola solutions and mobile devices under Motorola Mobility. Recently Inc. was acquired by..... Inc. and question was asked to the CEO of..... *'How this acquisition will impact consumers?'* Respondent replied *"It compelling new opportunities for partners, customers around the world. Together we will be able to drive faster innovation by taking our rich user experiences and cutting edge product to the next level with the co-operation of our carrier partner. We will be able to continue to delight customers and to push the boundaries of innovation even further delivering amazing benefit for more customers around the world."* The CEO also added that customer centric strategies are at core of its strategy. He was asked *'How as an individual consumer, you evaluate wireless and mobile and mobile devices as it becoming ubiquitous?'* Respondent replied *'Since we as a consumer are very interested for information because it shapes our everyday life and what we do next.'* Respondent also gave example of watching the status of DOW and for instance apps of CNBC or Bloomsburg to know what is happening in Japanese currency market through mobile devices. This has been found that the development of applications for smartphones and mobile devices like iPad and other tablets are increasing popular among consumers at different level for entertainment to serious business needs like CRM & Stock trading applications along with thousands through Android (Google Inc.'s mobile operating system) or IOS (Apple Inc.'s mobile operating system) (MITSloan, 2012). On the other hand, interviews were conducted with several ordinary users of broadband mobile devices and recognised smartphones and iPads' are becoming essential commodity now a days as every large scale companies are positioning applications through mobile operating system in a unique market structure of our time to enabled everyone in the process to act the way more agile and instantaneously in real time.

2.4 Overall strategy at Motorola's Wireless and mobile Technology based Business

According to Hambrick (1983), at the beginning of this year 4th January, 2012 Motorola Inc. USA separated itself into two companies to strategically focus more closely to their operations and to maximize shareholder value. However, very recently dated August 15, 2012 Motorola Mobility Inc. was merged and Acquired by Google Inc. USA, the search engine giant (Taylor & Waters, 2012). Motorola was one of the earlier clients of Google's open source mobile operating system Android. Android is becoming fastest growing mobile operating system right now. Google formed open alliance of handset manufacturers including HTC, Samsung, and LG (Wagner & Majchrzak, 2007). Now the question is why Motorola decided to merge with Google Inc. despite sound cash availability on their balance sheet, and their earlier separations to focus more closely to each segment? The merger enables Google Inc. to enter Motorola's strong intellectual property portfolios and defend its Android eco system against high cost patent disputes within industry. On the other hand Motorola is opening its hardware patents, operating system patents and wireless and mobile signalling patents for Google by gaining access to US\$12.5B in cash. It is a major decision for Motorola's top strategist to transform & operation towards future growth areas (Turban, et al., 2008).

The question was in my mind why Motorola opened up its hidden treasure of industry leading IP portfolios? As it was key competitive weapon within industry and it gains only cash despite US\$3B cash available (Konig-Ries, et al., 2002). What factors drives its key strategist to open up its expertise and business secrets for gaining cash? Questions were asked to Sanjay Jha, chairman & CEO of Motorola Mobility Inc. at Bank of America Merrill Lynch 2012 Technology Conference, NY, USA regarding company's overall strategy, key focus points for next few years and value creating within difficult market conditions? Respondent emphasised on *Operational Excellence, Incremental Differentiation & Sustained differentiation* (McCrum, et al., 2012). Operational excellence is becoming increasingly important for Motorola as it is virtually packed down in smartphone business to its competitors including HTC, Apple Inc. & Samsung (Salesforce, 2012). Operational excellence and vertical integration enables its competitors to gain superior market shares. According to the CEO; inventory & supply chain, being able to market products at right time, getting the portfolio right with quality, marketing, geographical diversity and channels are the major operational areas within its wireless and mobile and mobile business, need to be focused and optimized efficiency to increase performance and being able to encompass existing market shares within highly volatile market conditions. Sanjay mentioned "*It's extremely hard to get more market shares under same Android platform*" regarding Motorola's smartphone business as it is using Android operating system along with its key competitors mainly HTCs and Samsung within same industry (CISCO, 2010).

TABLE 1: PLEASE SEE LIST OF TABLES FILE (SEPARATELY ATTACHED)

Methodology

Selecting research methodology for the study was initially difficult. However by using internet based resources on various existing research methodologies, academic definitions, analysis of different research frameworks, tools and their natures, this was decided to use a qualitative research method (Belk 2006). After collecting data, these were categorized on the basis of information needs and were transformed into knowledge Heidegger (2005). Knowledge management is the intellectual resource and differentiate complex organizational capabilities of 21st century (Bryman & Bell, 2003). Behind every quantity there lies a quality. Selznick emphasises the importance to the quality of data (Walden 2002). On the other hand, qualitative perception develops based on quantifying facts. There is an abstract level relationship among both qualitative and quantitative methodology (Crowther & Lancaster, 2009). The research objective under study has driven to stay with qualitative schooling as resources, aim and objectives need to be compatible and achieved. In summary, this study has mainly depended on the review of literatures, both from online, published and unpublished platforms. This has also conducted two interviews as the key informants representing the wireless and mobile technological arena. For data analysis of these interviews, which were half an hour long, each the self transcribing process was adopted.

Findings and Data Analysis

4.1 Recent Changes and Applications of Wireless and mobile Technologies in Business: Ubiquitous internet through wireless and mobile technology based devices is changing our way of doing things.

Consumers are adopting digital technology and manage their personal and professional tasks through these technologies as it enabled them to act way more agile and faster. It was emerged from several interviews with users of smartphones and tablets that these devices are essential. Consumers share their experience of shopping through Amazon, Ebay and reading reviews regarding products and purchasing e-books. Online banking, stock trading through mobile devices and finding any location by using Google maps are becoming integral part of our everyday life. Question was asked to a project manager regarding the importance of internet based wireless and mobile devices in professional life and respondent replied *“I am sitting here in London and running a project through the project management software have an apps on my iPad at USA, sitting here with internet based mobile device I can manage my project team, assign tasks and I can see the status of the tasks and I am running the show. It is making me way more productive, in today’s market place to stay remain competitive you have to be connected and that’s connectivity giving you flexibility”*.

4.2 Consumer Adaptation of Digital Environment: Information and communication technology transformed almost every industry in some ways and as consumer we are also adopting and reshaping our way of doing things through the transformational process. Former CEO of Apple Inc. USA, Steve Jobs almost redefined three major industry namely computer industry through iMac, music industry through iPod and finally mobile industry through iPhone. He was a pioneer in envisioning contents in cloud environment and developed a convergence among several media & format through Apple’s various devices as mentioned earlier. He developed iTunes which reshaped the music industry through the mp3 format. But Apple’s strong vertical integration model and its in house capacity gave it competitive advantage and through innovation created several opportunities for different industries. These model later on adopted by almost all leading companies within same industry such as Sony, Samsung, and Google. Recently Motorola is repositioning its capacity towards content development and convergence among different devices and media.

4.3 Wireless and mobile Technology as Supporting Business: Motorola is recently deploying more and more convergence strategy among its different devices and content services as it is creating new innovative opportunities to grow further. Customers in cloud computing environment increasingly consumed different digital contents from entertainment to enterprise scales. It also creates new opportunities for different industries (Jopson & Gelles, 2012). Motorola adopted new strategy to leverage the opportunity and well positioned for enabling its customer needs by converging mobile devices and computing. By acquiring different companies for developing contents and ensuring mobile application based security, it is trying to capture the wave of mobile based market structure. Google Inc. recently acquired Motorola’s Mobility business to strengthen its Android operating system and access to Motorola’s strong wireless and mobile and mobile patents. Is it the joint afford of Motorola and Google to capture future opportunity of internet based wireless and mobile and mobile communication to leverage from their standing? Are these strategies based on mobile and wireless and mobile technology?

4.4 The Motorola Inc. and Business Convergence: According to Guimaraes (2012). Attempt was made to conduct interview with key strategist through e-mail communications and requested over phone. However, corporate office referred to investor relation link for video of CEO regarding strategy related information as organized by Bank of America Merrill Lynch 2012 Technology Conference (Wednesday, June 1 – Thursday2, 2012, The Crown Plaza Times Square, 1 New York, NY) (McElheran, 2012).

Due to the nature of the information required and its reliability and validity no other options was available rather relying on the video and skimmed key information represented below. It was asked to the CEO of...., *'How the merger with..... Inc. will help..... to fulfil customer satisfaction?'* in reply, CEO Stated *"There is a great convergence happening between the mobile world and the contents that enters the home through the setup box, I think as a result of this combination and working with our carriers, we will be accelerate that convergence and deliver products which delight customers quite frankly, so we are very exited about this combination"*.

FIGURE 1: PLEASE SEE LIST OF FIGURES FILE (SEPARATELY ATTACHED)

The graphic above showing segmentation wised positioning through convergence to fulfil targeted consumer's digital needs. CEO also added *"our home business is uniquely positioned to capitalize on the convergence of mobile and home entertainment and partnership with our key customers."* The question was in my mind regarding Google Inc.'s acquiring of Motorola and what benefit Motorola achieved and what are the implications? By the deal Motorola access to \$12.5B while already they have \$3B cash according to their financial statement. According to Larry Page Google Inc. CEO, regarding the acquisition of Motorola Mobility told it will accelerate innovation which will increase great share holder value and Motorola's development of intellectual property which helped remarkable opportunity in the mobile industry which every one enjoying today (Kramer, 2007). It will also enhance transform Motorola Mobility in to one of the leading android based mobile devices.

4.5 Wireless and mobile Technology and the Current Business Dynamics: Competitive dynamic in market place is always executing and alluring customers towards new products and updated technologies and thus creates opportunities for companies. The industries are transforming consistently towards new capabilities in terms of operations, products, consumer behaviours and immense competitions within industry. R& D is very important functional area for organization like Motorola to produce new ideas and turn it into successful business objectives. In doing so, companies required consistent financial agility to feed R&D. Giant tech firms are also merging and acquiring different companies to strengthen their in house capability to develop vertical integration and develop independent inter related executing capacity from strategy to the customer service level. Financial resources are important along with other resources to reshape overall strategy to execute in organization like Motorola. Incremental differentiation & Sustained differentiation are key strategic focus at Motorola according to its CEO. As its smartphone business is operating under the same Android platform used by its key business rivals push it to induce incremental differentiation through software develops to differentiate above android platform what was moto blurr (IBM, 2012). Motorola is also deploying its Sustained differentiation strategy across its wireless and mobile and mobile business through taking risk by Organic Acquisition, developing mid tier smartphones for growth market like Brazil and China and finally, by introducing mass market consumer product (MMCP).

Conclusions

Consumers are critical to Motorola's success. Motorola spending time & substantial amount of resources on consumer research to identify their needs.

Effective communication with consumers through marketing, advertisement & CRM to introduce products and develop product and services portfolio based on consumer analytics are major concern for Motorola's future growth. Increasing trends of communication channels within consumer and organizational relationship opened up much wider platform to interact with consumers in different phases of business process. It was evident from Global smartphones sales statistics and consumer's experience and expectations as they shared in interview regarding mobile devices and applications are increasing. It is also important for Motorola to introduce their product and services at first instance as competitors are increasingly positioning their products and services faster to capture market place. New market and services structure enables consumer to behave in a different way compare to past decades. Information centric business practices drive Motorola management to act faster and develop relationship with consumers uniquely to manage and organize consumer information and allow consumers to access business information instantaneously. Customer service distinguishes organizational capacity and differentiates its superiority within competitive environments. Customer services based on wireless and mobile and mobile platform in different business segments are increasing and Motorola need to develop its service portfolio to capture the growth opportunity. Consumers are increasingly consumes digital contents and opened up new business opportunities across value chain. Motorola was late to identify market potentials and new services according to customer needs. It was found that in early 2012, at the beginning it separated its operations in to two separate companies to strategically focus on different segments of markets, customers and services more closely. While dramatically they sold their mobile operations after seven months of separation. These are very significant strategic decisions and contrary to earlier declaration. Despite emerging market and increasing global sales of smartphones and tablets, decision to sell this segment of Motorola Mobility Inc. business is a key step towards future moves. The power of social networking and online market structure drives organizations to reshape their communication channels with customers, product and services portfolio and becoming social enterprise. By doing these, companies are turning themselves relevant to today's customers. Here is the power to grow and to capture the wave of change for capitalizing business growth and restructuring strategy at operational process. How these changes are relevant to Motorola's business, strategy and technology they are dealing with? Core competency and dynamic capability is a very important organizational capacity within technological industry Motorola operates. To remain competitive as recent change, innovation, customer behaviour all are key factors. Motorola need to capitalize its user experiences, technological leadership and dynamic growth opportunity.

Recommendations

Recommendation was followed and formulated based on findings, dynamic nature of market, technological upgrades, and organizational resource capabilities to support market driven approach. Unforeseen future risks are always exists within business environment and advised reader to bear in mind that number of forward-looking statement are included in this presentation in relation to strategic recommendations and forward-looking statements are not historical facts.

- Successful differentiation strategy is very important for organization like Motorola to develop its market and gain customer confidence. Differentiation may implement at operational process to differentiate product and services.

- Motorola's product and service portfolios and the entire eco system it operates need to focus well integrated CRM for business analytics to develop new products and services based on customer preferences and behavior. New product and service development within dynamic and constant changing environment is also a dynamic competitive advantage towards success and sustainability.
- The strong portfolio of hardware and software need to develop at Motorola according to present and future needs of management practices for enterprise customers. Customers' expectation must be reflected to their product and services.
- Immense competition within industry forces organization to develop innovative product and services. Motorola thus required break through innovation and diffusions across its value chain. As consumers increasingly consumes digital contents, it is important to focus on digital and video content development for different devices through cloud infrastructure.
- Strategic acquisition and merger may enable companies to create and strengthen new product and services to compete with business rivals. Again unforeseen future risk involves and careful choice and far sight is needed for successful M&A. Motorola needs to acquire new business concepts and merge carefully to optimize business growth by capturing new customers.
- Strategic alliances need to be developed to leverage existing consumers form its alliance platform. Motorola need to ensure more security of their enterprise customer's confidential business information as their products and services enabled customers to capture process and store information at different layers.

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ANALYSING THE IMPACT OF MOBILE AND WIRELESS TECHNOLOGY ON BUSINESS MANAGEMENT STRATEGIES

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Abstract

This research examines whether congruence exists between wireless and mobile technology with impact analysis on a firm's business management development and future strategies. The research adopted the Motorola Inc. as a case and the qualitative approach as the research method. It emerged from analysis that consumers, business management strategies and future strategic directions are embedded in wireless and mobile technology. Despite having high tech wireless and mobile technology, it is not always been possible to appear as the market leader within industry, where future consumer behaviour and business management strategies will differ from the one those exist today. This study proposes a new framework for diversifying intellectual capacity to develop consultancy based growth opportunity at Motorola. This also suggests intense mobile and wireless technological impacts on relationships with customers, enterprise agility and business management strategies in the internet based market structure.

Keywords: wireless and mobile technology, process automation, cloud infrastructure, convergence, business management strategy

ALIENATION IN CHANNEL MARKETING RELATIONSHIPS

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Abstract

Alienation is a well established concept in sociology and social psychology. It has been applied to explain the manifest conflicts an individual experiences in relation to his or her social structures (Heinz 1991). Often it is associated with a disconnection or separation (Erikson 1986) from a social entity.

Little attention has been given to the application of alienation in marketing systems, such as distribution channels. When the concept of alienation is applied to distribution channels, we find a close connection with the many popular channel constructs such as opportunism, trust, commitment, conflict and power; but there remains little recognition of the broader implications of alienation upon the channel.

The objective of this paper is to examine alienation and its multi-dimensional nature in an internal and external channel network environment. The theories and research of Seeman (1959, 1975, 1989) and Ray (1985) have been extended by considering forms of alienation and how they interact to create a sense of real or imaginary separation in channel marketing relationships. The context in which emergence and consequences of alienation were considered was via the impact of the environment and its structural conditions on the channel participants individually and within their networks. The process by which this environment worked to create alienation in channel marketing relationships is at the centre of this analysis.

A conceptual model (see Figure 3.2) was developed that depicted alienation as emerging from challenging structural conditions in the industry, and a relationship environment which caused changes to the channel participants' environment, and how these changes were subjectively interpreted by channel partners in particular ways. This is a feedback model because it recognises past alienating or de-alienating outcomes contributing to the present process of alienation creation. The model positions alienation as a bridging concept between influence conditions, behavioural responses and individual psychological responses to those behaviours – interpreted within a channel relationship.

Keywords: alienation, distribution, network, channels

Introduction

Social scientists are concerned with the responsiveness of society to the needs of its citizens. Since the Industrial Revolution, many scholars have questioned how the increasing pace of technological development has increased the level of dissatisfaction that individuals experience in their social environments. Karl Marx and his advocates proposed the existence of feelings of separation from the self and the surrounding social structure is a central effect. Marx referred to these feelings of separation as 'alienation' (Marx 1844).

Alienation is a disconnection or separation of latent or manifest conflicts an individual experiences in social structures (Erikson 1986) and includes feelings of social isolation, lack of

power, lack of trust and social exclusion. Alienation is evident in exchange relationships between individuals in distribution channel relationships (Ray 1985). The nature of alienation may well be a consequence of real or imaginary conflicts that manifest between channel partners on a day to day basis, creating a feeling of separation between partners. Further, these feelings of separation may well impact negatively on the performance and effectiveness of the distribution channel among channel partners. For example, Acer in the Australian information technology (IT) channel alienated its distributors by selling 36,000 notebook computers direct to the Victorian State Government, diverting stock away from its distributors, creating distrust and leading to distributors switching suppliers (Norsa 1998). It will be the purpose of this paper to explore the deep nature of alienation and how this impacts channel marketing relationships. This paper will highlight the interaction of individual channel members represented by wholesaler and vendor and how they interact on a personal level with one another to create states of alienation.

There are numerous examples of behaviour that has the potential to create alienation in marketing channels. At the heart of alienation-inducing behaviour are channel members' attempts to improve competitiveness, often at the expense of partners. Suppliers add new distributors to sales territories or adopt direct engagement with customers through the internet. Sometimes, without notice, suppliers drop products from product lines, depriving distributors of future sales opportunities and making current inventories obsolete. Similarly, distributors can reduce the shelf, floor or catalogue space allocated to suppliers, causing damage to suppliers' sales, profits, and/or reputations. Disagreements and dissatisfactions arise from such activities and are part of normal business relationships, although the consequences can be significantly far-reaching. The conflicts outlined may lead to termination or impact on partner commitment and performance.

The central argument of this paper is that alienation is more than mere dissatisfaction between channel partners caused by conflicts. It helps to explain the deeper feelings of separation experienced by channel partners leading to temporary or irretrievable relationship dislocation.

This paper presents a deeper understanding of the nature and process of the alienation concept it is argued in line with Rosenbloom (2007) that the rapid growth of multi-channel distribution systems over the last decade has significantly increased the potential for conflicts and alienation between suppliers and channel partners. Rosenbloom found that coordinating and integrating multiple channels that operate at high levels of efficiency has forced managers responsible for channel management to deal with a variety of challenging issues. The major issues include: the role of e-commerce in the multi-channel structure; finding an optimal channel mix; creating synergies across channels; managing more complex supply chains; dealing with conflict; and providing the leadership necessary to attain well integrated multiple channels. It is argued that these issues are associated with growing alienation. Recent examples abound in the trade press of both the presence and impact of conflict that may lead to alienation occurring between channel partners. For example, Salkever (2004) highlighted the alienation experienced by Apple's resellers to Apple's action of giving preferential access to its high turnover products at lower wholesale prices to its own stores at the expense of independent Apple resellers.

The study of alienation is particularly important in a marketing channel context because negative acts are predictive of relationship dissolution (Rusbult et al. 1988). Apparently, it is more important to avoid exchanging negative behaviours than to exchange positive behaviours (Montgomery 1988). Thus, understanding the process of responding and managing neg-

ative behaviour is an important step as partners strive to keep conflicts from deteriorating that may ultimately lead to dissolution. Channel relationships are often critical to a firm's survival and growth (Anderson & Weitz 1989) and contain considerable potential for conflict (Tsay & Agrawal 2004). This is an important area that, thus far, has received little attention from researchers.

Research Problem

Historically, the marketing literature concerning channels of distribution has taken four directions. First, the *channel management* emphasis has concerned itself with an *economic approach* emphasising efficiency, the costs of distribution, the channels' various functions, and physical distribution (Marshall 1898; Marshall 1919). Second, the *channel management* emphasis has concerned itself with organising and planning (Moyer & Whitmore 1976). Third, the *behavioural approach* has concentrated on the human and social elements of channel functioning (Alderson 1965). Fourth, the *political economy approach* focuses on incorporating the internal and external environment while concentrating on the channel dyad (Arndt 1985).

More recently, the *network approach*, has focused on network dimensions of business markets as opposed to only considering dyadic relations in isolation (Håkansson & Snehota 1995; Wilkinson 2001). There is now a realisation that the complexities within the environment (for example, all other direct and indirect ties) impinge on the focal relationship and so must be studied. Therefore, the purpose of this research is to '*investigate the causes and consequences of alienation within the network paradigm*'. This extends a study of alienation applied to a political economy framework (Benson 1981; Olson 1969; Seeman 1975) undertaken over many years.

As mentioned, alienation is a concept that has been used in numerous disciplines to explain a person's feeling of separation from a social context; that social context can be society in general, the political arena or the work environment. Despite its possible importance, alienation and the attendant negative relationship effects have not generally been studied in channels. An exception is Ray (1985), who defined channel alienation as 'a sense of separation or estrangement from the norms and values of distribution channel institutions or practices'. Ray found that wholesalers experience feelings of separation and discontent. Her major finding was that power, or its opposite, powerlessness, was the dominant element of her conceptualisation of alienation present in channels. Ray examined the internal environment between channel partners (direct channel relations) but did not address the external network environment (indirect and extended relations role). Iacobucci and Hibbard (1999) assert that in all marketing channel relationships, one of the parties eventually will engage in an action that another channel member considers potentially destructive for the relationship. These

actions or conflicts and how a particular channel member reacts have implications for the long-term viability and success of the relationship.

The research problem addressed by this research is as follows:

How does alienation manifest itself in individuals who are in channel marketing relationships to create feelings of separation that may impact negatively on the relationship quality and channel relationship performance?

The research examined alienation and its multi-dimensional nature from both an internal and

external channel network environment. This involved extending the research of Seeman (1959, 1975, 1989) and considering alienation dysfunctions that created a sense of real or imaginary separation in the internal channel network. The manner in which structural market conditions (Methlie & Gressgard 2006) in the external channel network interact with the internal network channel environment to create alienation, were also considered.

Methodology

To empirically investigate alienation a case study methodology was used, and data management, narrative analysis and thematic analysis were applied in the analysis of the data. The design utilised multiple sources of evidence combining archival records, interviews, industry reports and observation as recommended by Eisenhardt (1989), Miles and Huberman (1994), Reisman (1993) and Yin (1984). The method addresses the criticism that research on alienation rarely uses carefully designed case studies to explore the dimensions of subjective experience of alienation in various social contexts (Heinz 1991).

This paper will explain how alienation applies to channels of distribution. The literature that has pioneered this union of research will be examined and a justification for the application of alienation to marketing channels will be presented. Finally, a conceptual model will be developed to explore how alienation is manifested in dyadic relationships between vendors and wholesalers.

Marketing Applications of Alienation

The perception of a connection between alienation and the consumer behaviour side of marketing is long standing. Fromm (1955) regarded the hallmark of the alienated as being the 'marketing orientation,' through which the world and its people are commodities to which monetary values may be assigned and which then may be peddled. In line with previous discussions, this leads to the 'separation' that is alienation. Adding to alienation, are meaningless purchases made by deceived consumers, which result in dissatisfaction, fuelling further alienation. Fromm believed that the economic system is responsible for alienated feelings in line with the discussions of foundation thought.

Consumer Alienation in the Marketplace

Allison (1978) defines consumer powerlessness as the feeling held by consumers that they are unable to help determine market practices, and are unable to control the market environment or events within the marketplace. Consumer or marketplace alienation is seen as a psychological attitude with four dimensions of marketplace powerlessness, normlessness, isolation and self-estrangement (Allison 1978). Allison was first to apply Seeman's alienation

dimension to the study of consumer behaviour. The marketplace is conceptualised here as all institutions involved in offering goods and/or services and the practices or activities conducted by these institutions.

Lambert (1981) suggested that an alienated consumer believes he or she has no control over any of the aspects he or she faces in dealing with the marketplace. Consumer normlessness may be described as a belief that marketers will behave in ways that are unethical, unjust and undesirable in order to meet their selfish goals, i.e. that marketers are not to be trusted. Normlessness is often manifested in unclear standards for buyer behaviour. Social isolation from the marketplace is characterised by feelings of estrangement from the institutions, prac-

tices, and outputs of the market system. Allison (1978) argued that feelings of self-estrangement arise from an inability to identify with behaviour traditionally associated with the consumption role.

Most recent studies on consumer alienation examined attitudes toward a firm or industry and complaint intentions. Kim, and Shin (2003) found that a greater level of consumer alienation leads to a lower likelihood of complaint.

Alienation in Channels of Distribution

Ray (1985) conducted the first research on the sources and consequences of alienation in the distribution channel. Ray's study was exploratory and empirical in nature, and she was influenced by the Churchill method to develop scales that could be used to measure channel alienation (Churchill 1979). Ray was guided by Seeman's (1975) six interrelated dimensions of alienation which she related to the context of channels.

1. Powerlessness is defined as the sense of low control and relates to the power literature in channels.
2. Meaninglessness is characterised by a lack of clarity. When a channel member does not properly understand his or her role or what is expected of him or her, conflict can follow (Stern 1969, p. 21). Therefore, meaninglessness was included for channel purposes. When communication breaks down, misunderstanding or meaninglessness is the result.
3. Normlessness relates to expectations of unethical behaviour from a supplier. The questioning of ethics and expectations are commonplace Hunt (1972).
4. Self-estrangement is associated with activities that are not intrinsically rewarding. However, self-estrangement is manifested in work, as part of worker alienation. Although channel intermediaries could certainly experience self-estrangement as a result of their work environment, these feelings would exist outside the supplier-wholesaler relationship. For this reason, it was not included as an acceptable dimension for channel alienation.
5. Social isolation occurs when one feels excluded or rejected. As channel relationships are about human interaction, the relationships will be characterised by human feelings. A sense of rejection could be experienced if a channel intermediary is not ignored by his or her supplier's account manager, not consulted regarding credit terms or policy issues by his or her supplier. Social isolation has the potential to be an important channel alienation dimension.
6. Cultural estrangement occurs when an individual rejects commonly held values in society. It may reflect an individual's distaste of the 'establishment', but would probably not be applicable to a specific channel environment.

The findings of the research identified that wholesalers in a channels context can experience feelings of alienation. The alienation dimension of powerlessness, the opposite of power, rated highly with wholesalers surveyed compared to other dimensions. The wholesalers who experienced powerlessness were less likely to complain, directly to their vendors. They had a tendency instead to complain directly to competitors of conflicts. They also had a tendency to ignore any news or information originating from their supplier.

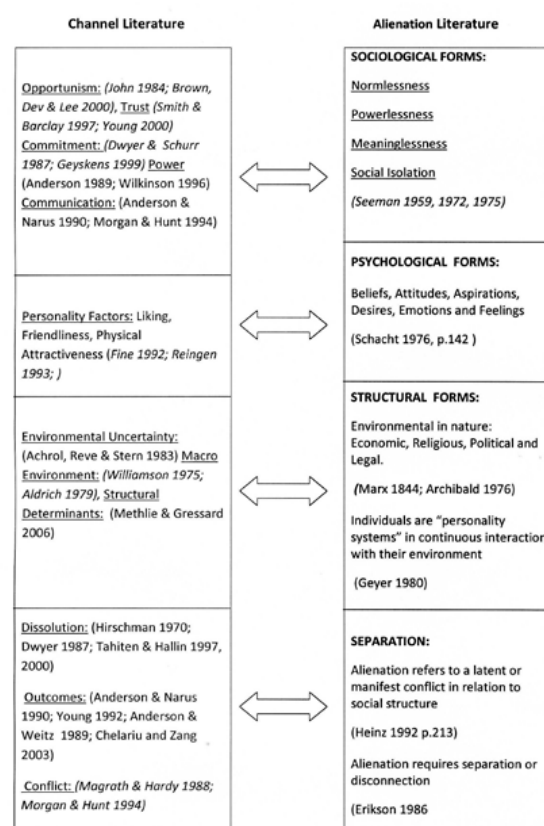
The paper will add to the Ray study by recognising that channel alienation may well be effected by channel structure complexity and lack of communication exchange between chan-

nel partners. The paper positions alienation as a state of conflict between two channel partners that has a psychological component that may be real or imaginary, impacted by structural conditions in the environment that may lead to separation.

Channel Alienation Link

As indicated alienation has not been studied much in channels of distribution. This is surprising because as the following discussion highlights there are strong similarities between well researched channel constructs and the dimensions of alienation. In addressing our first research objective (Chapter 1), that of understanding the nature of alienation and how it is manifested in channel marketing relationships, Figure 3.1 compares the parallels between the alienation and channels literature.

Figure 3.1: Channel Alienation Literature Link



Seeman's alienation form of normlessness is represented in the channels literature as feelings of distrust in people, of business channel practices and unethical tendencies manifested by unclear channel role clarity, lack of commitment and opportunistic behaviour. While there is limited research on distrust in business marketing, trust has been extensively examined (Smith & Barclay 1997; Young 2000). Trust or trusting attitudes develop over time through increased communication interaction between channel members (Anderson & Narus 1990; Doney & Cannon 1997; Morgan & Hunt 1994; Young 1992). This allows for clarifying objectives and understanding, and builds positive emotions (Young 2000). The feeling of distrust that is at the heart of the normlessness dimension is dysfunctional and runs counter to trust. It is manifested through infrequency of communication and lack of role clarity of your channel partner. This affects commitment by one channel partner who often takes a short-term orientation (Dwyer, Schurr & Oh 1987) instead of a long-term orientation toward their

relationship. The relationship interactions are not a smooth relationship (Anderson & Weitz 1992; Mohr, Fisher & Nevin 1996), as they are underpinned by opportunistic behaviour by one channel member over the other. Opportunistic behaviour by one channel member has been shown to be associated with decreased trust and commitment (Brown, Dev & Lee 2000).

Seeman's alienation form of powerlessness in a channel perspective, is the feeling held by a channel member that they are unable to help determine channel practices, and an inability to control events in the channel relationship. Power in channels has a rich history with French and Raven's (1959) work listing the five bases of power: reward power, coercive power, legitimate power, referent power and expert power. Power is the ability of one channel member to get another to undertake an activity they would not normally do (Anderson & Weitz 1989). This ability can be manifested by one party attempting to control the other and is successful when one channel member modifies the behaviour of the other (Brown, Lush and Nicholson 1995; Heide & John 1992; Mohr, Fisher & Nevin 1996). This feeling of powerlessness may be very evident and dysfunctional in channel relationships and is a well researched form of alienation.

Seeman's alienation form meaninglessness has received less attention than powerlessness. However, it is an important form in explaining dysfunction in channel marketing relationships. Meaninglessness, in a channels context, relates to a feeling by one party of poor communication and role ambiguity in the channel relationship. Research in channels has indicated that communication difficulties are a prime source of conflicts in channel marketing Relationships (Mohr & Nevin 1990). As Etgar (1979) found, conflict is fuelled by ineffective communication that leads to 'misunderstanding', which creates frustration and a sense of ambiguity in the channel relationship.

Seeman's social isolation as a form of alienation refers to a feeling by one channel member of exclusion from coordination activities. Social isolation leads to once strong relationship ties being substituted by weaker ties that adversely affect relationship quality. In distribution channels, coordination requires retailers and manufacturers to work closely together (Raju & Zhang 2005). The issue of alignment is vital for effective channel coordination, as without alignment communication may break down and channel members can feel a sense of exclusion from channel activities.

The psychological forms depicted in Figure 3.2 are derived from Schacht (1976) who highlighted the deeply embedded dissatisfaction with a relationship, with attention directed to an individual's perception, emotions, feelings, beliefs, attitudes, desires and aspirations. These are part of an individual's memory. The psychological and sociological forms of alienation have been considered in business marketing in the limited work that recognises the

centrality of emotions in business relations (Young 2006). Shaver et. al (1987) further stated that emotions play important roles in facilitating intuition and psychological and relational health, necessary for effective performance.

Previous research has focused on the cognitive antecedents of trust between buyers and sellers, those more impersonal, detached, and dispassionate analytical antecedents, such as a common value system and frequency of interaction. Less attention has been paid to the role played by more personal and emotional factors, such as a distributors liking the manufacturer's sales representative (Fine 1992; Reingen & Kernan 1993). In a channel environment, if a distributor does not like the manufacturer's sales representative, this may have a negative im-

pact on relationship quality and outcomes. Liking has long been believed to be a powerful human motivator for relationship development and maintenance (Altman & Taylor 1973). Liking has been found to build trust and create personal attachment, thus reinforcing economic bonds between channel partners (Nicholson, Compeau & Sethi. 2001).

The structural forms of alienation depicted in Figure 3.2 refer to economic, financial, cultural, religious, political, economic and legal forms. These relate to what Marx refers to as objective inputs in a individual's external environment that interact to potentially create a subjective state of alienation between individuals (Archibald 1976).

The structural forms of alienation have considerable congruence with structural forms or conditions of the channel environment. Economic, technological, competitor, legal, cultural, and financial conditions impact on channel relationships and create uncertainty. As previously discussed in the channels literature, the construct 'environmental uncertainty' has been frequently included in conceptual and empirical studies of distribution channels (Achrol & Reve 1983; Achrol & Stern 1988; Anderson 1985; Arndt 1979; Etgar 1977; Heide & John 1990; Noordewier, John & Nevin. 1990; Stern & Reve 1980; Williamson 1975). The construct refers to the 'unanticipated changes in the manufacturer's environmental setting that makes it difficult for the manufacturer to predict the future outcomes related to its decisions' (Klein, Frazier & Roth. 1990).

Methlie & Gressgard (2006) examined five environmental dimensions: market, actor, product, influence, and transaction. First, market measures include two main factors, fragmentation and knowledge. Fragmentation refers to the number of competing players on each side of the transaction, that is, the number of suppliers and the number of buyers. The actor dimension includes measures of scale and scope economics, and cost variables. The product dimension defines the content of a transaction and is measured by the degree of differentiation potential and the complexity of the service, both production complexity and buying complexity. The influence and transaction dimensions describe the exchange. Influence encapsulates the social mechanisms, and transaction refers to the economical conditions that affect the relationships.

Alienation and its relationship to marketing channels in Figure 3.2, links and ties the nature of conflict, dissolution and outcomes with the concept of separation or disconnection in a social structure (Erikson 1986).

The nature of conflict, central to understanding alienation in channel relationships, has a real and imaginary dimension that if not recognised can create a separation in channel relationships. It is the perception of harm caused by a conflict that is difficult to identify over real harm. This perception of harm has a psychological component relating to conflict (McIntyre 1997).

Conflict can result in varying degrees of separation that may result in the dissolution of the channel marketing relationship. The channels literature stresses the importance of trust and continuation as desirable states (Iacobucci & Hibbard 1999; Perez & Descals 1999; Young 2006). However, research on dissolution would indicate that there are different strategies for disengaging with a channel partner, which might involve direct or indirect approaches (Alajoutsijarvi, Moller and Tahtinen 2000; Baxter 1985; Hirschman 1970).

Based on the channels and alienation literature reviewed, a conceptual model can be developed to better understand how alienation is manifested in channel marketing relationships.

This may be done by relating how objective and subjective elements interact to create real or imaginary conflicts, that create a separation in channel marketing relationships.

Conceptual Model of Alienation in Channel Marketing Relationships

The development of the conceptual model of alienation in channel marketing relationships compares alienation and channel literatures. The conceptual model is presented in Figure 3.2.

The conceptual model presents how alienation is a process whereby structural conditions in the industry and relationship environment are subjectively interpreted by channel partners. The resulting behaviour, positive and negative outcomes, is based on the interaction of the behaviour (IMP). This is a feedback model because it recognises past alienating or de-alienating outcomes as contributory factors to alienation.

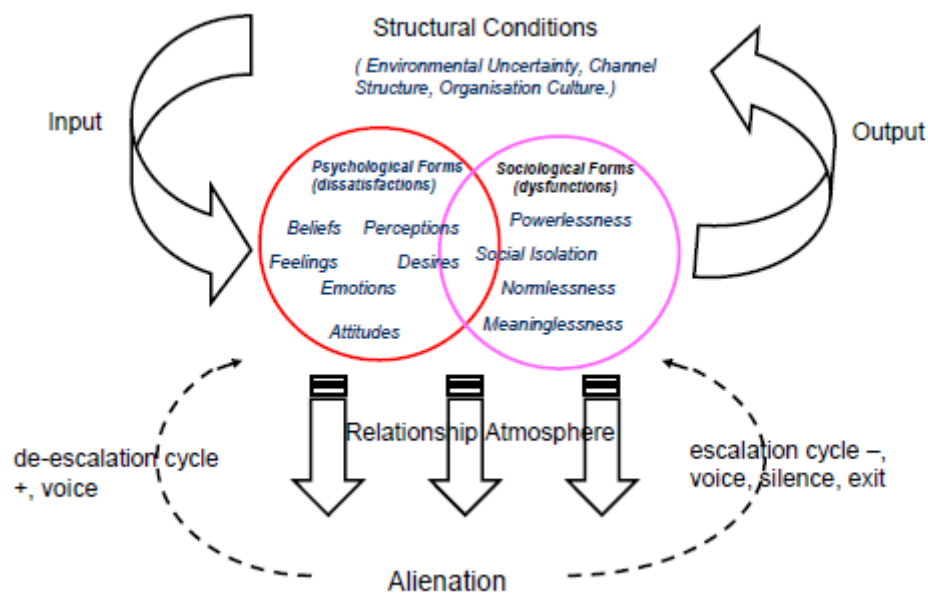
The structural conditions are environmentally determined. Structural conditions can be numerous. In a channel management environment these structural conditions of interest have been identified as market, product (service), influence (social mechanisms) and commercial agreement (risk/return), as identified by Methlie and Gressgard (2006).

The input arrow in Figure 3.2 relates to the structural conditions in the environment that are observed by the individual channel member in the channel relationship, or loosely defined as all incoming stimuli. These create challenges and opportunities for the channel member which creates a greater or lesser propensity for alienation as depicted by the input arrows. The output arrow links the alienation (psychological or sociological forms) to the channel members' reactions or actions and impact structural conditions in his /her environment.

At the heart of Figure 3.2 is the alienation of the individual channel member and their world. This is intended to capture the psychological and sociological forms of alienation that interact with structural conditions to create a myriad of alienations.

Psychological forms of alienation, derived from Schacht's (1976) work, highlight the effects of the deeply embedded dissatisfaction with a relationship, with attention directed to an individual's perception, emotions, feelings, beliefs, attitudes, desires and aspirations which are part of the individual's memory. In a channels environment, the importance of emotions in building trust in business relationships has been considered in terms of trust and the related feeling of liking (Young 2006) The need for liking and trust are central parts of human psychology (Asch 1952; Nicholson & Sethi. 2001) and their absence (or opposite) create the seeds for alienation.

Figure 3.2: Conceptual CMR Model of Alienation



The sociological forms or dimensions of alienation relate to dysfunctions in relationships and are derived from Seeman (1959, 1975, 1989). His dimensions of alienation powerlessness, social isolation, normlessness and meaninglessness, were applied by Ray (1985), to study and re-conceptualise alienation in a channels environment. The Figure 3.2 depicts psychological and sociological alienation as overlapping because through relationships, psychological states are informed and modified. The next part of the model refers to relationship atmosphere and the feedback loops of de-escalation and escalation of conflicts that lead to de-alienation and alienation in channel marketing relationships.

The relationship atmosphere refers to the dyadic exchange channel partners have with each other over time. The relationship atmosphere may be seen as open or closed and can influence the ability of both channel partners to resolve conflicts. If the relationship atmosphere is open it is based on trust and recognition that each partner will resolve conflicts to the benefit of each other. A closed relationship atmosphere is characterised by distrust and a recognition that only one party's interests will prevail when conflicts arise. The model depicts two scenarios that can increase or decrease alienation in Figure 3.2. The de-escalation cycle uses voice or open dialogue with the other party to reduce conflict intensity and the psychological and sociological states of alienation. The escalation cycle uses voice, silence and exit communication strategies to increase conflict intensity. This ultimately can lead to separation in channel relationships. The use of voice is a joint discussion between channel partners which may often lead to terminating or continuing the relationship without hostility or arguments. The use of silence implies that there is an unspoken understanding that the relationship has ended. This happens when the disengager reduces the frequency of communication and investment in decreases investment in their channel partner. Using exit strategy results in one partner explicitly stating that the relationship is over leaving the other partner no opportunity to discuss. The escalation cycle results in eventual break down of the relationship caused by a gradual build up of dissatisfaction with the other party resulting in the un-bonding of the channel marketing relationship (Baxter 1979, 1985).

The conceptual model developed in Figure 3.2 guides the design of the research to be con-

ducted and the analysis of its findings. The conceptual model will be applied to explore channel relationships in the Australian Information Technology channel environment. It will explore how structural conditions in the channel environment interplay with the psychological and sociological forms of alienation a channel partner experiences to create separation in relationships. The way this process determines relationship outcomes is a further focus of the research presented in the following chapters. The conceptual model of alienation in channel relationships developed in Chapter 3, guides the application of a multi-method case study approach, which is described in this chapter. The design is deliberate as it allows the meaningful investigation of the complex interplay of the alienation process and addresses the criticism of Heinz (1991) that the investigation of alienation, and the measures used to explore it, are generally alienating in themselves. He mentioned that rarely are carefully designed biographical and/or case studies used to explore the subjective experiences of alienation in various social and economic contexts.

Description of the Study Undertaken

The research setting and approach selected, address the exploratory nature and multi-data collection method of this research on alienation in distribution channels.

The Research Setting

The research focus is the Australian Information Technology (IT) industry, focusing on the time period 1986 to 2007. The industry and associated distribution channels are an interesting context in which to study business channel evolution because of their rapid development and maturity over a relatively short time span. Australia is a nation of sophisticated IT users who eagerly embrace new technology. The Australian market is used extensively by leading international companies to develop and trial new applications (Chaplin 2007).

While Australia is ranked 54th in the world by population – it is the fourteenth largest IT market in the world and the fifth largest IT market in the Asia-Pacific region, after Japan, China, India and Korea. Indeed, the industry in Australia continued to enjoy a strong compound annual growth rate of 12.8 per cent between 2003 and 2007 – faster than Japan, Hong Kong, Singapore, South Korea and Taiwan. The 30,300 Information Technology (IT) businesses in Australia generated revenues of \$79.9 billion in 2007. To put this contribution in perspective in relation to the Australian economy, the IT industry contributed 4.6% of GDP in 2007, comparable to other sectors in Australia such as agriculture industries (3.1%) and the mining sector (5.0%) (Chaplin 2007).

Most of the leading international IT companies have operations in Australia including BenQ, Hewlett Packard, IBM, Toshiba, Toshiba, Microsoft, Nokia, Panasonic, SAP, Oracle-PeopleSoft, NCR, and Sun Microsystems. Underneath locally listed companies and multinational corporations is a plethora of small privately owned companies competing for the ICT dollar. (Chaplin 2007). The distribution channel structure includes distributors (wholesalers), retailers, and resellers. Resellers are split into two main groupings – those that focus on selling products ('volume movers'), and those focusing on services ('value providers') (Chaplin 2007). The Australian IT industry was chosen as the focal case because it represents an important, dynamic and evolving industry of national and international importance. However, the research conducted and methods used could equally be applied to different industry types.

Case Research Design

The approach used to develop a case study was guided and adapted by Eisenhardt (1989) who developed a three phase framework for case research design. The approach involved the following:

Phase 1 – involved selecting the case to be analysed which was the Australian IT industry and developing a multiple data collection method involving archival research and expert industry interviews.

Phase 2 - involved coding the data and analysing the data within the case for emergent themes.

Phase 3 - analysed the themes relating to current literature and developed conclusions that advanced the understanding of alienation in channel marketing relationships.

Case Research Protocol

Structure and Content of Protocol

Eisenhardt (1989) and Yin (1984) both highlighted the need for a case study protocol that can be used as a guide in conducting case research. According to Miles and Huberman (1994), such a protocol should outline the procedures and rules that govern the conduct of the researcher and the research project. Despite the averred importance and criticality of case study protocols, it was surprising that there appear to be very few established protocols published in the literature relating to case research. The case study protocol for the research for this research was adapted from Miles and Huberman (1994). The purpose of the protocol is to ensure that rules and procedures are clearly articulated. The protocol for case study research commences with a Preamble, Procedures, Research instruments and Data analysis guidelines.

Preamble

The purpose of this section is to ensure confidentiality and data storage for the research conducted. This was done via UTS ethics approval. Within the ethics application, protocols were articulated to ensure sensitive information was protected e.g. names of individuals or companies are not named or quoted by the researcher. Data storage protocols were articulated, e.g. archival data and interviews were digitally stored on a main computer and a back-up device that is kept in a locked cabinet. The researcher received permission from informants to include specific quotations at the time of interviews.

Procedures

The following procedures governed the researcher's conduct during the course of the data collection.

Procedure 1: Archival Research

The archival research was conducted to frame the case study of the Australian IT Industry. The archival research consisted of text-based material from 1986 to 2006. A total number of 1550 trade journal articles were considered for coding, and a final sample of 605 journal articles was coded. The analysis of archival data avoids problems of imperfect recall and because the material used (articles in trade journals published during the review period) is from the perspective of many different observers, we also avoid dependence on the perspectives and

interpretations of only a few observers. The limitation of trade journals is that they have a tendency to understate conflicts because of their sensitive nature. The in depth interviews were deployed to enable a deeper probing of conflicts in channel relationships.

The archival material was sourced from industry trade publications such as:

- 1.. Computer Reseller News and Australian Reseller News. These publications have a 20-year history and capture the technology and channel relationship events in the Australian IT Industry. Archival material is available only in text form from 1986 to 2006 and in digital form from 1996 to 2006. The uses of key words (conflict, trust, distrust, control, communication) that are subsumable under the alienation theme were used to identify key articles.
2. Australian Newspaper Information Technology. This regular Tuesday computer supplement was used to secure hard copy of key technology events and relationship events in the Australian IT industry. This publication secured 20 years of data.
3. Other sources. Key industry books and publications were sourced to develop and frame the critical events e.g. IDC Industry reports

This digital and text-based material was analysed using an Excel spread sheet and non-digital material was read and analysed thoroughly. The data gathered enabled a preliminary map of the Australian IT channel network to be developed with particular reference to relationship and technology events.

Procedure 2: Expert Interviews

A series of eight semi-structured, taped interviews with industry experts were conducted to gain an appreciation of technology and relationship events that have occurred in the Australian IT industry. The industry experts were chosen based on the following criteria:

1. A minimum of 10 years of experience in the Australian IT industry.
2. A variety of senior management sales and marketing roles in the Australian IT industry.

Industry experts were initially approached by email and then a follow-up phone call was initiated to secure an appointment. The semi-structured approach was used to provide direction but maintain a degree of spontaneity in the interview process. Experts were interviewed at their business premises and these interviews lasted between 45 to 60 minutes. Interviews were recorded and later transcribed. The interviews were read for clarity and coded applying the alienation archival data code book refer Appendix 1. The expert interviews added more credence and validity to the archival research.

The archival material and expert interview data were integrated to: (i) identify the technology events that have shaped the Australian IT industry; (ii) document the changing nature of relationships in the Australian IT channel and systematically relate channel processes to alienation.

Procedure 3: IT Wholesalers

Twenty semi-structured, in-depth interviews were conducted with IT wholesalers in Australia. In-depth interviews were deployed to better understand the deeper nature of alienation experienced by individuals from a wholesaler perspective. The role of the IT wholesaler is to

distribute a range of software, hardware and peripheral products through a network of resellers. The selected IT wholesaler firms were chosen because they represented a larger sample and have been a part of the channel for 20 years. This makes them a better focus than retailers of whom there is a smaller number and shorter history. The types of wholesalers chosen for this study and interviewed were typically hardware and software focused.

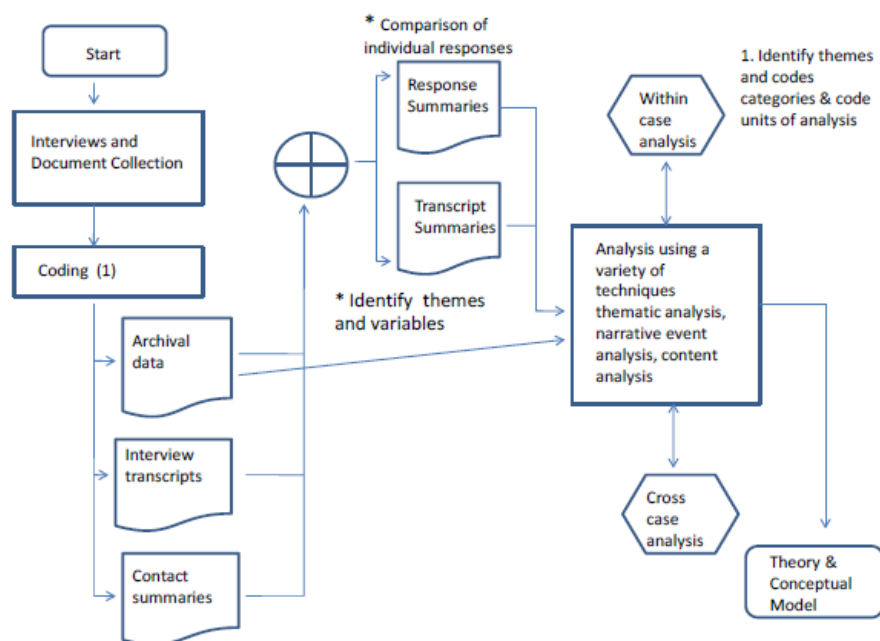
The selection of IT wholesalers was based on whether they operated in top-tier, mid-tier or specialty distribution segments. Respondents interviewed were senior sales and marketing managers with large influential wholesalers, or wholesaler principals.

Appointments were made by accessing a wholesaler directory and sending an email and making a follow-up phone call to secure the appointment. Appointments were very difficult to secure with a 50 per cent rejection rate.

All interviews were held at the wholesaler's premises. The length of interviews was 45 to 90 minutes, and interviews were recorded digitally and transcribed. Field notes were taken during and after each interview to summarise the main themes.

The case analysis process in Figure 4.1 can be broken down into four steps as recommended by Yin (1994).

Figure 4.1: Case Analysis Process, Developed from Yin (1984)



In line with Figure 4.1, a four-step analysis process was used. First, archival data was examined sequentially to identify the actors involved, the nature and timing of critical events and other processes taking place, and a data base of this information was developed. Second, the impacts of a major event or series of events were explored and those leading to a phase change, i.e. a substantive change in the channel configuration, were identified (Abell 1987; Franzosi 1998). Attributions of importance and causation were noted and similarly triangulated. Frequency of mention by experts and annual review pieces in the trade journal as to key events in the industry for each year were also used to draw conclusions about the importance of events, relationships between them and their impact on evolution. The event map and data base were progressively updated throughout. Finally, an event map was used to guide an evaluation of the accumulated evidence, and conclusions drawn as to how and why the Australian IT channels developed over time and how the process of evolution itself changed in four phases identified over a twenty year time frame.

Research findings

The research was concerned with the exploration of the deep nature alienation in channel marketing relationships. A conceptual model Figure 3.2 was developed to understand the nature of alienation in channel marketing relationships. At the heart of the findings of this research, is support for the theories of Schacht (1976) that alienation manifests in two main forms - psychological and sociological. The psychological forms of alienation are of a perspective-relative character (Schacht 1976), that is, they centre on the dissatisfaction with the state of affairs that was dissatisfying because of self-understanding, beliefs, conceptual repertoire, desires and feelings that individual's experience. In other words it is very individual. The framework of each individual varies and evolves. Their perception of a particular conflict may vary in intensity depending on the degree of satisfaction and dissatisfaction of the individual wholesaler with the vendor over time. This was observed implicitly in the discourse with informants and the use of personal/self directed emotion labels such as 'panic' (DeRivera 1977). However these individual manifestations of alienations were largely grounded in, and inseparable from, sociological forms of alienation, as outlined below.

In this case study the sociological forms of alienation identified by Seeman (1959, 1976, 1989) centred on dysfunctions that characterise relations between wholesalers and distributors and their vendors. Sociological alienation emerges for channel participants when there is a failure to act in accordance with social norms – particularly inside channel relationships. This too is context-specific. In other words, behaviour that is dysfunctional in relation to one social structure may be functional in relation to another, although there are norms about what constitutes fair and reasonable business practice. Also, the channel structures in which informants interact do not stigmatise all alienation-generating behaviours, as what is stigmatised is also context-specific. In addition the relationship between the intensity of conflicts and the degree of separation it causes between channel partners is variable. In the main it is who experience alienation. wholesalers are seldom 'victims'.

The relationship between conflict and alienation is a complicated one. For some intermediaries alienation adversely impacts upon the relationship function, but in other situations alienation is a coping mechanism. Separation resulting from feelings of alienation enables relation-

ship continuity to be maintained or assists in relationship termination with vendors. This is somewhat akin to the various forms of conflict that have been explained in the channel literature; some conflict forms destroy relationships and others may be essential for growth, health and/or the vitality of vendor distributor relationships. One example is the conflicts by vendors that create tension with wholesalers, where there is the threat of terminating their distributor agreement if they fail to pay within agreed credit term, or fail to meet monthly sales targets. One could argue a degree of tension inflicted by the vendor on the distributor creates a sense of urgency and combats complacent behaviour, in which case it is productive and probably does not lead to alienation. The psychological nature of alienated conflict (McIntyre 1997) involves a perception of harm accompanied by psychological withdrawal. This research has identified that the consequences of this psychological threat can be substantial. This withdrawal in turn can lead to a decrease in, or termination of, conversation and communication between channel partners and can further exacerbate relational tensions. In other words the conflicts can begin as speculative and imagined, i.e. exist largely or entirely in the mind of a channel participant, but can develop into full blown conflict and relationship termination.

Channel alienation can be partially explained by power exerted by vendors over the wholesalers. The majority of wholesaler informants experienced powerlessness, or a sense of not being able to influence outcomes with their vendors. The more transactional were the wholesaler relationships, the less the ability to control events with vendors. These findings illustrate that wholesalers who were moving away from transactional products to more service-based solutions had more control in their relationships. Size is

Larger vendors have a tendency to alienate smaller wholesalers in part because these wholesalers are not likely to complain to their vendors due to the wholesaler's substantial dependence. Instead the wholesalers tended to suffer in silence and internalise their grievances. However, not all wholesalers are victims. The research found that many wholesalers were quietly resilient and often were making alternative plans, such as switching suppliers and developing contingency plans.

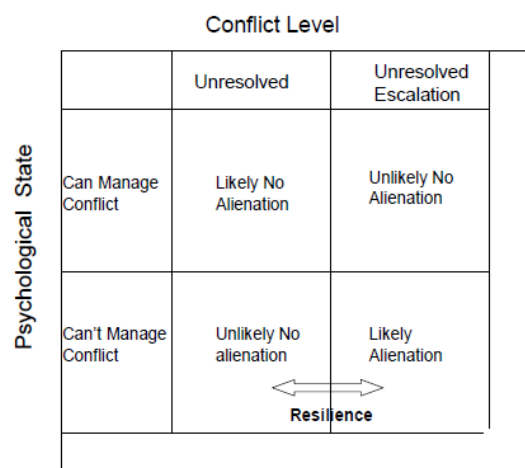
Alienated wholesalers experience distrust and a feeling of lack of control in dealing with vendor partners. This alienation form of normlessness was perpetrated by vendors breaking promises, poaching partners' staff, servicing accounts direct and not being consistent with their channel policies and strategy. Trust has been studied in-depth in channels and research is uncovering that trust has many forms. There is less work on distrust in the literature. This research contributes to the area by identifying distrust as an important form of alienation. The wholesaler informants characterised distrust as feelings of withdrawal or separation in the relationship and of holding back in committing to the relationship. Conflicts are real but emotional scarring can be caused by vendors who place inexperienced vendor account managers in positions of managing multi-million dollar accounts. This was a common theme that emerged from the research.

As already noted, alienation in the form of social isolation was experienced by wholesaler informants. The feeling of exclusion from channel coordination activities was evident and often deliberate. Vendors were found to use isolation as a way of disengaging from partners who failed to achieve their commercial obligations, such as failing to meet sales targets or not paying their account within specified payment terms. However the act of disengaging and not communicating with informants may have other causes. Whatever the cause these acts are likely to result in psychological damage. Imagining the worst created tension in informants who were sensitive about losing their distributorship or about being judged by the vendor management as a poor performer and was likely to result in loss of self-esteem.

The sense of meaningless is another alienating form experienced by informants. Many wholesalers were unclear about their role, and most often this was precipitated by a lack of communication with them. Role ambiguity was evident with many wholesalers anxious about their vendors selling direct and undermining their role as a wholesaler. The conflict of vendors adopting a multi-channel model selling direct if poorly communicated by the vendor was shown to be a major trigger point for conflict and alienation. Vendors need to have clear rules of engagement and channel strategy and communicate frequently.

Alienation can be explained by growing dissatisfaction of informants caused by increasing conflict levels between channel partners and their psychological resilience to cope with and manage conflicts. Figure 6.2 highlights the importance of psychological states of alienation experienced by informants caused by the conflict level experienced by an individual channel member. The model below shows the conflict level on x axis and psychological state on the y axis for an individual channel member. The dissatisfaction experienced by the individual channel member often relates to the level of conflict and the psychological state of the individual channel member to deal with the conflict. In the model, unresolved and escalating conflict might exist but does not lead to alienation. This may be due to the power dependency that a small wholesaler informant has with a larger influential vendor. The other situation might be unresolved conflict and a psychological state of the individual channel member not able to manage the conflict with his vendor partner. The unresolved conflicts might be issues of over distribution, cutting rebates, vendor selling direct. In this instance the wholesale informant might be in a psychological state of high dissatisfaction with their vendor but perseveres with their vendor relationships. The triggers that escalate unresolved conflict

Figure 6.2: Psychological states leading to alienation



to create deeper psychological state of dissatisfaction leading to likely alienation can be explained by alienation trigger points. These trigger points operate on two levels. Level 1 is when the vendor account manager is communicating infrequently and is ineffective in resolving escalating conflicts. The psychological state of dissatisfaction has reached a tipping point where the resilience level of the wholesale informant has been tested and they now question the viability of continuing with their relationship. Level 2 is continuing state of the relationship over time that leads to a deeper sense of psychological dissatisfaction, isolation, and distrust and eventually lead to alienation that result in termination of the relationship.

In conclusion, we find alienation in vendor distributor relationships is highly 'elastic'. Ven-

dors and distributors over time are moving closer, or are separating and moving away from each other, based on the degree of imaginary, temporary or permanent conflicts that occur.

Managerial Implications

There are important implications for managers emerging from these findings. First, many of the causes of channel evolution are largely beyond the control of the individual players within that channel (Wilkinson & Young 2002). Effective response to channel evolution is in part via effective channel management that focuses on ways of building the capacity to work with channel partners to jointly deal with, cope and manage these changes. The rationale is that additional skills and resources that arise from such partnering give organisations greater capability to deal with changes (Ritter, Wilkinson & Johnston 2002).

The major contribution of this research has been the exploration and application of the concept of alienation in a marketing channel network. Marketing and channel practitioners could benefit from the knowledge of the effect that channel alienation has on managing their relationships. Understanding the nature and intensity of conflicts in channel marketing relationships enables vendors to mend relationships before relationships are terminated.

Finally, while Ray (1985) developed a causal model relating alienation to the degree of satisfaction between channel partners, along with exogenous power sources and environmental variables and found the fit to be marginal. A limitation of the Ray (1985) study was that it needed to explore deeper the dimensionality of alienation, identifying the factors that cause a reduction in alienation, more accurate validation of alienation measures and the use of qualitative research over time to measure how alienation is manifested in channel relationships.

The paper adds to Ray (1985) by recognising that channel alienation is multi-dimensional in nature and is impacted by structural conditions in the environment and the inter play of psychological and sociological alienation form that an individual channel member experiences to create de-escalation in (de-alienation) or escalation that lead to increased state of alienation in channel marketing relationships that leads to separation or un bonding by both channel members.

Future Research

From these patterns some cautious extrapolations emerge to be further tested. First, rapidly evolving structural conditions lead to a greater degree of evolution of channel structure than would otherwise occur. We would expect to see channels associated with markets in rapid expansion or contraction and/or those with rapid product/technology evolution, changing in scope as well as scale with corresponding changes to channel relationship functions (Dwyer & Welsh 1985; John & Reve 1982) and character resulting. Second, we would expect to see relationships characterised by opportunistic collaboration to cope with channel evolution, particularly if the changes are rapid. Third, such collaboration will be likely to be unstable with probable high levels of conflict and much of that conflict, permanent and dysfunctional; as such collaboration is not about achieving mutual benefit but trying to retain one's own revenue and margin. Finally, effective channel relationships would only be expected to emerge in the medium and long term when channel participants had consolidated in ways that enable them to cope with new conditions, and with the process of continuing change itself, and when these relationships were configured in ways that led them to seek competitive advantage in partnering relationships.

Limitations of Research

The nature of alienation may require further consideration. The very limited amount of pre-existing theory applying alienation to a channels context has been used but the quality of this and the relevance of the application of other discipline areas theory to channels is open to further debate. The lack of foundation in the area resulted may well have led to less effective probing into the psychological and sociological forms of alienation in the in-depth interviews with industry experts and wholesalers.

Overall, the insights emerging as to the limitations of this research show that the research reported in this report can be used as the basis for a continuing programme of research into the nature and role of alienation in distribution channels.

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INTENDED RESOURCE INPUTS INTO CUSTOMER RELATIONSHIPS

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Abstract

For buyer-seller relationships to work effectively and efficiently as conduits for transmitting and integrating resources, and hence to act as value creation vehicles, each partner needs to invest in the relationship and needs to make it easy for the other partner to access their resources. However, as every investment is risky and it is not sure whether their aimed-at objectives will be achieved, this paper addresses the question of which factors drive intention to invest into a customer relationship from a supplier's perspective. Three main factors are identified as investment drivers: first the relationship quality, second the suppliers' expectation of future access to the important intangible resources in their customers, and third the relationship value perceived by the supplier. We propose that all three have a positive effect on the supplier's intended resource inputs. After analyzing interview data from managers, the study analyzes survey data using the structural equation modeling technique and finds support for the propositions. We find that both relationship value and the expectation of future access to the resources in their customers have direct effects on suppliers' intentions to invest. Relationship quality also has a strong effect, which is mediated by the other two drivers.

Keywords

Intangible; performance; relationship; resources

1. Introduction

For buyer-seller relationships to work effectively and efficiently as conduits for transmitting and integrating resources, and hence to act as value creation vehicles, the partners need to invest in the relationship and need to make it easy for a the partner to access their resources. However, making resource investments and allowing a partner to access one's resources both have risks, so relationship conditions need to be such that a firm has the confidence to do so. In this paper, we assess several factors that will affect whether or not a seller will invest in the relationship with a customer. This issue is important, as the rapidly developing customer attractiveness literature indicates (Hüttinger, Schiele, & Veldman, 2012; Schiele, Calvi, & Gibbert, 2012).

Several theoretical streams support the notion that a firm needs to utilize its own and its partners' resources and integrate these sets of resources to develop future value if it wishes to be truly successful.

Medlin (2006) has clearly demonstrated the importance of resource ties to relationship performance for sellers from an IMP point of view. Morgan and Hunt (1999) use their resource-

advantage theory, based on the resource based view of the firm (RBV) (Barney, 1991), to list and describe a set resource categories to which a firm can usefully gain access through a buyer-seller relationship. These include such intangibles as the buyer's network of relationships and its informational resources in databases or elsewhere. Also with relation to RBV, Dyer and Singh (1998) argue in their Relational View that firms that are able to combine external resources in unique ways can generate relational rents and thus gain competitive advantages. Competence theory similarly identifies the usefulness to a firm of "firm-addressable resources" which are external resources that the firm does not own, but to which it has access through a relationship (Sanchez & Heene, 1997). And the service-dominant logic (S-DL) of marketing (Ballantyne & Varey, 2006; Vargo & Lusch, 2008) provides support for the concept that the exchange of resources through a relationship leads to the creation of value-in-use by the relationship.

The resources that firms access through relationships are both tangible and intangible. Access to these resources is vital for healthy collaboration and for optimal co-creation of value in the relationship, so the success of investments in resources to build relationships that allow for resource exchange is an important concern for firms.

In order to access resources and tap into the potential for future value creation by resource integration both partners need to work on development of the relationship. In general, resource integration takes place at resource interfaces, where resources can interact (Waluszewski & Håkansson, 2007) and, of particular interest to this study of buyer-seller relationships, at knowledge interfaces (Strömsten & Håkansson, 2007). This requirement to work on the relationship means that each partner needs to put resources, both tangible and intangible, into the relationship (Ford et al., 1998 page 27), or at least make them available, in order to be able to tap into the buyer's resources.

But as every investment is risky it is not sure whether the aimed-at objectives of such investments into customer relationships will be achieved from the supplier's point of view. And as those investments may cause high costs the question arises which factors drive a supplier's intention to invest into a customer relationship.

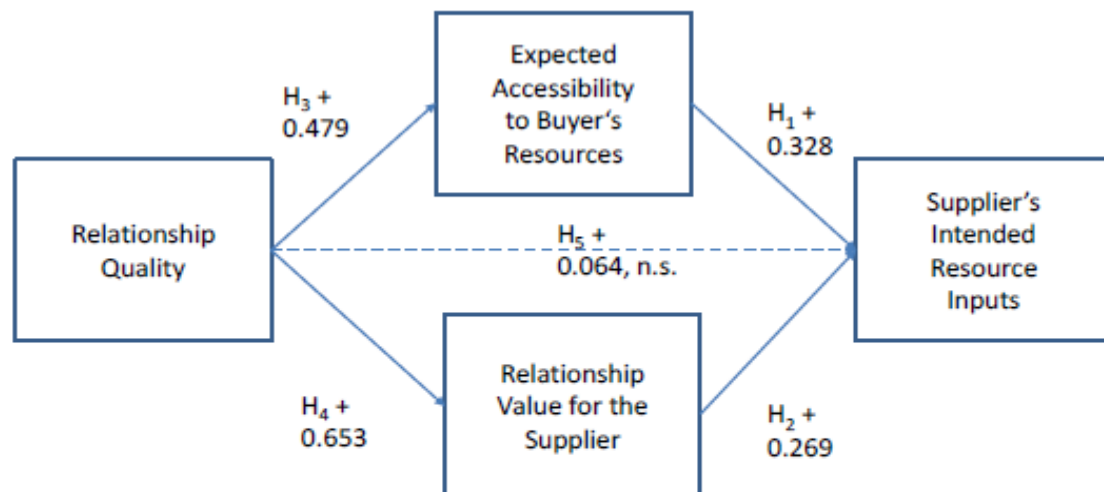
The IMP literature (e.g. Håkansson & Snehota, 1982), based on richly descriptive qualitative analysis, and the work of others such as Morgan and Hunt (1994) provides evidence that the nature of a relationship is an important factor in determining how well it allows for the transmission of intangible knowledge based resources and in turn how well it can aid long-term relationship success. Therefore, the study described in this paper proposes that the relationship quality in terms of trust and commitment into and satisfaction with the customer is a major driver of a seller's level of resource inputs into a relationship. The higher this relationship quality is the more two mechanisms are activated and at work that cope with or reduce the risks that are related to such investments: the first one is the expected accessibility to the buyer's resources and the second one is the value of the relationship the supplier holds with the customer. So, we further propose that the main effect of relationship quality on the supplier's intentions to invest resource into customer relationships is mediated by the expected accessibility to the buyer's resources as well as the value of the relationship.

Chiefly by analysis of quantitative data, the study provides support for the propositions outlined above. In the next section, the paper develops the conceptual model to test the study's propositions by reviewing relevant literature. It then describes the methodology and the analysis results. Finally, the paper discusses the implications of the study and future research issues.

2. Model Development

2.1 Model structure

The following discussion develops the structure of the model and its hypotheses as shown in Fig. 1.



Note: 1. numbers are standardized path coefficients
2. n.s. means not significant

Figure 1: Model

When investing resources into a customer relationship a supplier always has to deal with the trade-off between the attractiveness of the customer relationship as a positive expectation towards the relationship with this customer (Schiele, Calvi and Gibbert 2012) on the one hand and the risks of not achieving the intended objectives of the investments on the other. One can assume that the intentions to invest are higher the lower the perceived risk is that the investments will not result in the expected positive returns. What are the drivers of such an assessment?

Literature on perceived risk states that it is based on two components: first the perceived importance of the consequences which might result from an incident ("Amount at stake") and second the perceived uncertainty about the incidence of negative consequences ("Probability that it might go wrong") (Hogan, 2001).

In a relationship setting this risk can mainly be seen as an endogenous uncertainty which refers to the behavior of the partner (Williamson 1985, Das and Teng 1996). Besides that also exogenous risks exist that relate to environmental factors but which cannot be influenced by the relationship partners (Williamson1985).

Against this backdrop and in line with the literature on customer attractiveness, supplier satis-

faction and preferred customer status (Hüttinger, Schiele and Veldman 2012), we start from the premise that sellers' expectations on the customer behavior with respect to letting them receive the positive returns of their resource investments are essential for reducing their uncertainty. We assume that these assessments are mainly driven firstly by the seller's expectations on the accessibility to buyer's resources and secondly by the relationship value as assessed from the seller's point of view. Furthermore, we assume that both constructs are driven by the evaluation of the quality of the relationship with the respective customers. Thus, this study proceeds on the assumption that the supplier's intentions to invest into a customer relationship is mainly driven by the quality of the relationship. But this main effect is completely mediated by the seller's expected accessibility to buyer's resources on the one hand and the relationship value as assessed by the seller on the other hand.

2.2 Hypotheses

2.2.1 Expected accessibility to buyer's resources

Given the basic notion that getting access to customers' resources causes positive effects for the supplier the probability of receiving positive returns on investments into customer relationships should be higher the more likely it is that the supplier gets access to the certain customer resources (Baxter, 2012). Hüttinger, Schiele and Veldman (2012) argue that a customer's attractiveness, and hence its ability to attract investment from a supplier, is based on expectations and is therefore future-oriented. This expectation will drive supplier behavior. Thus we hypothesize:

H₁: The higher the expected accessibility to buyer's resources is, the greater is the supplier's intention to invest into the customer relationship.

2.2.2 Relationship value

Recent research has stressed the importance of relationship value both on the customers' and suppliers' behavioral intentions (Geiger et al. 2012). This relationship value can be defined as the sum of the benefits and cost reductions generated in an ongoing exchange with a business partner (Lefaix-Durand, Kozak, Beauregard, & Poulin, 2009).

From the supplier perspective a high relationship value results in high contribution margin, high customer lifetime value and in receiving other benefits like references, innovation inputs etc. Therefore, if these benefits occur or are expected, it is reasonable for the seller to enhance the relationship. This has been supported by empirical evidence that a higher relationship value perceived by the supplier leads to a higher intention to enhance customer relationships (Geiger et al. 2012).

H₂: The higher the relationship value for the supplier is, the greater are the supplier's intentions to invest into the customer relationship.

2.2.3 Relationship quality

We assume that the expected accessibility to buyer's resources as well as relationship value are driven by the quality of the relationship. We assume that a good relationship quality has a

positive impact on the supplier's intention to invest into the customer relations as it reduces a presumed risk related to the future behavior of the customer (Williamson 1985, Das and Teng 1996). In the context of this study behavioral risk stands for the fact that a customer might behave opportunistically, thus averting the seller from receiving the expected positive results out of getting accesses to the customer resources.

We see relationship quality as a three-dimensional construct consisting of trust, commitment and satisfaction (Ulaga & Eggert, 2006; Walter, Müller, Helfert, & Ritter, 2003). Whereas commitment and trust are often assessed from the perspective of the buyer in a buyer-seller relationship, the commitment, trust and satisfaction assessed in this study are from the perspective the seller. Dwyer, Schurr and Oh (1987) note that in bilateral relationships, trust and commitment grow in both parties. Hence, the commitment is conceptualized as commitment of the seller to the buyer and the trust as well as the satisfaction are conceptualized as trust and the satisfaction of the seller in or with the buyer.

Thus, we assume that the effect of relationship quality on the seller's level of resource input into the customer relationship is mediated both by the expected accessibility to buyer's resources and by relationship value. Thus, we hypothesize:

H₃: The better the relationship quality perceived by the seller is, the higher is the supplier's expected accessibility to buyer's resources.

H₄: The better the relationship quality perceived by the seller is, the higher is the relationship value for the supplier.

H₅: The better the relationship quality perceived by the seller is, the greater are the supplier's intentions to invest into the customer relationship. (No direct but fully mediated effect)

2.3 Model constructs

The study conceptualizes the resource input level construct as the level of effort that the seller puts into providing resources to the specific relationship which the respondent uses as the subject for the questionnaire. It is an assessment of the attitude of the regard that the seller has for the relationship in terms of the seller's allocation of resources to the relationship. Respondents are asked to rate the level of their firm's input into the relationship of a set of tangible and intangible resources that are representative of the kind of resources that a seller applies to a relationship.

The definitions and measures of trust and commitment in the study are those of Morgan and Hunt (1994). Although the Morgan and Hunt conceptualization of trust tends to be weighted towards its calculative aspects (Young, 2006) and their conceptualization of commitment tends to be predominantly affective (Geyskens, Steenkamp, Scheer, & Kumar, 1996), they are well-tested. The satisfaction construct adopts the conceptualization of Kumar, Stern, & Achrol (1992).

The study conceptualizes relationship value as the respondent's current perceptions of the value of the relationship to his/her firm. The "Expected accessibility of buyer's resources" construct is the extent to which the seller expects to get access to the more intangible resources of its customer, derived from resource categorizations of the intellectual capital lit-

erature (e.g. Roos, Roos, Dragonetti, & Edvinsson, 1997). As noted above, the focus is on more intangible resources because these are relatively under-researched and are the ones that tend to be useful in creating longer-lasting and more unique competitive advantage, as Morgan and Hunt (1999) explain. This focus aligns with the important resources that the S-DL describes as operant rather than those the S-DL describes as operand.

The next section of the paper describes the study's method.

3. TESTING THE MODEL

3.1 Method

The empirical phase of the study pre-tested a questionnaire and then surveyed managers involved in relationship management on 7 point scales with anchor points such as “strongly disagree” to “strongly agree”, with 314 good responses (23% response rate). The unit of analysis was a relationship that the responding supplier had with a specific customer. *t*-tests on the early and late responses to survey questions did not indicate non-response bias (Armstrong & Overton, 1977).

3.2 Measure development

The scale for resource input level has three items describing a mix of resources that represent the resources firms put into their relationships. The dollar input item does not perform as well as the other three in this scale, but remains in the scale on the basis that it is content valid (Rossiter, 2002), that its corrected item-total correlation is above 0.5 (Hair, Anderson, Tatham, & Black, 1998), and its removal does not increase the scale's Cronbach alpha.

Similarly, the measures for accessibility of buyer's resources are four resources that are representative of those more intangible resources that a seller would find useful if they were accessible from their customer, as noted above. The measures for commitment and trust are some of those used by Morgan and Hunt (1994), changed to the buyer's perspective. The satisfaction scale is that of Kumar, Stern, & Achrol (1992).

The study specifies all indicators as reflective or elicited (Rossiter, 2002). Morgan and Hunt (1994) and Kumar et al. (1992) designed and tested their scales that way. The scale for the resource input level and accessibility of buyer's resources constructs are reflective because the indicators represent the relevant resources for each construct. The indicators for relationship value are questions that a respondent will rate highly if he/she has a high perception of the value of the subject relationship.

3.3 Analysis

After exploratory analysis shows suitability for analysis, an unrotated exploratory factor analysis shows that common method variance is not likely to be a problem (Podsakoff, Mac-

Kenzie, Jeong-Yeon, & Podsakoff, 2003). Table 1 shows that the measurement model, which includes all the Fig. 1 model's constructs, has good fit statistics (Hair et al., 1998; Hu & Bentler, 1999).

The appendix shows sound psychometric properties of scales. All have Cronbach alpha well in excess of 0.7 (Hair et al., 1998) and regression weights of indicators on constructs in excess of 0.7, apart from a few, which are retained for content validity. The measures and constructs all have convergent and discriminant validity according to standard tests.

The study next estimates the Figure 1 structural model, as in the second row of Table 1. All paths in Figure 1 are highly significant except for the H5 path, which has a non-significant regression coefficient, being fully mediated by the two indirect model paths. The indirect effect of relationship quality on the supplier's intended resource inputs has bootstrapped two-tailed significance of $p < 0.006$ and the r^2 for supplier's intended resource inputs is sound at 0.28.

Model	CMIN	Df	p-value	CMIN/Df	SRMR	RMSEA	TLI	GFI
Measurement model including all six constructs	301.11	194	0.000	1.55	0.04	0.04	0.97	0.92
Structural model as in Fig. 1	363.40	201	0.000	1.81	0.06	0.05	0.96	0.91

Table 1: Model fit statistics

4. DISCUSSION

This study's analysis extends the customer attractiveness literature's findings that suppliers support customers at a level that is aligned to the gains expected by the supplier, by showing that this effect goes beyond the supplier's expectations in terms of financial outcomes to the supplier's expectations in terms of the more intangible informational resource benefits the supplier can get from its customer. The study's findings also support this paper's contention, based on several theoretical streams, but particularly on the IMP literature, that the beneficial development of relationships requires reciprocal exchange of resources in a positive context, illustrated in this study in terms of relationship quality and relationship value perceptions.

Some specific examples of the way in which exchange and integration of resources takes place in a buyer-seller relationship will help ground the study's findings in practice. Taking one of the resources used as in the study as an indicator of the seller's resource input level as an example, if the seller's boundary personnel are resourced to give more time to the relationship, they are able to better communicate with and to better give information to their customer. This information gain can be of great value to the customer, because it allows the customer to better utilize products and processes. This study does not model the value gain from these increased capabilities, but it explains the importance to both parties of exchanging resources and also the importance of relationship quality to the process.

The study has limitations in terms of its cross-sectional view and the fact that it takes the perspective of only one side of the dyad. Extension of the model to the buyer's perspective is an opportunity for future research. Further to this issue of perspective, researchers are keenly aware of the need to extend research more deeply beyond dyadic considerations into the net-

works in which firms are positioned.

Another avenue for future research is to investigate the detailed mechanisms by which the resources of relationship partners are integrated and how this integration leads to improved performance in terms of accessibility of buyer's resources. It will be interesting to assess the effects of the distinct cognitive and affective aspects of trust (Johnson & Grayson, 2005) and similarly to assess these distinct aspects of commitment (Geyskens, Steenkamp, Scheer, & Kumar, 1996). An aspect of relationship and network research that needs further work at a micro level concerns how individual people as actors, such as salespeople, actually operate within both dyadic and network relationships and, as they do so, how they modify them (e.g. Baxter & Olesen, 2008; Haas, Snehota, & Corsaro, 2012).

Manufacturers were the context for this current study. It will be interesting to investigate the same issues in other contexts such as services to assess this aspect of the generalizability of the findings.

The study's findings provide useful ideas for managers. They indicate that both parties in a buyer-seller relationship need to consider closely how they work on their relationship to build a positive context in terms of commitment, trust, satisfaction, and openness to resource accessibility, if they wish to receive reciprocal resource benefits.

Appendix: Scale items

Scales and items	Anchor points on 1 – 7 scale			Standardized regression weight	Cronbach alpha
Resource input level in future					0.779
Please consider again your firm's relationship with your chosen customer over the next 3 years. How high do you expect your firm's level of input of the following re-sources to be into the relationship, compared with your other customers?	Very much lower		Very much higher		
Dollars your firm puts into the relationship.				0.569	
Time input of your personnel.				0.851	
Your intangible inputs, such as your knowledge, skills, ingenuity and your business contacts.				0.814	
Accessibility of buyer's resources					0.857
Again, for the next 3 years, how effective do you expect the relationship with your chosen customer to be in giving your firm useful access to the following?	Not at all effective		Very effective		
To your customer's network of relationships				0.732	
To the capabilities in their organisation (e.g. the organisational knowledge, infrastructure, processes, and/or culture)				0.893	
To the capabilities of their personnel				0.841	
To their capabilities for the development of new products or processes				0.669	
Relationship value	I do not agree at all		I fully agree		0.855
This relationship currently is of great value to my firm.				0.923	
This relationship will be of great value to my firm in the next 3 years				0.914	
There is a lot of intangible value in this relationship				0.643	
Commitment					0.866
The <u>relationship</u> that your firm has with the chosen customer:	Strongly agree	disagree	Strongly agree		
Is something you are very committed to				0.821	
Is something your firm intends to maintain indefinitely				0.693	
Is something your firm really cares about				0.834	
Deserves your firm's maximum effort to maintain				0.802	
Trust					0.907
In your relationship, your chosen customer:	Strongly agree	disagree	Strongly agree		
Cannot be trusted at times (reverse scored)				0.682	
Is perfectly honest and truthful				0.782	
Can be counted on to do what is right				0.888	
Is always faithful				0.853	
Is someone that you have great confidence in				0.898	
Satisfaction					0.818
To what extent do the following statements describe your relationship with your chosen customer?	Not at all		Very much so		
The relationship of my company with this customer has been an unhappy one (reverse scored).				0.543	
My company is very pleased with its working relationship with this customer.				0.921	
Generally, my company is very satisfied with its overall relationship with this customer.				0.894	

Notes: 1. Numbers in the column headed "Standardised regression weight" are path weights between each measure and the construct it reflects in the measurement model whose fit statistics are shown in Table 1. 2. Regression weights in this appendix are all significant at $p < 0.001$.

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SALESPERSON GOAL ORIENTATIONS AND THE SELLING PERFORMANCE RELATIONSHIP: THE CRITICAL ROLE OF MEDIATION AND MODERATION

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ABSTRACT

Over the last two decades studies have demonstrated the importance of goal orientations in the context of selling and established a body of the main antecedents and outcomes. A closer look at the empirical findings reveals that the relationship between goal orientations and performance remains partly inconsistent as there is mixed evidence of the learning orientation performance relationship partly conflicting with theory. We propose that these findings can be clarified by studying moderation effects related to the nomological network of goal orientations. In testing a research model focused on the interrelations of goal orientations, selling experience, adaptive selling and salesperson selling performance, we confirm the established relationships and show that the learning orientation performance relationship is more complex than earlier studies suggest. The findings indicate that the effectiveness of learning orientation is contingent on selling experience and it affects performance also indirectly by helping salespeople adapt their sales styles more effectively. Ignoring these interaction effects will undermine the role of learning orientation in selling performance bearing also concrete implications for sales management.

Keywords: Selling behaviors, goal orientations, learning orientation, performance orientation, selling experience, ADAPTS, salesperson selling performance, interaction effects.

Introduction

For any company wanting to be successful in business it is of the utmost importance to be able to identify and validate the salesperson characteristics and behaviors predictive of high performance in selling. In line with this thinking, a vast number of studies has been conducted in relation to selling behaviors, their individual and organizational antecedents, and salesperson performance (e.g. Franke and Park 2006; Guenzi, De Luca and Troilo 2011; Plouffe, Hlland and Wachner 2009).

Salesperson goal orientations have been found to be among the key drivers of various salesperson behaviors and selling performance.

They refer to the individual differences in goal preferences in achievement situations (Dweck and Legett 1988; Kohli, Shervani and Challagalla 1998) and can be divided into two major classes, namely learning goal orientation which involves seeking to develop competence by

acquiring new skills and mastering new situations, and performance goal orientation which involves seeking to demonstrate and validate one's competence to others (Dweck and Legett 1988). During the last two decades their key antecedents and outcomes have been established in the context of selling (see Sujan, Weitz and Kumar 1994; Harris Moven Brown 2005; Ahearne, Lam, Mathieu and Bolander 2010). However, a closer look at the salesperson goal orientation studies reveals some key gaps and inconsistencies in the goal orientations performance relationship.

First, goal orientation studies have produced mixed findings related to the relationship between learning orientation and performance, ranging from clear positive relationships (e.g. VandeWalle, Brown, Cron and Slocum 1999) to no relationship (e.g. Kohli et al. 1998). Further, several studies have found that contrary to theory, performance orientation explains salesperson performance better than learning orientation (e.g. Porath and Bateman 2006). Some studies have suggested and also provided evidence to support the idea that the interaction between time and goal orientations might resolve these inconsistencies (Ahearne, Lam, Mathieu and Bolander 2010). Kohli et al. (1998) argued that learning orientation might not affect or might even hamper selling performance in the short term, but increase performance in the long term by enabling salespeople to develop their skills. The gaps in findings and the related propositions indicate that the largely unexplored question of the effect of salespersons' selling experience on goal orientations should be studied more closely.

Secondly, studies have to date mostly concentrated on the direct key antecedents and outcomes of goal orientations. Scholars have recently called for new studies on selling that examine alternative types of relationship, including mediation and moderation, for a better understanding of the interrelations between selling behaviors and the mechanisms how they affect performance (see Plouffe, Hulland and Wachner 2009). As goal orientations concern the mental framework that individuals use to interpret and respond to achievement situations (Dweck and Legett 1988) and relate closely to learning, it is likely that they can affect selling behaviors not only directly but also through interaction, for example by helping salespeople adapt their selling style more effectively. Ignoring these potential indirect effects can lead to underestimation of various goal orientations' role in selling performance indicating the need to study the topic more closely.

This study seeks to fill the identified gaps in research on selling goal orientation by creating new understanding of the nomological network of goal orientations. *The purpose of this research is to provide new in-depth knowledge on the interrelationships between salesperson goal orientations, experience, adaptive selling behavior and performance.* We contribute by 1) examining more closely the role of experience in the goal orientation performance relationship, and 2) studying whether goal orientations affect selling performance indirectly through interacting with selling behaviors in addition to direct effects. We delimit our view of selling behaviors to adaptive selling, which has been found to be the single most influential factor behind selling performance and is also directly linked to learning orientation (e.g. Plouffe, Hulland and Wachner 2009; Park and Holloway 2003).

Our work is organized as follows. We start by reviewing the literature and propose a research model together with hypotheses concerning the relationships between goal orientation, experience, adaptive selling and salesperson performance. Secondly, we present our research methodology including the sampling, data collection and measure validation procedures. Thirdly, we test the hypotheses based on moderated regression and present the results of the

study. Finally, we discuss the key findings and draw out implications for future research and management.

Current knowledge of salesperson goal orientations and performance

Salesperson goal orientations relate to the broader goals pursued by individuals and they have been defined as dispositional or situational goal preferences in achievement situations (VandeWalle 1997; Payne, Youngcourt and Beaubien 2007). Thereby they affect how salespeople interpret, evaluate and act in the pursuit of their task (Dweck and Legget 1988; Silver, Dwyer and Alford 2006). Goal orientations have traditionally been divided into two classes: performance goal orientation (PO) or ego orientation, in which individuals are concerned with demonstrating and validating their competence, and learning goal orientation (LO) or mastery orientation, in which the individuals look to develop their competence by acquiring new skills and mastering new situations (Dweck and Legget 1988; Sujan et al. 1994). The early research considered these two orientations the opposite ends of a single continuum but they are currently and universally seen as two separate dimensions (VandeWalle 1997). Hence, a salesperson may adopt both learning and performance orientation simultaneously (VandeWalle 1997). More recently, scholars have drawn a further distinction in performance orientation identifying two dimensions, namely performance-prove orientation referring to the desire to prove one's competence and gain favorable judgments on it, and performance-avoid orientation referring to the desire to avoid disapproval of competence and negative judgments thereon (VandeWalle 1997; Silver et al. 2006). Studies have provided some evidence that the three dimensional conceptualization of PO is preferable to a two dimensional conceptualization (see VandeWalle 1997; Silver et al. 2006). Still, some scholars have argued that the performance-avoid dimension works differently from the original conception of performance orientation being similar to the fear of failure construct (Jelinek, Ahearne, Mathieu and Schillewaert 2006). In this study, we focus on the traditional two dimensional conceptualization of goal orientations, limiting our view on performance orientation to the *prove* dimension, which is similar to the approach adopted by the majority of studies on selling (see Jelinek et al. 2006; Ahearne et al. 2010).

The various marketing studies have thus far built a rather consistent body of the key antecedents and outcomes of goal orientations in a selling context. Empirical results indicate that LO and PO work in different ways and have different antecedents and outcomes. Studies focusing on the antecedents have shown that stable salesperson personality traits explain goal orientations (Harris et al. 2005; McFarland and Kidwell 2006) but salespersons' orientations can also be affected by the employment of different supervisory feedback and orientations (Sujan et al. 1994; Kohli et al. 1998; Markose 2011). Also the findings related to the outcomes of goal orientations have started to display a clear pattern but remain still partly inconsistent and ambiguous as illustrated below.

Performance orientation is an extrinsic orientation aimed at achieving recognition from others involving a short term focus (e.g. Kumar et al. 1998). The studies in the context of education have traditionally associated PO with maladaptive behaviors and negative outcomes produced by the fear of failure (Dweck and Leggett 1988; Payne, Youngcourt and Beaubien 2007). However, the empirical studies in the selling context contrast sharply with the studies in a classroom setting indicating mostly a positive relationship between PO and selling performance, explained often by salespersons' greater efforts to attain goals (Kohli et al.

1998, McFarland and Kidwell 2006; Porath and Bateman 2006; Silver et al. 2006). Only avoid-PO has been shown to have a clear negative link to performance (see McFarland and Kidwell 2006; Silver et al. 2006; Porath and Bateman 2006). The short term nature of PO has been demonstrated of late in the context of organizational change where it was found to relate to smaller performance declines at the beginning but to lead to lower sales performance in the long run due to the shallower learning efforts (Ahearne et al. 2010).

Performance orientation's focus on the present moment can also be seen in relationships found to salesperson behaviors. PO and its prove dimension has been found to relate to selling orientation (Harris et al. 2005) and working hard (Sujan et al. 1994), both targeting quick results. PO also links to broader behaviors such as territory and account planning (VandeWalle et al. 1999), intention to adopt sales technology (Jelinek et al. 2006), and to effective self-regulation tactics i.e. proactive behavior, emotional control and social competence (Porath and Bateman 2006). Overall, the outcomes of empirical findings in the selling context have supported frequently positive outcomes.

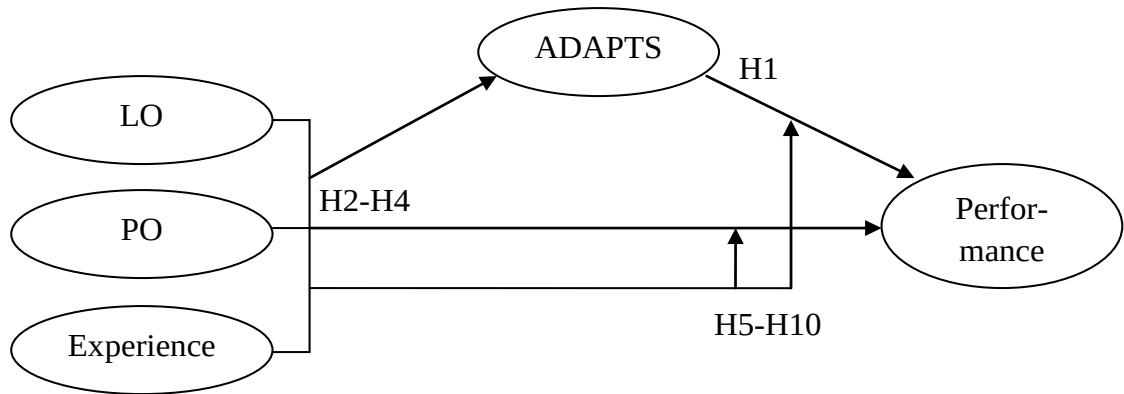
Learning orientation has traditionally been considered an essential issue in effective behaviors and high performance in the long term. Accordingly, several studies have found support for the direct link between salesperson LO and performance (VandeWalle et al. 1999; McFarland and Kidwell 2006; Silver et al. 2006; Porath and Bateman 2006). However, the link is not straightforward as there are also studies which have found no significant relationship to salesperson performance (see Kohli et al. 1998; Gong Huan and Farh 2009). Further, several studies examining both goal orientations have found that in sharp contrast to the theory PO actually explains salesperson performance better than LO (see Kohli et al. 1998; Silver et al. 2006; Porath and Bateman 2006). Recently, Ahearne et al. (2010) found that the LO performance link is related to time as salesperson performance trajectories for learning orientated salespeople in organizational change show greater initial declines but steeper recovery curves and higher restabilization levels in the long run.

Studies indicate that the positive LO performance relationship is mediated through concrete salesperson behaviors. Significantly, a learning orientation is related to customer facing behaviors through encouraging and helping salespeople to adopt adaptive selling behaviors or working smart (Chai et al. 2012; Sujan et al. 1994; Park and Holloway 2003), and also helps them become customer oriented (Harris et al. 2005). LO affects also salespersons' task related behaviors such as working hard (Sujan et al. 1994), goal setting (VandeWalle et al. 1999), intention to adopt sales technology (Jelinek et al. 2006) and effective self-regulation tactics (Porath and Bateman 2006). It has been even linked to salesperson creativity (Gong Huan and Farh 2009).

In sum, the empirical findings on the outcomes of goal orientations in selling show that both PO and LO are mainly positively linked to salesperson performance but for different reasons. Interestingly, the numerous studies establishing no LO-performance link or showing performance orientation's stronger impact on performance provide a contrast to the theoretical arguments of LO's key role in long term performance (see silver et al. 2006). We argue that studying neglected interaction effects relating to goal orientations can clarify these unexpected findings.

The hypothesized relationships among salesperson goal orientations, experience, adaptive selling and performance

This study broadens the nomological network related to the relationship between goal orientations and selling performance by examining the mediation and moderation effects with central close constructs. More specifically, the research model and the hypotheses focus on the interrelationships between salesperson goal orientations, adaptive selling, selling experience and selling performance (see Figure 1).



H1	Hypothesized direct relationship
H2–H4	Hypothesized mediation relationships
H4–H10	Hypothesized interaction relationships

Main and mediation effects: H1–H4

The first four hypothesized main relationships have been largely confirmed in earlier studies. Adaptive selling behavior (ADAPTS) refers to the alteration of sales behaviors during a customer interaction or across customer interactions, based on perceived information about the nature of the selling situation (Weitz, Sujan and Sujan 1986). It can be theoretically linked to selling performance, as information gathering and the employment of a unique sales approach for each customer will most likely outweigh the costs of acting, confirmed by a recent meta-analysis (Spiro and Weitz 1990; Franke and Park 2006).

H₁ *Adaptive Selling Behavior is positively related to salesperson sales performance*

A salesperson with a learning orientation (LO) enjoys the process of discovering how to sell effectively and how to improve their selling skills. This should lead to higher selling performance through the development of skills and knowledge, such as ADAPTS, that are beneficial over a long period of time (Sujan, et al. 1994; Kohli et al. 1998; Park and Holloway 2003). Salespeople with a high performance orientation (PO) are motivated through extrinsic rewards such as money, respect and promotion from others, and are associated with behaviors targeting quality performance in the short term (Harris et al. 2005). PO can be theoretically expected to be linked to performance as the desire for recognition should encourage salespeople to exert more effort in their job as well as to select their tasks in a way that maximizes their likely success level (Kohli, Shervani and Challagalla 1998; Bartkus and Howell 1999). The currently unstudied relationship between performance orientation and adaptive selling is not straightforward.

On the one hand, performance oriented salespersons might be reluctant to try new selling techniques because of the possibility of failure (e.g. Harris et al. 2005) but on the other, salespersons might strive to adapt their selling style to specific customers to attain better results and demonstrate their competence to others (e.g. Jelinek et al. 2006). Hence:

- H_{2a} Learning Orientation is positively related to salesperson sales performance; H_{2b} however this relationship is mediated through Adaptive Selling Behavior*
H_{3a} Performance Orientation is positively related to salesperson sales performance; H_{3b} however this relationship is mediated through Adaptive Selling Behavior

Finally, salespeople with a depth of sales experience have versatile models in their memory which they can apply to new situations, helping them employ more adaptive selling approaches. Accordingly, studies have found that sales experience from the industry and total sales experience are positively related to adaptive selling (Franke and Park 2006; Levy and Sharma 1994; Shoemaker and Johlke 2002) and also to sales performance (Behrman and Perreault 1984; Franke and Park 2006). Again, it is reasonable to expect that the impact of experience on performance is established through the adoption of more effective selling behaviors such as ADAPTS. Hence:

- H_{4a} Selling Experience is positively related to salesperson sales performance; H_{4b} however this relationship is mediated through Adaptive Selling Behavior*

Moderation effects: H5–H10

The key argument of this study is that the interaction among constructs can shed new light on the partially inconsistent relationship between the salesperson goal orientations and performance. Several studies in the selling context have found no link between LO and performance (Kohli et al. 1998; Gong Huan and Farh 2009), and PO to explain salesperson performance better than LO (Kohli et al. 1998; Silver et al. 2006; Porath and Bateman 2006) despite the theoretical arguments of the importance of LO (e.g. Dweck and Legett 1988). We argue that LO works in a complex way underlining the need to examine interaction effects to explain better its role in selling performance.

First, we anticipate that selling experience can be expected to interact with learning orientation and also adaptive selling. Kohli, Shervani and Shallagalla (1998) proposed that the salesperson learning orientation performance relationship is dependent on time, i.e. LO might not positively affect or might even hinder, selling performance in the short term, but increase performance in the long-term. This is because salespeople with a strong degree of learning orientation are not afraid of making mistakes and are ready to spend time in challenging situations and with challenging customers, potentially hampering their short term performance but ultimately enabling salespeople to develop their skills and effective selling approaches (see Kohli et al. 1998; Harris et al. 2005). This idea has received support in the context of organizational change where LO was found first to hamper salesperson performance trajectories but in the long run to help salespeople recover faster and perform better due to deeper learning (see Ahearne et al. 2010).

We expect this logic applies also to the unexplored question of salespeople's experience and the LO-performance link. Less experienced salespeople may first find their performance disadvantaged by LO but as they become more experienced they should be able to benefit from the outcomes of LO and outperform salespeople with shallower knowledge structures

(Ahearne et al. 2010). In turn, selling experience should not interact with the PO-performance link as performance orientation denotes an extrinsic orientation to current performance suggesting a null hypothesis for the relationship (e.g. Kumar et al. 1998). Finally, knowledge gained through experience can be hypothesized not only to help salespeople employ more adaptive selling approaches but also to become more effective in adaptation by applying the models lodged in their memory to selling situations (see Franke and Park 2006).

- H₅** *The relationship between LO and performance will be weaker for salespersons with low experience and stronger for salespersons with high experience*
- H0₆** *The positive relationship between PO and performance will not be affected by salesperson experience*
- H₇** *The positive relationship between ASB and performance will be stronger with salesperson experience*

Secondly, we expect that LO, relating to skill and ability development through learning, should help salespeople enact more effective selling behaviors, similarly to the logic used in **H₇**. In other words, the preference for challenge and the acquisition of new skills that is associated with LO should help salespersons gain a better picture of selling situations and versatile behaviors, enabling them to become more effective in utilizing adaptations (c.f. Silver et al. 2006; Ahearne et al. 2010). Further, a salesperson may have learning and performance orientations simultaneously, as LO and PO represent two separate dimensions. It has been shown that perceived self-efficacy, or experienced job competence, moderates the PO-performance relationship as a lack of confidence is likely to cause salespersons to question their ability to effect successful outcomes through hard work (Sujan et al. 1994). We extend this logic and hypothesize that the learning related to LO can produce concrete tools for salespersons and increase their self-confidence, thus helping them improve the performance outcomes of PO (see Sujan et al. 1994; VandeWelle 1997). Finally, PO relates to a salesperson's desire to demonstrate and validate their competence to others (Dweck and Legget 1988; Sujan et al. 1994). As it does not provide salespeople with any concrete means to develop their selling behaviors, it is logical to expect that it doesn't moderate the adaptive selling behavior link, contrary to learning orientation supporting a second null hypothesis.

- H₈** *The positive relationship between ASB and performance will be stronger should the salesperson adopt a learning orientation*
- H₉** *The positive relationship between PO and performance will be stronger should the salesperson adopt a learning orientation*
- H0₁₀** *The positive relationship between ASB and performance will not be affected by a salesperson's performance orientation*

Methodology

Sampling and data collection

The research model is tested with data collected in the context of automobile selling in Finland. The sales force for the three of the ten biggest selling car brands in Finland were selected for the study comprising both B-to-C and B-to-B sales. These brands and their

salespeople soundly reflect the entire car sales industry in Finland as the brand offerings cover the full range of size and price classes. The whole sales personnel handling these three brands was contacted for the study, a total of 774 salespersons to represent the entire car sales industry, and sent the research questionnaire plus a reminder should the first three week response deadline not be met (Brand A 221; B 357; C 196). A total of 198 responses was received, and excluding those with excessive missing values, the final number was 192 at a response rate of 24.8%. Armstrong and Overton's (1977) procedure for estimating non-response bias was employed, comparing the first (N=146) and second (N=46) response waves. No significant differences were found, suggesting there were no serious problems associated with non-response bias.

Measures

Earlier studies have developed measures for all the constructs in the research model, so we used established scales to test the research model. Table 1 below summarizes the measures employed. The questionnaire was translated into Finnish, and then back into English, to ensure translation accuracy. Sales performance is measured through a subjective performance measure developed by Behrman and Perreault (1982) that has been widely employed in selling research. Adaptive selling is approached using the Spiro and Weitz (1990) ADAPTS scale. The learning and performance orientation measures draw on the work of Sujan, Weitz and Kumar (1994). Sales experience is a concrete topic measured with two items (see Bergkvist and Rossiter 2007). The items for each of the measures employed are presented in Appendix 1.

The reliability of the measures is considered sound as they all have Cronbach's Alphas of over 0.81 and Composite Reliabilities (CR) of over 0.73. The confirmatory factor analysis supported the validity of the measures after removing problematic indicators. The removal of items is not problematic for reflective measures because reflective indicators are interchangeable and construct validity is unchanged when an indicator is removed (Bollen and Lennox 1991). CFA exhibited a significant chi-square statistic (228.0; $p=0.00$), but the ratio of the Chi Square to the degrees of freedom was close to one ($\chi^2/df= 1.6$) and model fit was acceptable: CFI 0.94; TLI 0.92; RMR 0.08, and RMSEA 0.06 [0,04; 0,07]. The loadings were mostly higher than 0.6 and were all significant ($p<.001$) (see Appendix 1).

Place Table 2 about here

The AVE values for performance orientation and selling performance constructs remained below 0.5 but otherwise exceeded 0.5. Further, all the squared AVE values were greater than related correlations supporting the Fornell and Larcker (1981) criterion for discriminant validity (see Table 2). Overall the tests indicate sufficient validity and reliability for the measures.

Common method bias

Common method variance may bias findings when both independent and dependent variables are obtained from the same source. We assessed common method bias with two methods. First, the bias was tested by using Harman's one factor test. The principal component analysis conducted in this study generated 5 factors with eigenvalues higher than one. The first factor accounted for 23% of the variance, whereas the remaining 4 factors together accounted for 65% of the total variance, thereby indicating that common method bias is not a severe problem in this study. Secondly, a single-common-method-factor approach recommended by Podsakof, MacKenzie, Lee and Podsakoff (2003, 894) was applied. A latent common method factor with all of the measures as indicators was added to the model and the significance of the structural parameters was examined. The analysis showed that all significant parameters remained significant and non-significant parameters non-significant. Finally, several hypothesized interaction effects were supported, providing additional support for the lack of severe biases, since interaction effects cannot be artifacts of common method bias (see Siemsen, Roth and Oliveira 2010).

Analysis and Results

The proposed research model was tested by performing a series of regression analyses. First, hypotheses 1–4, including the main and mediation effects on selling performance were examined. Baron and Kenny (1986, 1176-1077) state that mediation occurs under the following conditions: first, the independent variable must account significantly for the variations in the presumed mediator; second, the independent variable must be shown to affect the dependent variable; and third, the mediator must affect the dependent variable. If all these conditions hold in the predicted direction, mediation takes place when the effect of the independent variable on the dependent variable reduces when the mediator variable is added to the model. Consequently, three regression analyses were tested for mediation (see Table 3). Model 1 was tested with adaptive selling behavior as the dependent variable to study the first condition, followed by Models 2 and 3 with salesperson selling performance as the dependent variable focused on the two latter conditions.

Place Table 3 about here

Regression Models 2 and 3 show that performance orientation (0.17*; 0.13+), experience (0.28**) and adaptive selling (0.31**) directly explain salesperson performance, supporting **H₁**, **H_{3a}** and **H_{4a}** (see Table 3). Interestingly, no relation was found between learning orientation and salesperson performance (–.06ns.) leading to the rejection of **H_{2a}**. Interestingly this result was aligned with the earlier studies which have found no relationships between LO and performance in contrast to the theoretical arguments of the importance of LO. Further, the comparison of the first three regression models indicates that the conditions for mediation were fulfilled for one relationship.

More specifically, the relationship between performance orientation and sales performance is partially mediated through adaptive selling behavior supporting **H_{3b}** as the PO-performance relationship (0.17*) was significantly reduced in strength (0.13+) after including the ADAPTS constructs in the model. However, based on the Sobel's test, the mediation effect found is weak as it is significant only at the 10% level (1.79, $p < 0.09$). LO was strongly related to adaptive selling (.28**) but not found to explain performance (0.00ns.), and experience was not related to adaptive selling (0.10ns.) leading to the rejection of **H_{2b}** and **H_{4b}**.

Secondly, a fourth regression model including interaction terms was tested to study the moderation hypotheses 5–10 (see Aiken and West 1991). The interaction terms were formed by multiplying mean-centered predictors as recommended by Cohen, Cohen, Aiken and West (2003). The mean-centering approach is used as it eliminates the multicollinearity problems. Model 4 summarizes the results and shows that two significant interaction effects were found (Table 3).

More specifically, the relationship between learning orientation and performance is moderated by experience (.21**; ΔR^2 0.05, $p < 0.01$) supporting hypothesis **H₅** (see Table 3). To facilitate the interpretation of the moderation, we present the moderation effects graphically in Figure 2. Consistent with Aiken and West (1991), the values for the moderator were computed using the mean as the medium value, one standard deviation above the mean as the high value, and one standard deviation below the mean as the low value. Results indicate that the LO-performance relationship is *negative* for salespeople with low experience but becomes *positive* for salespeople with medium and high experience, helping to explain the non-significant direct relationship between learning orientation and performance.

Place Figure 2 here

Further, the relationship between adaptive selling behavior and performance is moderated by learning orientation. Figure 3 demonstrates that learning orientation enables the salespersons not only to become *more adaptive* in selling but also to become *more effective* in their adaptive selling behaviors.

Place Figure 3 about here

In turn, experience did not moderate the relationship between ADAPTS and performance, and learning orientation did not moderate PO and the performance relationship, leading to the rejection of **H₇** and **H₉**. As expected, selling experience did not moderate the path between PO and performance and PO did not moderate the ADAPTS-performance relationship, thus failing to reject the null hypotheses **H₀₆** and **H₀₁₀**.

Discussion

Theoretical implications

The key proposition of this study was that mediation and moderation effects can help clarify the inconsistent and unexpected empirical findings related to the relationship between goal orientations and performance. The findings support this idea as the moderation effects significantly alter the findings relating to the performance outcomes of learning goal orientation. The key findings are discussed below in more detail in the light of theory.

First, the results concerning the examined *direct effects* on performance were largely aligned with the earlier empirical findings. As expected, adaptive selling behavior was found to be the most central individual issue explaining salesperson selling performance (see Harris et al. 2005; Park and Holloway 2003), closely followed by salesperson selling experience (see

Behrman and Perreault 1984). Performance orientation was also found to predict directly performance in contrast to learning orientation. Interestingly, the findings are aligned with several other earlier empirical studies in the selling context, showing that performance orientation explains salesperson performance better than learning orientation (see Kohli et al. 1998; Silver et al. 2006; Porath and Bateman 2006) and findings establishing no direct effect between learning orientation and selling performance (Kohli et al. 1998; Gong Huan and Farh 2009), which sharply conflicts with the theoretical arguments on learning orientation's key role in performance (e.g. Sujan et al. 1994). Hence, the results concerning the *direct* effects provide additional support for the idea that performance orientation is a positive issue in the selling context, in contrast to the traditional findings in education settings (Dweck and Leggett 1988; Payne, Youngcourt and Beaubien 2007), but suggest that learning orientation does not play a direct key role in explaining salesperson performance.

Secondly, *mediation effects* were examined in addition to the direct performance relationships. Since the goal orientations and experience represent the broader goals of the salespeople, it is logical to expect that their performance effects are realized through concrete behaviors (see Porath and Bateman 2006). As hypothesized, learning orientation was the key antecedent of adaptive selling, related to the process of discovering how to improve selling and develop the skills and knowledge to adapt selling styles to customers (see Sujan, et al. 1994; Kohli et al. 1998; Park and Holloway 2006). However, no mediation was established since learning orientation did not relate directly to performance. Interestingly, hypothesized positive link between performance orientation and adaptive selling was supported, also partially mediating the relationship found to selling performance. This indicates that extrinsic performance orientation can encourage salespersons to adapt their selling styles to specific customers in order to demonstrate their competence to others, rather than lead to a reluctance to try new selling approaches in order to avoid failure (see e.g. Jelinek et al. 2006). Contrary to earlier findings, selling experience did not relate to adaptive selling behaviors and no mediation was established (see Franke and Park 2006; Levy and Sharma 1994; Shoemaker and Johlke 2002). Hence, our data indicate that salesperson goal orientations directing how salespeople interpret, evaluate and act in the pursuit of their task (Dweck and Leggett 1988) appear to be superior enablers of adaptive selling behaviors for salespersons compared to general selling experience (c.f. Ahearne et al. 2010, p. 76).

Thirdly, as hypothesized, the examination of the interaction effects alters the main findings significantly. The *moderation effects* found demonstrate that learning orientation is central to selling performance although the relationship is complex. First of all, the relationship between learning orientation and selling performance is contingent on selling experience. The finding supports the propositions in the literature that learning orientation might not affect, or might even hinder, selling performance in the short term, but increases performance in the long term by helping salespeople develop their skills (see Kohli et al. 1998). The findings indicate that learning orientation has a negative relationship to selling performance for less experienced salespeople but the relationship becomes slightly positive for salespeople with medium experience, and even more so for persons with high experience (see Figure 2). This finding confirms and extends the recent discovery of Ahearne, Lam, Mathieu and Bolander (2010) that the effectiveness of learning orientation is dependent on time. The finding underlines the long term time horizon required for learning orientation (Sujan, et al. 1994).

The moderation effect of learning orientation on adaptive selling further demonstrated its indirect and complex nature. Besides helping salespersons become more adaptive in selling,

learning orientation affects performance indirectly by helping them become more effective in their adaptive selling efforts as demonstrated in Figure 3. This moderation indicates that the learning oriented salespersons' interest in challenges and the acquisition of new skills enables them to improve their ability to adapt by capturing a better picture of selling situations and potential applicable behaviors (c.f. Silver et al. 2006; Ahearne et al. 2010). Interestingly, the related moderation hypothesis concerning salesperson experience was not supported, indicating that the simple accumulation of experience does not help salespeople adapt more effectively (c.f. Ahearne et al. 2010, p. 76). Active experimentation and learning are essential to becoming more *effective* in the use of adaptive selling behavior. No moderation effects were found in relation to performance orientation; it does not help salespeople adapt more effectively, and neither do learning orientation or selling experience help increase the benefits of performance goal orientation. The results point out the short term focus of performance orientation and indicate that its outcomes are limited to direct effects on performance.

The significance of the moderation effects found is made clear by the fact that they increase the explained variance from 0.22% to 0.29% (see Table 3). As the studies examining key selling behavior have typically explained around 10–20% of the variance in salespeople's performance, the 7% increase in the variance explained can be considered highly substantial (see Franke and Park 2006). Overall, the centrality of the established moderation highlights the need to incorporate the interaction effects in future goal orientation studies in order to understand better the role of goal orientations and the mechanisms by which they affect salesperson performance.

Managerial implications

We studied the interrelationship between salesperson goal orientations, experience, adaptive selling behavior and selling performance. Salesperson goal orientations comprise performance orientation concerning the demonstration and validation of competence to others, and learning orientation concerned with developing competence by acquiring new skills and mastering new situations. The study confirms that the examined variables are linked to salesperson selling performance. Interestingly, the results show that salesperson experience is connected to selling performance, but it does not explain the adoption of new selling approaches or achieving more efficient adaptation. Instead, the learning and performance orientations affecting how salespeople interpret, evaluate and act in the pursuit of their task operate as the key drivers to adopting new selling behaviors. Hence, management should primarily consider these orientations in developing and managing salespeople, and motivate, train and reward them accordingly. Performance orientation is more directly linked to short term selling performance by encouraging salespersons to devote effort to issues they perceive to be central to performance, whereas learning orientation is the main enabler for salespeople to adopt effective selling approaches in the long run.

We found further that even though learning orientation is a major predictor of high selling performance, the link is dependent on selling experience. Our results show that learning orientation initially hampers the performance of salespeople but becomes a key predictor both of effective selling behaviors and selling performance in the long run. As the recruitment of new salespeople represents a considerable investment for firms, we encourage sales managers to look for learning oriented staff and consider the longer time frame in managing and evaluating them to maximize long term performance.

Limitations and future research

We recognize that this study has its limitations. First of all, it is based on a cross-sectional, single respondent research design including subjective performance assessments vulnerable to respondent bias. Although subjective performance measures are more problematic than objective measures, meta-analyses have provided evidence that the use of subjective selling performance measures does not significantly alter research findings when compared to that of objective measures (e.g. Churchill et al. 1985; Jaramillo et al. 2007). Further, the common method bias tests and uncovered interaction effects indicate that common method bias is not a major concern here. Nevertheless, it is clear that the use of objective performance measures would improve the validity of the findings. Secondly, the study has been conducted in a single industry setting and other empirical contexts might produce different results. Therefore the generalization of the results to other industry settings should be enacted with caution and we call for studies to replicate the results in other empirical settings. Thirdly, our study was delimited to the two dimensional conceptualization of goal orientations. Although the study contributes specifically to the moderation of learning orientation and the results in relation to performance orientation were logical, a closer scrutiny of moderation effects related to performance prove and avoid orientations could extend the results further. Fourthly, two of the tested hypotheses were null-hypothesis which can never be completely confirmed. We believe that these null-hypotheses are still meaningful to this study in being able to construct a more complete research model. Finally, our findings show that the moderation effects can be very fruitful in understanding the interrelations of various selling orientations and behaviors as well as the mechanisms through which they affect performance. As the list of studied constructs is by no mean exhaustive, we call for new studies extending the examination of goal orientations' interaction with other close selling behavior constructs such as customer orientation (Saxe and Weiz 1982), selling skills (Rentz, Shepherd, Tashchian, Dobholkar and Ladd 2002), sales service behaviors (Ahearne et al. 2007), opportunity recognition (Bonney and Williams 2009), or salesperson listening behaviors (Ramsey and Sohi 1997).

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Appendix 1.

Questionnaire

Indicators, followed by the indicator loadings, all indicators significant at $p < 0.01^{**}$

Learning Orientation (based on Sujan Weitz and Kumar 1994)

LO1 An important part of being a good salesperson is continually improving your sales skills
0.82**

LO2 It is important for me to learn from each selling experience I have 0.81**

LO3 Learning how to be a better salesperson is of fundamental importance to me 0.78**

LO4 I'm always learning something new about my customers 0.74**

Performance Orientation (based on Sujan Weitz and Kumar 1994)

PO1 I very much want my co-workers to consider me to be good at selling 0.68**

PO2 I feel very good when I know I have outperformed other salespeople in my company
0.64**

PO3 I always try to communicate my achievements to my manager 0.59**

PO4 I spend a lot of time thinking about how my performance compares with other
salespeople's 0.65**

Adaptive Selling Behavior - ADAPTS scale (based on Spiro and Weitz 1990).

AD1 When I feel that my sales approach is not working, I can easily change to another
approach 0.80**

AD2 I can easily use a wide variety of selling approaches 0.82**

AD3 I am very flexible in the selling approach I use 0.65**

AD4 I feel confident that I can effectively change my planned presentation when necessary
0.60**

Selling Experience

SE1 How many years have you been a salesperson? 0.88**

SE2 How many years have you been selling cars? 0.80**

Selling Performance (based on Behrman and Perreault 1982)

SP1 Identifying major accounts and selling to them 0.79**

SP2 Generating a high level of euro sales 0.85**

SP3 Selling high profit margin products 0.72**

SP4 Attaining sales targets 0.55**

SP5 Developing long-term customer relationships 0.50**

Table 1
Summary statistics for the measures

Construct name	Number of items	Range (1-7)	Mean	Std. Deviation	Cronbach's alpha / CR	AVE
Adaptive selling behavior	4	1.8-7.0	5.1	0.97	0.81 / 0.81	0.52
Learning orientation	4	2.8-7.0	6.1	0.75	0.85 / 0.87	0.62
Performance orientation	4	1.3-7.0	5.1	1.05	0.73 / 0.74	0.41
Selling experience	2	0.4-41.5	13.6	8.82	0.82 / 0.83	0.71
Selling performance	5	1.6-7.0	4.9	0.82	0.82 / 0.82	0.48

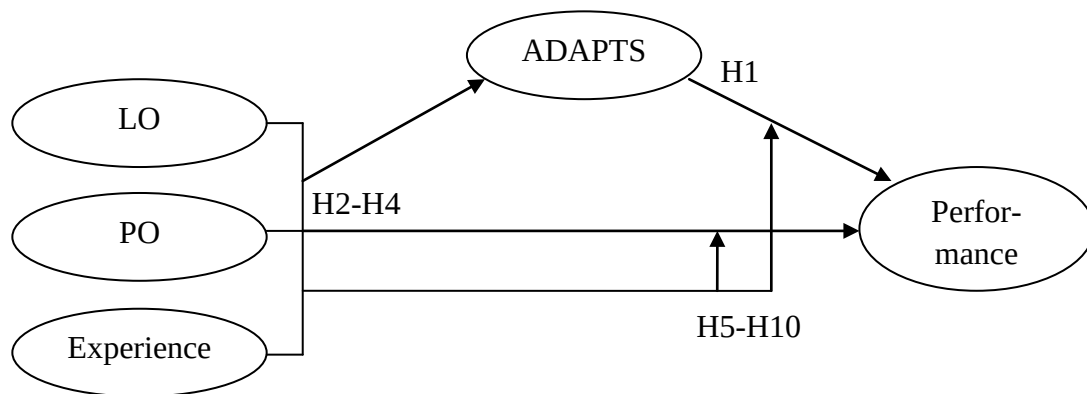
Table 2
Correlations and square root of AVE (squared AVE values bolded in diagonal)

Construct name	ADAPTS	LO	PO	SE	SP
Adaptive selling (ADAPTS)	.72				
Learning orientation (LO)	.29**	.79			
Performance orientation (PO)	.18**	.20**	.64		
Selling experience (SE)	.07	-.11	-.01	.84	
Selling performance (SP)	.35**	.08	.18*	.30**	.69

Table 3
Results of Regression

	Model 1: Main effects on adaptive selling behavior		Model 2: Main effects on performance		Model 3: Mediation effects on performance		Model 4: Interaction effects on performance	
	Beta	T-value	Beta	T-value	Beta	T-value	Beta	T-value
Main Effects:								
LO	.28	3.96**	.08	1.18	.00	−.06	.00	.04
PO	.13	1.84+	.17	2.43*	.13	1.93+	.13	2.06*
EXP	.10	1.43	.31	4.60**	.28	4.34**	.27	4.14**
ADAPTS					.31	4.48**	.32	4.78**
Interaction Effects:								
ADAPTSxEXP							−.02	−.24
LOxEXP							.21	3.27**
POxEXP							.03	.39
ADAPTSxLO							.15	2.13*
POxLO							−.08	−1.10
ADAPTSxPO							.10	1.33
	R ² .11		R ² .13		R ² .22		R ² .29	
+ <i>p</i> <0.10; * <i>p</i> <0.5; ** <i>p</i> <0.01			ΔR ² LOxEXP 0.05, <i>p</i> <0.01; ΔR ² ADAPTSxLO 0.02, <i>p</i> <0.05					

Figure 1
The proposed research model



- H1 Hypothesized direct relationship
H2–H4 Hypothesized mediation relationships
H4–H10 Hypothesized interaction relationships

Figure 2
Interaction of learning orientation and selling experience

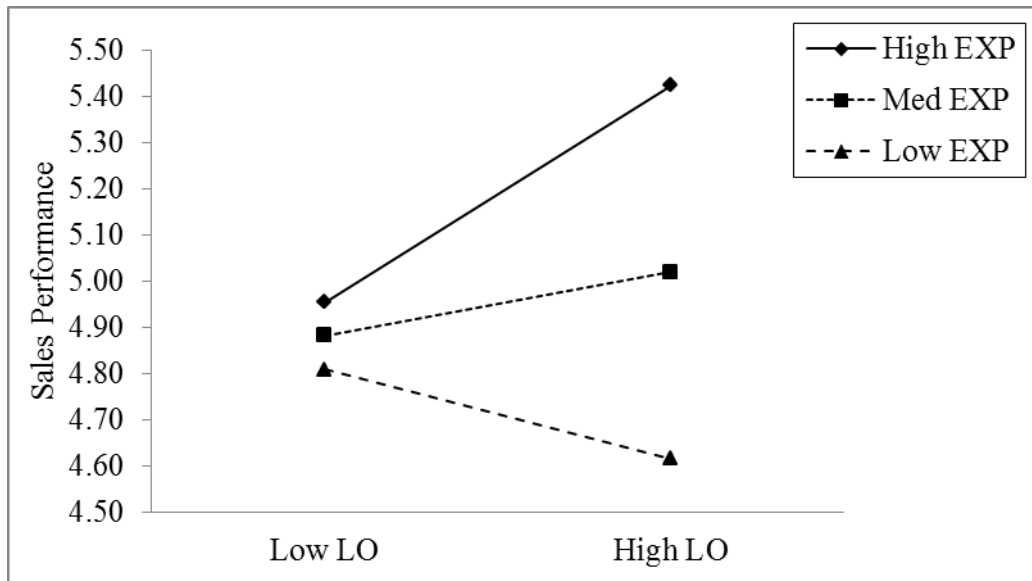
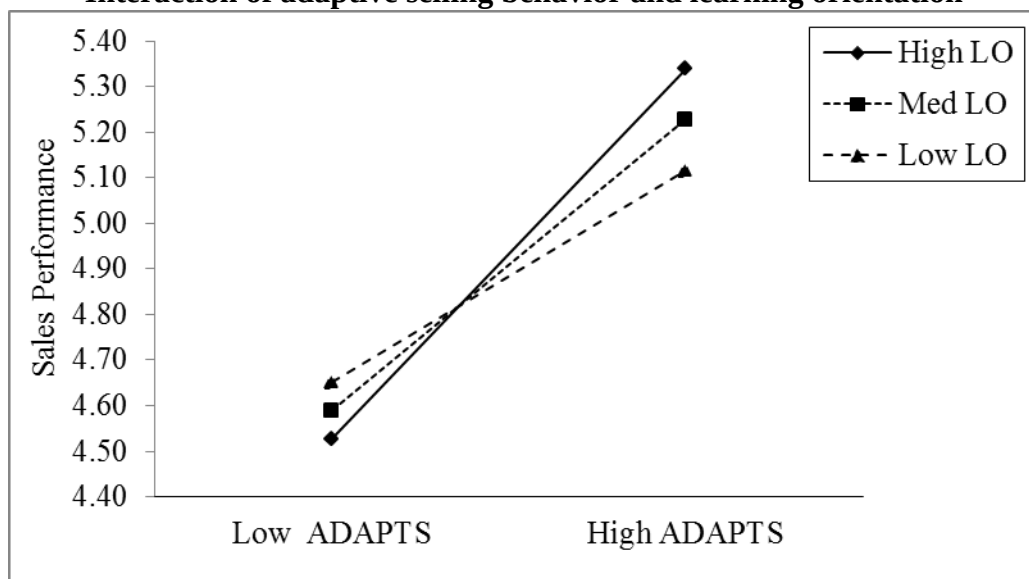


Figure 3
Interaction of adaptive selling behavior and learning orientation



HOW DO FIRMS SUCCESSFULLY INNOVATE UNDER RESOURCE LIMITATIONS?

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Abstract

How does successful innovation happen when resources are limited and what type of resources are most and least important to innovation success? To explore these questions and generate new theory, we conducted a comparative case study of four companies involved in innovative activities in different industries and settings- all with the common denominator of having to innovate under resource limitations. The findings demonstrate the importance of context on the type of resource limitation likely to exist and that resource limitations can actually lead to successful innovation but only under certain contexts. Our case evidence suggests a non-recursive moderator model of the resource limitation-innovation relationship.

The research contributes to the literature, first, by providing a grounded analysis of the resources and factors associated with innovation in contexts of limited resources. Second, it extends on resource-based theories of resource advantages and bricolage to explain how innovation can take place in resource-limited contexts.

Keywords: Innovation under Resource Limitation; R-A Theory; Dynamic Capabilities Theory; Bricolage

HOW DO FIRMS SUCCESSFULLY INNOVATE UNDER RESOURCE LIMITATIONS?

Previous research into successful innovation and firm performance suggests the importance of obtaining excess resources for innovation and firm survival (e.g. Bates 1995; Cooper et al. 1988). However, it has become obvious from empirical observations that limited resources can be enabling innovation in organizations, particularly small entrepreneurial ones (Baker and Nelson 2005; Garud and Karnoe 2003; Goldenberg et al., 2001; Katila and Shane 2005).

Thus, despite the large literature on slack resources and innovation, there is still no clear cut understanding of the relationship between resource limitations and innovation activities. More importantly, no study that we know of has examined the different types of resources and their effect on innovation and substitution effects when one or more resource is limited (in particular financial limitations (Weiss et al. 2011)). Studies either focus on financial slack (Latham and Braun 2009; Chiu and Liaw 2009) or, more recently, human resource slack (Mellahi and Wilkinson 2010) but none take these resources into account simultaneously by utilizing a qualitative case design that allows for in-depth inquiry of persons actually responsible for the innovation effort and inductive theory generation (Büchel 2000, Eisenhardt, and Graebner 2007; Siggelkow 2007).

This paper contributes to the literature on innovation by examining the different types of resources used under conditions of resource limitations. The basic research questions are: how does innovation continue when resources are limited? Which resources are the most/least important to innovation in such cases?

Theory: Resources and Innovation

Alternative theories of innovation under various resource conditions exist. These are not necessarily mutually exclusive but they do point out the need for examining innovation, especially in conditions of resource limitations, in a more holistic manner. The first is seen in the literature of resource allocation and innovation (e.g. Nohria and Gulati 1997). An alternative theoretical approach is seen in the resource-based view of the firm (Wernerfelt 1984) and specifically, the resource-advantage (R-A) theory (Hunt and Morgan 1995; Hunt and Morgan 1996) and the dynamic capabilities literature (Eisenhardt and Martin 2000; Kogut and Zander 1992; Teece et al. 1997). We briefly discuss each perspective below to demonstrate the unique need for qualitatively studying innovation under limited resources.

The literature on resource allocation and innovation has a long history going back to Cyert and March (1963) and March and Simon (1958). Most of these early studies focused on the requirement of excess resources needed for innovation, which was designated by the term, slack resources. Innovation as ‘organizational adaptation and renewal’ was expected to require excess resources because of the uncertainties and costs associated with exploration versus exploitation (March 1991). Indeed, Nohria and Gulati (1996, p.1246) defined slack as “the pool of resources in an organization that is in excess of the minimum necessary to produce a given level of organizational output”. As such, most research has focused on the existence of these slack resources and whether there is a relationship with innovation activities rather than whether innovation can take place under limited resource scenarios.

This literature essentially has three camps. The first camp believes or has shown empirically that slack resources help innovation efforts by providing safe avenues for exploration required of innovative activities (e.g. Cyert and March 1963; Damanpour 1987).

The second are those who believe that slack resources hinder innovation efforts because these resources are utilized inefficiently for things like pet R&D projects (e.g. Jensen 1993; Latham and Braun 2009). Finally, the third camp has produced a number of studies showing that there is a non-monotonic inverted-U relationship between slack resources and innovation (e.g. Nohria and Gulati 1996; Yang et al. 2009).

Unfortunately, this literature focuses mostly on the *amount* of slack resources (usually financial) available rather than the *type* of resource and the interactions of resources on the propensity and effectiveness to innovate. Slack is usually measured using available accounting metrics such as the current ratio (current assets/current liabilities) (Chiu and Liaw 2009) or psychometric measures (Nohria and Gulati 1996). Recently, there has been some focus on other resources as measures of slack such as human resources (Mellahi and Wilkinson 2010). The slack resources literature also assumes that it is excess resources that are important to innovation. While studies have looked at downsizing and the elimination of slack resources via recessionary pressures (Mellahi and Wilkinson 2010), most studies still assume slack is a measure of resources above and beyond the necessity for normal operations. Essentially the slack resources literature, which is largely based on economic theory, ignores the possibility that limitations (or negative slack) may actually spawn innovation.

Alternative perspectives on resource utilization in cases of innovation are seen in models of resource limitations in the entrepreneurship literature (Baker and Nelson 2005) and R-A theory (Hunt and Morgan 1996). These are primarily drawn on the RBV (Resource-based view) perspective of competitive advantage (Barney 1996; Wernerfelt 1984). R-A theory categorizes resources as financial, physical, legal, human, organizational, informational and relational and suggests that the type and utilization of resources as well as the amount available for strategic efforts is directly related to the competitive advantage of a firm. Indeed, it provides an explanation for why and how some resources become a ‘non-resource’ or ‘contra resource’ over time if a firm fails to recognize the resource’s ‘non-contribution’ or, more seriously, inhibition to its innovation efforts. Firms may fail to modify, relinquish, or abandon a resource or an assortment of resources in response to a changed environment (Hunt 2000, p. 141). That means, an asset that is a valuable resource in one environment can become a non-resource in another if it no longer contributes towards a firm’s innovation activities. Indeed, it may actually inhibit their innovation efforts. Using resources that are readily available for innovative purposes by changing the social context of what the resource can do or be via *bricolage* (see definition below) may fit this situation.

This suggests that certain resources, which may not necessarily be financial in nature, will be associated with successful innovation as strategic initiatives involving exploration. Gibbert et al. (2007, p.15) suggested that resource limitations may actually help innovation by either generating ‘entrepreneurial approaches’ to obtaining the missing resource or by using ‘social rather than purely economic strategies’.

The ‘entrepreneurial’ strategies under resource limitation were suggested early on by Starr and Macmillan (1990). Baker and Nelson’s (2005) study of ‘entrepreneurial persistence in depleted and constrained environments’ utilized Lévi-Strauss’s (1967) concept of “bricolage”, which was described as making do with “whatever is at hand” (Lévi-Strauss 1967, p. 17) and originates from the French noun meaning ‘something constructed from materials at hand’. This suggests that substitution of resources under conditions of limitations may help explain why innovation can still occur in less munificent environments and for less resource-rich entrepreneurial companies.

Both R-A theory and models of bricolage suggest that the ability to manipulate the recombination of resources is important to innovation. As such, the literatures on capabilities used for re-deploying and re-combining resources are relevant. Later we will see that these aspects emanated from our grounded data. As such, we utilize the notions of combinative and dynamic capabilities to help explain our data. Kogut and Zander (1992, p. 391) defined combinative capabilities as the ability “to generate new applications from existing knowledge”. Eisenhardt and Martin (2000, p. 1118) stated that “dynamic capabilities are best conceptualized as tools that manipulate resource configurations”. As such, these types of capabilities should be directly related to the propensity for firms to innovate via the use of strategic resources.

R-A theory, the capabilities literature and the notion of bricolage from models of entrepreneurship should all be useful in examining innovation under conditions of limited resources because they allow us to determine when some resources are more or less associated with exploration and how they can be (re)combined for maximal efficacy. Furthermore, the identification of various resources associated with competitive advantage or performance suggests that some resources may substitute for others via the social processes of innovative actors. Identifying the types of resources associated with innovation under resource limitations is just as important as quantifying the amount of resources needed for successful innovation- as is the ability to re-configure resources when one or more is depleted.

Method

We utilized a case study approach to examining innovation with limited resources. This methodology is recommended for situations in which a ‘how’ or ‘why’ question is asked (Eisenhardt 1989). Our secondary research question of “Which resources are the most/least important to innovation?” also requires a method allowing for informants to ‘verbalize the underlying causes of behavior reliably’ (Bonoma 1985). Furthermore, the case studies presented are meant to be utilized to inform theoretical development of our understanding of situations of resource limitations and innovation (Eisenhardt and Graebner 2007).

We followed the advice of Gibbert et al. (2008, p. 1467), employing techniques in our inquiry that matched the required aspects of validity and reliability recommended by Cook and Campbell (1979). For example, among many techniques, we utilize existing theory to help interpret the data from our study (internal validity). We utilize multiple interviews and archival data as well as review of our analysis and work by key informants (construct validity). We conducted multiple case studies from different organizations (external validity) and created a case study and interview protocol as well as a case study database in the process of our research (reliability).

Case selection

An explorative comparative case study design with the objective of uncovering new understandings and generate new theory on innovation under limited resources was used (Eisenhardt and Graebner 2007). Thus, we attempt to generate new theory inductively from case studies (e.g., Büchel 2000). We took the unit of analysis as the ‘innovation experience’ of managers involved in the innovation processes of their firms. Informants from four American companies known to be successful innovators under resource limitations were chosen for cross comparison based on the logic that differences may exist between mature companies and nascent entrepreneurial firms as well as different industries that focus either on products or processes as their final customer offering. Each of the company settings thus provided contextual variability to help generate theoretical dispersion and convergence when trying to

generate new conceptual understandings from the grounded approach utilized.

Data Collection Process & Analysis

We started by reviewing the literature on resources and innovation, which focuses mainly on the presence and amount of available slack resources. Extant research on resources and innovation does not specifically discuss the types of resources and limitation conditions involved in innovation. However, a significant amount of literature associates human resources with innovation propensity and capabilities. Thus, we utilized a grounded approach to developing the interview protocol to be used for interviewing informants for our research (Glasser and Strauss 1967). As such, the probing questions were open-ended, asking informants to discuss their experiences with innovation under conditions of resource limitations. The resulting interview protocol is shown in Table 1.

Table 1: Interview Protocol

1. Please describe your experiences with the process of innovation as you see it.
2. In your experience what do you think are the most pressing issues with innovating a new business product or process?
3. What types of resources have you found to be associated with successful innovation? Talk a little about why you feel these particular resources are associated with successful innovation.
a. In your experience with the process of innovation, which resources seem to be the most problematic to accumulate?... Which resources seem to be the most abundant?
4. In situations where you had as many and as much resources as necessary, were there any problems you encountered that hindered innovation?
5. In cases where resources were limited, how did you manage to innovate?
a. Did the resource limitation help or hinder the innovation effort?... Do you think that the missing resource would have made a difference if you had had more?
6. Are there things that might be defined as 'other than resources' such as intangibles that you feel have been influential in the success or failure of the innovation projects you have been involved with?
7. Is there anything else about successful innovation that you feel is important to 'explaining the whole story of how successful innovation happens'?

We then identified companies that had innovated in some significant way in circumstances that could be deemed limitation due to issues related to company size, management structure and industrial context. The final four companies provided a spectrum of high tech, low tech, small and medium as well as mature and relatively nascent contexts. This allowed some level of differentiation and integration in the case studies. However, the purpose of this particular part of our research program is *theory generation* and *exploration* so issues of generalization are not applicable.

Individuals in positions of upper management within the companies known to be involved in the innovation process of the company were contacted and asked to participate. Interviews were conducted via virtual conferences as well as in-person depending upon the scheduling issues and circumstances of distance. Interviews lasted with an average of 50 minutes. All interviews were taped and transcribed by a professional transcription company. Interview transcripts were then analyzed separately by the two researchers by coding for terms related to resources and innovation. A process of pattern matching and theme generation was then

used on the interview data. Company documents and artifacts were also used. In order to ensure a comprehensive understanding of the situation, the preliminary analysis was shared with key informants for their input. Case notes were modified based on their feedback.

Cases of Innovation under Resource Limitation

In many situations innovation takes place under non-ideal conditions of limited resources. How do companies do it and under what contexts do certain resources help innovation? In order not to confine the discussion of what innovation meant to our informants, we did not define innovation upfront but rather allowed the notion of innovation to emerge from the dialogue. Instead, we looked for compelling and persuasive examples of what innovation and the resource limitations and practices to overcome these limitations meant to our informants. This section briefly describes the companies and the experiences of the informants in managing innovation under resource limitations for each of the cases in order to provide a deep background on the context of each situation. Table 2 shows the characteristics of each firm.

	BioFirm	RecycleFirm	EnergyFirm	WebFirm
Age	About 14 years	About 40 years	About 9 years	About 14 years
Number of Employees	About 30	About 70	About 10	From 45 to about 1000 over time
Industry	Biotechnology	Recycling/Waste Management	Green Technologies/Engineering	Travel Services
Typical Innovation Effort	Product-biological reagents	Process- metal separation	Product- Ceramic engineering	Product/Process- Website development
Management Style	Formal	Informal	Informal	Formal/Informal

BioFirm

Biofirm is a small reagents and assays company in the biotechnology industry located in the Southwest of the U.S. Innovation at the company recently involved going into a new line of research.

Being an innovative high-technology company, the biggest limitation on resources for BioFirm seemed to be human resources, as mentioned by the Director of R&D. His comments also alluded to another theme that was generated from some of the other cases, viz., the notion of fit and having the ‘right people’ with the ‘right skills’:

One thing that is critical in our business is finding the right kind of people with the right kind of skill sets. Because some of... our products are cutting edge, sometimes the technology and skill sets that people possess are hard to find.

Relational resources were also seen to be relevant to innovation success at Biofirm. Indeed, limitation in this area can be detrimental to a small company in the biotechnology/pharmaceutical field. The importance of the relational resources and the relative disadvantages that smaller companies can have was evident in the following comments that exemplified similar issues at the other companies that we studied, which rely on external partners:

There’s a product... I was working on... with some outside partners. And these were larger free agent companies and... a possible customer- a pharmaceutical company that would have used this product. But there was quite a bit of R&D that needed to be done, and essentially as

I worked with [these] two different outside larger companies, – it always felt like we couldn't keep up. Eventually those larger companies... essentially took the product, the idea for the product, made their own, and... continue to successfully sell it today.

The comment alludes to the disadvantage of limitations on resources for smaller companies when dealing with larger partners in innovation efforts. BioFirm (as with all the firms) struggled with issues of financial capital, or money:

We're like many groups, we're asked to generate new and creative products that will sell well for our company, and yet do that with the least amount of money possible, and in as short amount of time as possible... Certainly people seem to be [important] – and again... perhaps with more money one might be able to recruit better. So in some ways it kind of boils back down to money. And we certainly have to operate within our budgets.

EnergyFirm

Energyfirm is a small, start-up company with two major products that help reduce energy costs associated with furnace operations. It is located in the Northeast, USA. While their concept is simple the inventor of the products stated that at least one of the products “fit an area of the application that nobody else can do”.

EnergyFirm is typical of a highly entrepreneurial firm that benefits from the innovative drive of its founder and core management team. While many resources were identified by the informants to create limitations on innovation, many of these limitations were also seen as generating opportunities. A particularly important limitation that actually led to a positive effect on innovation was its need to build custom equipment for its manufacturing process. This appeared to be a limitation based on both physical and relational resources as pointed out by the GM:

I mean suppliers are somewhat of a problem for us.

You know, there's... not a lot of people that deal like in stainless metal... We do a lot of stuff in the stainless and in the ceramics, so well, every piece of equipment just about out here is custom made... There's maybe two companies worldwide that make the graphite that we need for that machine, and if they have a backlog, then we're kind of stuck.

However, these limitations also seemed to have a positive effect on innovation because the company was then required to make do with what they had:

You know, but that's part of a small company. You just go and pull from wherever you need to because one of your biggest hang ups is always going to be nobody outside your world can answer your questions on how to make something because you have to invent it. Every piece of equipment you have, you're inventing for what you need.

Money could always be an issue but the company found that it could make do by obtaining funding and loans from various programs. It helped that it had legal and reputational resources in the form of patents and patents pending that it could demonstrate the potential of the technology on which the company success is predicated. In various comments the GM was adamant that, while important, money should never get in the way of innovation and that the most important resource was human capital:

Our biggest struggles were, one, finding the right caliber and talented of people in [our] mar-

ket... that's a catch-22. That's very hard because sometimes without the money resource side of- it, it's hard to bring the right people in.

... [But] I don't care what size company you are, you always lack money. You know, you always want more money. I mean we deal with the big steel guys, and they're always crying for more money too... So money is always something that's part of conversation every day.

RecycleFirm

RecycleFirm is a small family-owned firm running three recycling operations located in the Northeast, USA. The company has been in business for around 40 years. While the basic scrap and recycling industry as a whole is not necessarily known for innovation, RecycleFirm always seemed to be on the lookout for new ideas and ways to process the raw materials that are the basis of their business. Core innovative processes included new ways to separate metals.

Given the nature of the business and industry, all the innovation was process-oriented as the GM stated when asked about innovation efforts at the company- "It's more process improvements". Some innovative activities that were new to the industry were driven by anecdotal experience of the founder:

I was the first here with roll-off containers. I tried to make things easier... We were the first to completely computerize, and we paid by check; we don't pay by cash. People said that wouldn't work... So we changed a lot of these things, which are now... industry-wide... and eventually I bought out four [competitors].

Not surprisingly, due to the structure and process nature of the business, one of the biggest limitations for RecycleFirm was capital, as stated by the GM:

I think the biggest resource is just capital – I think for any business, especially one of our size. We're already in a very capital-intensive business, and there's a constant fight for that because we're always trying to make improvements to PP&E, and I think it's a fight dollar-wise."

On the other hand, the limitations faced by RecycleFirm also seemed to drive the innovations that they did undertake- most being focused on lower costs of business or providing a service that differentiated them from their competitors- but always from a process-orientation. Interestingly, similar to EnergyFirm, these activities were sustained by the availability of just enough money to keep their cash flow going- often provided by Small Business Association (SBA) Loans- as exemplified in the statement of the CEO:

The SBA. I must have had two, three loans with them... without the tax help on buying equipment where we could write-off 50 percent of it – you know, our equipment deteriorates within seven years. I mean, it's under heavy use, and so the repairs after three years become costly.

WebFirm

Webfirm is a smaller private operation that is owned by a large parent company in the airline

industry. Webfirm was one of the first companies to develop web-based services associated with travel. Their systems were so successful that they have been applied to segments other than air travel such as trains, though not always successfully. A foray into hotel sites suggests the folly of excess resources and lack of focus:

Trains are quite different than airplanes. They come apart. They stop more often. There are a lot of different things, but it worked. They then went on to try to build a system for Hilton and another hotel company, maybe it was Marriott, and a car rental company, and the guy who ran that project convinced management that they should build a totally new system using untried technology with basically nobody from [our company] involved. It was a total startup- except it was a massive startup. They had to build this huge system.

They had hundreds of people working with entirely new technology, trying to do something that had never been done before and it failed miserably. It never worked. I think the problem there was they had too many resources and they attempted too many new things at once at too large a scale, so it was just a huge debt and they lost several hundred million dollars doing it.

Being a company in the middle of the dot com craze, a lot of excessive spending and wasted resources seemed to be a result that did not necessarily lead to innovation. The founding manager of the company spoke of the halcyon days of the internet's first forays into commercial endeavors:

I think if you look back at the Internet bubble where you had people with abundance of money- they wasted a lot of it... I think one thing that was very useful [for us] was... we financially had grown up inside of an airline, which by its nature is a highly parsimonious organization. Airlines are notoriously cheap and they have to be because they don't make a high return.

So we had a rigorous budget process... So I think we nurtured our resources carefully and didn't spend them wastefully and I think that was pretty important. I think there were certainly startups that had this great amount of resource and blew it on parties and great offices and a whole lot of stuff that wasn't really important.

Another informant reiterated the notion that, while necessary, money was not a panacea for innovation and certainly should not get in the way of solving problems that are the sign posts of innovation:

If you're creative in how you manage that budget, which is my experience, there's always a way to solve a problem, always, and whether it's through your resources [or] whether you're going to cut in another area to grow in another, budget should never be a constraint in my opinion...

Listen, you never have abundance, period. You just don't ... you always have a budget constraint, but you have flexibility... I will always come in on budget, but I'm going to do it in a way that's maybe a little bit *avant garde*, but I'm going to get it done. So you always have a constraint from your budget and you typically also always have a constraint on the other resources.

Characteristically for a high-tech company, the informants at WebFirm considered human resources to be of utmost importance. Challenges of acquiring talent was also ever-present, particularly in the days when expert programmers and other highly qualified people were being offered extravagant pay packages to switch allegiances and work for competitors. Creating a culture to breed innovative behavior and allow people to do what they do best- where their passions lie- seemed to help retain such people and recruiting people with the right attitude was also alluded to by the Senior VP of Technology:

I've been doing this over 25 plus years, you can't take a person who is not intrinsically motivated to do innovation. There are some people that just innately have the knack. They have the passion, they have the desire, and so if you try to make this mandatory you're going to have people in there that aren't even going to contribute, and so what you do is you try to make it exciting [based] around emerging technologies... You just let people go. It's just amazing what people will come up with if you let them go and if you're flexible with them [for example] in work hours – if they kill themselves to go do something, you give them some comp time. If you deal with people and you give them rope, let them go run with it. That's really where people appreciate the opportunity. You'll get people if you give that empowerment- they'll do the work of three people and they want to do it. It motivates them. Those are the people you want to go find.

Similar to BioFirm's case, WebFirm struggled with being a small company challenged in its relationships with larger organizations like its parent company. On one hand, the senior VP stated:

It's very much an influencing role in the smaller organizations that you've got to get your parent company on board, and it's tough. You have to be relentless.

However, the founding manager found the smaller organization, even within a larger company, helped the innovation efforts because of the challenges of creating an innovation culture in larger organizations. He also alluded to the notion of fit or having the right resources for the right problems:

I think it is that large organizations don't necessarily have the right resources and are generally not set up for change. They're set up for repeatability, stability, high quality. If you take six sigma, for example- a wonderful process that can drive a lot of quality- six sigma kind of collides with innovation. I spoke recently at the American Society of Quality Managers, and what I talked to them about is, look, you've got to allow people to innovate to figure out what the new process ought to be and when it's time to optimize that process. But if you're in there with your quality ten steps to nirvana, nobody's ever going to do anything because you've got to [be willing to] fail, and corporations aren't set up to fail...

I've seen it over and over again, particularly in large companies. It's about creating a culture where innovation can exist. I think a lot of companies don't have a culture of innovation. When things fail they punish the person more than they punish the project, so leaders have to be more like coaches to really get innovation to exist and realize that there are going to be a lot of failures.

Towards A Theory of Innovation under Resource Limitations

In analyzing the data we were struck by the fact that the case informants often referred to the resources categorized in R-A Theory. This was not pre-determined by the researchers alt-

though a major purpose of the research was to identify the resources involved in innovation as well as the conditions under which limitations in these resources are overcome. The themes generated from the case data on resource limitations and other factors linked to successful innovation are captured in Table 3. It is apparent from the table that all seven types of resources from R-A theory were identified across the population of cases, although not in all cases. This analysis allowed us to identify the scenarios in which some resources may be more relevant than others for certain contexts of resource limitations. The apparent effect—either negative or positive on innovation success—was also identified in the data and is tabulated in Table 3.

Table 3: Effects of Resources and other Factors on Innovation

BioFirm				EnergyFirm				RecycleFirm				WebFirm			
Resources:	Resource can Constrain Innovation?	Effect of Constraint on Innovation		Resource can Constrain Innovation?	Effect of Constraint on Innovation			Resource can Constrain Innovation?	Effect of Constraint on Innovation			Resource can Constrain Innovation?	Effect of Constraint on Innovation		
		Negative	Positive		Negative	Positive			Negative	Positive			Negative	Positive	
Financial	Yes	X	X	Yes	X	X		Yes	X	-		Yes	X	X	
Human	Yes	X	-	Yes	X	-		Not Mentioned	-	-		Yes	X	-	
Informational	Yes	X	-	Yes	X	-		Yes	X	-		Yes	X	-	
Legal	Not Mentioned	-	-	Yes	X	-		Not Mentioned	-	-		Yes	X	-	
Organizational	Not Mentioned	-	-	Yes	X	X		Not Mentioned	-	-		Yes	X	X	
Physical	Not Mentioned	-	-	Yes	X	X		Yes	X	X		Yes	X	X	
Relational	Yes	X	-	Yes	X	X		Yes	X	-		Yes	X	-	
Effect on Innovation				Effect on Innovation				Effect on Innovation				Effect on Innovation			
Innovation Success factors:	Mentioned?	Negative	Positive	Mentioned?	Negative	Positive		Mentioned?	Negative	Positive		Mentioned?	Negative	Positive	
Bricolage	Yes	-	X	Yes	-	X		Yes	-	X		Yes	-	X	
Brainstorming	Yes	-	X	Yes	-	X		Not Mentioned	-	-		Yes	-	X	
Culture	Yes	-	X	Yes	-	X		Not Mentioned	-	-		Yes	-	X	
Flexibility	Yes	-	X	Yes	-	X		Yes	-	X		Yes	-	X	
Focus	Yes	-	X	Yes	-	X		Yes	-	X		Yes	-	X	
Passion	Yes	-	X	Yes	-	X		Yes	-	X		Yes	-	X	
Small Company	Yes	X	X	Yes	X	X		Yes	X	X		Yes	X	X	

The Importance of Context to Resource Limitations

The data in Table 3 show that different resource limitations were considered important under different industrial and innovation contexts. That is, the emergence of different innovation foci in our case analyses (i.e., what it meant to innovate for our informants) led to an understanding that industry context and other contextual aspects may make a difference in the approach to, first, recognizing resource limitations and, second, handling the situation of limited resources. RecycleFirm, for example, focused mostly on financial resources as the major limitation and it was limitation in physical resources that seemed to drive innovation at the company. While the entrepreneurial orientation of the founding member suggests that human resources (in the form of managerial talent) was important to the company's successful process innovations, none of the informants nor any other case data suggested a strong orientation towards managing for human capital at the company. This can be directly compared with the other three cases that all demonstrated a focus on human resources as a major limitation on innovation (when lacking adequate human capital). The other three firms also showed evidence of the importance of limitation in financial resources but that these often actually drove innovative behaviors. At BioFirm, this was seen in the development of less expensive testing equipment. At EnergyFirm and WebFirm, this was seen in the use of brainstorming and forums to generate ideas to solve problems in less expensive ways. All of these examples tended to substitute financial limitations with human resource allocations.

The innovation context also differed significantly for RecycleFirm. It was the only company involved in incremental innovation activities and thus lack of money seemed to be a more visible problem. The other three companies were high-tech, involved more in substantial in-

novation and thus required knowledge workers (i.e. human capital) as important resources. Using terminology from R-A theory, we would state that Recycle firm was more involved in 'reactive innovation', while the other companies were more involved in 'proactive innovation'. Proactive innovation is when a firm's R&D develops a market offering and then the firm finds a market segment for it. Reactive innovation occurs when inferior financial performance signals a firm that their comparative *disadvantage* in resources has resulted in their occupying a market place of competitive disadvantage.

Upon so learning, firms react by attempting to acquire an equivalent or superior resource, which generally requires financial resources (Hunt 2000, p. 213).

The data suggests that the type of innovation (proactive versus reactive) may be considered the context, determined to some extent by the industry or company environment, in which a firm finds itself requiring the proper type of resource. For example, proactive innovation would focus on human resources and reactive innovation on financial resources. Under conditions of resource limitations, the context of innovation becomes even more salient to success than under conditions of resource munificence. This suggests that the notion of context for any particular resource limitation is also important- leading to our first generated propositions.

Proposition 1: The context of innovation (often based on industry and sector) is related to the type of resource limitation.

Proposition 1a: Specifically, reactive and incremental-type innovation will be more likely related to limitations in financial resources.

Proposition 1b: Specifically, proactive and radical-type innovation will be more likely related to limitations in human resources.

Perusal of Table 3 demonstrates that when a limitation in a resource was mentioned by one of our informants it seemed to lead to negative effects on innovation (even though there were sometimes also cases where the resource limitation had a positive effect on innovation). These findings suggest that there is a contingency relationship with moderating variables that may affect the resource limitation-innovation performance relationship. In general, and also intuitively, under conditions in which the moderating variable is absent one would expect that limitations in resources will have a negative effect on innovation. Indeed, the traditional literature on slack resources, as discussed earlier, suggests this case. Therefore, we propose that in the absence of enablers (measured by moderator variables) resource limitations will have either a negative effect or no effect at all on innovation performance.

Proposition 2: Limitations in resources will be negatively or not related to innovation performance in general.

Enablers of Innovation: Combinative and Dynamic Capabilities- Passion, Focus and Flexibility

In some cases we found that limitations in resources actually led to innovation. Indeed, we know this from anecdotal examples of innovation under resource limitations (Garud and Karnoe 2003; Gibbert et al. 2007; Goldenberg et al. 2001). Analysis of our data suggested that this was the case when other success factors were present. These are depicted in Table 3 as innovation success factors and seem to be indicative of combinative and dynamic capabilities in their effect on manipulating resource configurations. In fact, the data suggested that innovation under resource limitations may be similar to creating strategy in dynamic envi-

ronments where dynamic capabilities are utilized to create “simple, experiential routines that rely on newly created knowledge specific to the situation” (Eisenhardt and Martin 2000, p. 1115). As a company develops its dynamic capabilities, it will be in a better position to utilize resource limitations to drive innovation behavior.

While we could not identify all aspects that help drive innovation under resource limitations, our data suggested that the themes of passion, focus and flexibility play an important role. These concepts can be generalized as cultural aspects of the environment, which may influence innovative effort (Teece 1996; Tellis et al. 2009) and enhance the team climate for innovation (TCI) (Anderson and West 1998; Somech and Drach-Zahavy, 2011; West 1990; West and Anderson 1996), which has recently been shown to be positively related to innovation under financial resource limitation (Weiss et al. 2011). Sociocultural factors have also been shown to directly influence as well as moderate the relationship between top management leadership and organizational innovation (Elenkov and Manev 2005), demonstrating the power of culture to drive behavior in an organization.

Our analysis suggests that these cultural elements of innovation can be characterized as aspects of dynamic capabilities (e.g. the ability to change as the situation changes). Specifically, in the R-A theory framework the passion-focus-flexibility triad fit the concept of renewal competences, which Teece and Pisano (1994) described as “dynamic capabilities,” and Dickson (1996) as “learning how to learn”. Based on R-A theory, we envision passion-focus-flexibility as renewal competences that stimulate innovation under resource limitations by enabling firms to: (1) anticipate unmet customer needs, wants, and preferences (e.g., when a web firm finds a niche market); (2) envision market offerings that might be attractive to such segments (e.g., a web travel site offering not only flight tickets but also service bundles in the form of hotels and rental cars); and, (3) foresee the need to acquire, develop, or create the required resources/competences to produce the envisioned market offerings (e.g., hiring employees with passion to innovate and/or giving employees empowerment and flexibility to innovate). This agrees with the recent finding that strategic flexibility is an important dynamic capability identified with business model innovations (Bock et al. 2011).

The data suggests that innovating under resource limitation is not possible without commitment and determination, which ultimately emanates from the passion and attitude of people in the company and the existence of an innovation culture and capabilities for generating innovative activity. While passion, for example, may generally be important for innovation, it becomes even more salient under conditions of resource limitations in which innovation may cease without it (i.e., passion). As such, these are aspects of potential moderating variables of capabilities. In a general sense, this predicts that when certain dynamic capabilities are present innovation will continue under resource limitations. Without the presence of the necessary moderators innovation will not take place. This leads to a general proposition about the effects of contextual moderators on the resource limitation-innovation performance relationship. Specifically, our data also suggests (well not an exhaustive list of moderators) that the conditions of passion, focus and flexibility will positively moderate the resource limitation-innovation performance relationship.

Proposition 3: All else being equal, limitations in resources will be positively related to innovation under conditions of greater combinative and dynamic capabilities to offset the original resource limitation.

Proposition 3-a: Specifically, under conditions of greater combinative and dynamic capabilities exemplified by 1) passion; 2) focus and 3) flexibility, limitations in resources will be more positively related to innovation.

In building the model of innovation under resource limitations from the generative data, it became clear that a non-recursive model would be appropriate for describing the generation of capabilities over time. Thus, based on R-A theory, we make the final two propositions regarding the generation of capabilities over time that help a firm get better at managing conditions of resource limitations. Indeed, it is apparent that some of our informants innovated by creating new capabilities and resources that over time had lowered the threshold in which they would be perceived as 'resource limited'. The building of custom equipment at EnergyFirm is an example of such a process. Another example comes from BioFirm, in which they created a new imaging agent, and in the process developed capabilities useful for future innovation efforts:

There's no doubt that sometimes it spurs creativity to be resource constrained. I can think of another example where we had a really cool project... where we were working on a really novel kind of imaging agent so you could essentially... allow a surgeon to very accurately image a tumor.

And we have a little bit of resources put to it, but we don't have enough. Some of the instruments to image are half a million dollars or more... Anyway so, one of the scientists here came up with a way-, even though it's probably not quite as nice as the half-million-dollar instrument, we're able to do with less than \$1,000 worth of parts and pieces, cobble together an imaging station, so we could at least get the preliminary data that we needed.

And there's no doubt that if we had all of the money we needed, we wouldn't have bothered with that. But in the meantime, that's helped create some additional skills with essentially having to build that piece of equipment on our own. We certainly know more about light and its interaction with biology. So it's led to a deeper understanding of our subject.

The notion of change is also implicit in the theory of dynamic capabilities. Indeed, Eisenhardt and Martin (2000) build upon the literature of organizational learning, including the creation of routines that 'deepen the memory of firms for the routine' (Argote 1999; Nelson and Winter 1982). As such, we propose the following:

Proposition 4: The more a firm has had experience with innovation over time, the greater the amount of combinative and dynamic capabilities it will have developed.

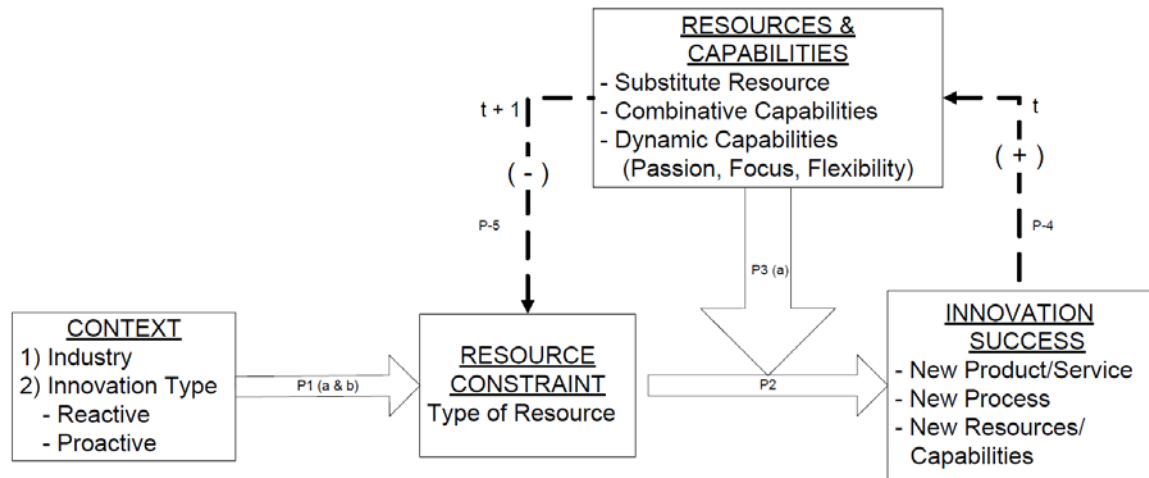
Proposition 5: Over time, greater combinative and dynamic capabilities will lead to fewer limitations in resources.

Discussion

While our methodology does not allow for testing the generalization of our model, the data showing the connection of resources and innovation moderated by these contextual factors supports the generation of theory that they are connected. In terms of face validity, there is also something intuitive about this finding. That is, under conditions of high passion, focus and flexibility one would expect that less resources are needed to drive innovation. On the other hand, lack of passion, focus and flexibility may not lead to innovation at all- regardless of the amount of resources allocated to the innovation process!

The resulting model generated from the study's data and incorporating the previous propositions is depicted in Figure 1.

Figure 1: Proposed Model of Resource Limitation and Innovation (A Resource/Capabilities Model of Bricolage)



The model of Figure 1 suggests the mechanisms by which bricolage can take place. Baker and Nelson (2005) indicated that bricolage consists of three elements: 1) making do; 2) combining resources for new purposes; and 3) utilizing resources at hand. Furthermore, while their process model of bricolage and growth emphasized under what condition bricolage led to company growth, they hinted at an environmental context that encouraged creativity (Amabile 1997), improvisation (Moorman and Miner 1998), combinative capabilities (Kogut and Zander 1992), tolerance for ambiguity, messiness, setbacks and social skills and network. Still, they stated:

Unfortunately, while our results as a whole strongly suggest this connection, they do not provide enough evidence to develop a full understanding of the relationship between bricolage and many of the related capacities that it sometimes entrains, and this remains perhaps the weakest part of our model (Baker and Nelson 2005, p.360).

Combining R-A theory (Hunt and Morgan 1996) and dynamic capabilities (Eisenhardt and Martin 2000; Kogut and Zander 1992; Teece et al. 1997) with the qualitative evidence from our case-based research creates a possible model explaining in what situations innovation under resource limitations (referred to as bricolage in the context of entrepreneurship) will take place. Of course, any future confirmatory studies of our model need to control for company size, industry and other factors known to influence innovation. For example, Baker and Nelson (2005) suggested that 'broader, richer and more demanding markets' may be required to turn bricolage into successful growth for a company. Also, Bradley et al. (2011) recently showed that financial slack may be more important in low discretion environments that are hostile and stable. While our data and common sense suggests that the innovation culture factors identified may be more universally related to innovation under resource limitations via bricolage, the interactions and allocations of resources are likely to be industry or market segment-specific. There are also likely to be many more specific enablers of innovation under resource limitations that we have generalized as 'dynamic capabilities'. Future research could identify these and specifically test for changes in the influence of enablers over time via longitudinal studies.

The importance of such research is clear-cut. Any commercial endeavor requires some financial capital (i.e. money) to see it through. As innovation is often defined as 'invention plus

commercialization’^[1] (Roberts 1988), it stands to reason that money is required for innovation. Indeed, researchers in the area of creativity have long believed that innovation requires enough resources to be successful but that an abundance of resources may actually constrain innovation (Amabile 1988; Scott and Bruce 1994). The question then becomes how much money is needed and can resources that use up less financial capital be more effective in turning invention into innovation by leveraging on dynamic capabilities that are based on an innovation culture?

With the recent interest in reverse innovation ^[2] (Immelt et al. 2009; Hang et al. 2010), in which radically new ways of developing products more cheaply for emergent markets that demand certain functionalities but not at the expense of excessive offerings and costs, we are beginning to understand that innovation can take place at lower thresholds of resource allocations (Bradley et al. 2012; Halme et al. 2012). While reverse innovation usually suggests foreign, emergent markets, many examples of the companies we studied demonstrate that small, entrepreneurial companies in the U.S. are engaged in a form of ‘reverse innovation’ as well. As a tangential point, a couple of the cases also emphasized the importance of foreign markets to the companies’ innovation and sales activities.

The research described here joins recent work in the area of managing for effective innovation by discovering how managers can better deploy resources to impact performance (Wiklund and Shepherd 2005). It also lends credence to recent conceptual work that suggested that creativity in innovation and creative deviance (i.e., an actor disregarding the instructions of a superior in an organization to desist from exploring a new idea) may require structural strain, defined as ‘the condition where the resources the organization makes available for the elaboration of new ideas do not suffice to support the elaboration of all proposed new ideas in the work context’ (Mainemelis 2010, p. 562). Our findings further suggest the importance of resource limitations on innovation in an environmental contingency manner such that the context in which resources are deployed makes a material difference to performance (Bradley et al. 2011).

The empirical data reported also reinforces the importance of all types of resources in promoting innovation activities, something which tends to be neglected in the innovation management literature (in favor of a focus on a specific type of resource such as financial slack). Specifically, our qualitative study of innovation under conditions of limited resources suggests that there are ways to drive innovation without throwing money at the problem. This is of extreme importance to practicing managers who find themselves under the pressure of innovating with limited and sometimes impossibly small budgets. Anecdotal evidence suggests that it is possible to innovate under limited resources (Baker and Nelson 2005; Gibbert et al. 2007; Starr and Macmillan 1990) and our study shows that, beyond financial capital, other resources put forth via R-A theory (Hunt and Morgan 1995; Hunt and Morgan 1996) and developing dynamic capabilities (Eisenhardt and Martin 2000; Kogut and Zander 1992; Teece et al. 1997) that are based on a strong innovation culture can help.

Indeed, our study demonstrates that some of these resources (in terms of human capital) and other culturally-based factors can overcome the limitations of underfunded budgets. Of course, this requires strong managerial skills to help create and drive the passion and attitudes of focus and flexibility needed to overcome the perceived barriers and work towards innovation when certain resources are limited.

Limitations and Future Research

While our inductive methodology allowed for the generation of a new theoretical model of innovation with limited resources, it is not without its limitations. As with all research projects the study provides only a glimpse of the potential understanding of the resource limitation-innovation phenomenon. Specifically, our methodology did not allow us to test for the generalizability of our findings. However we see future work in testing for the generalizability of the generated model. Also, while we found convergence in many themes as we analyzed the cases, which allowed for the generation of the proposed model via theoretical induction (Douglas 2003), we cannot preclude other factors that may have a contingency effect on innovation performance. For example, Bradley et al. (2011) recently showed that environment context (stable vs. dynamic and munificent vs. hostile) may play a role in the relationship between financial slack resources and firm performance. Other case studies might discover more and different types of resources and capabilities associated with innovation success under resource limitation beyond the themes of passion, focus and flexibility that we identified in our cases. As such, there is a tremendous amount of opportunity in terms of specific studies that might focus on specific aspects of our Resource/Capabilities Model of Bricolage in Innovation.

Conclusion

In the strategy, marketing and management literatures, the importance of resources to innovation and firm performance has long been recognized. However, only recently has it been acknowledged that performance, particularly from innovation processes, can actually be enhanced when resources are limited by leveraging upon extant resources and capabilities already existing in the firm's environment. Our study of innovation under resource limitations demonstrates that a contingency model of dynamic capabilities can help to explain the situations in which such successful innovation and firm performance can take place. This inductively-created model may now be used in more generalizable studies to explore specific types of resources and capabilities associated with such innovation efforts. It is our hope that this exploratory theory-generating study provides a basis for future work examining the effects of different types of resources and capabilities utilized by firms in overcoming resource limitations in their innovation processes.

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FOOTNOTES

[1] Note that in our study innovation can include process aspects such that the exact definition of invention is inappropriate. However, keep in mind that all our informants were dealing with commercialized innovations.

[2] This is probably a poor, somewhat imperialistic, moniker for the phenomenon since it implies that the normal pattern is for innovation to run from West to East; Rich to Poor, etc.

which historically has not always been the case (e.g., with China- see WINCHESTER, S. 2008. *The man who loved China : the fantastic story of the eccentric scientist who unlocked the mysteries of the Middle Kingdom*, New York, Harper.)

Figures and Tables

Figure 1: Proposed Model of Resource Limitation and Innovation (A Resource/Capabilities Model of Bricolage)

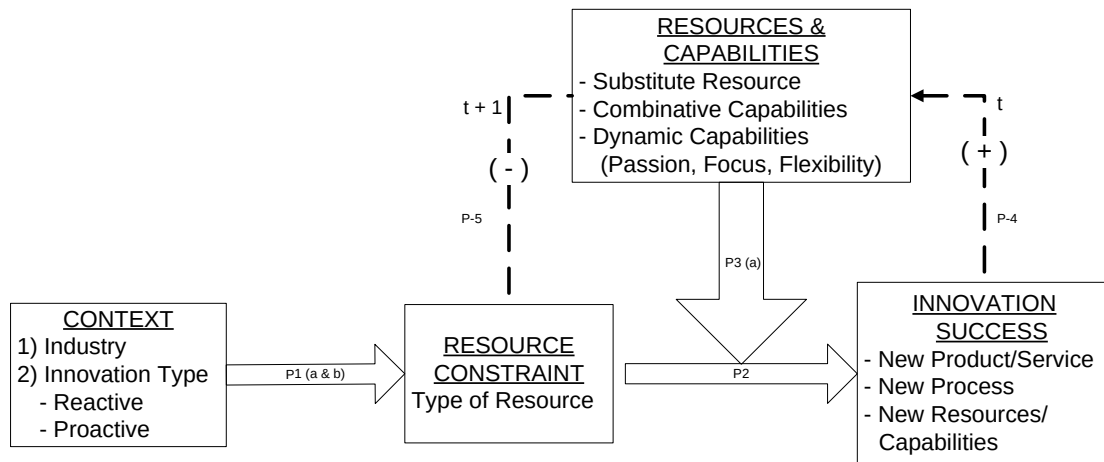


Table 1: Interview Protocol

1. Please describe your experiences with the process of innovation as you see it.
2. In your experience what do you think are the most pressing issues with innovating a new business product or process?
3. What types of resources have you found to be associated with successful innovation? Talk a little about why you feel these particular resources are associated with successful innovation.
 - a. In your experience with the process of innovation, which resources seem to be the most problematic to accumulate?... Which resources seem to be the most abundant?
4. In situations where you had as many and as much resources as necessary, were there any problems you encountered that hindered innovation?
5. In cases where resources were limited, how did you manage to innovate?
 - a. Did the resource limitation help or hinder the innovation effort?... Do you think that the missing resource would have made a difference if you had had more?
6. Are there things that might be defined as ‘other than resources’ such as intangibles that you feel have been influential in the success or failure of the innovation projects you have been involved with?
7. Is there anything else about successful innovation that you feel is important to ‘explaining the whole story of how successful innovation happens’?

Table 2: Firm Characteristics

Table 2: Firm Characteristics				
	BioFirm	RecycleFirm	EnergyFirm	WebFirm
Age	About 14 years	About 40 years	About 9 years	About 14 years
Number of Employees	About 30	About 70	About 10	From 45 to about 1000 over time
Industry	Biotechnology	Recycling/Waste Management	Green Technologies/Engineering	Travel Services
Typical Innovation Effort	Product-biological reagents	Process- metal separation	Product- Ceramic engineering	Product/Process-Website development
Management Style	Formal	Informal	Informal	Formal/Informal

Table 3: Effects of Resources and other Factors on Innovation

		BioFirm		EnergyFirm		RecycleFirm		WebFirm	
		Effect of		Effect of		Effect of		Effect of	
		Resource can	Constraint on	Resource can	Constraint on	Resource can	Constraint on	Resource can	Constraint on
		Constrain Innovation?	Innovation	Constrain Innovation?	Innovation	Constrain Innovation?	Innovation	Constrain Innovation?	Innovation
Resources:		Negative	Positive	Negative	Positive	Negative	Positive	Negative	Positive
Financial	Yes	X	X	Yes	X	Yes	X	Yes	X
Human	Yes	X	-	Yes	X	Not Mentioned	-	Yes	X
Informational	Yes	X	-	Yes	X	Yes	X	Yes	X
Legal	Not Mentioned	-	-	Yes	X	Not Mentioned	-	Yes	X
Organizational	Not Mentioned	-	-	Yes	X	Not Mentioned	-	Yes	X
Physical	Not Mentioned	-	-	Yes	X	Yes	X	Yes	X
Relational	Yes	X	-	Yes	X	Yes	X	Yes	X
		Effect on		Effect on		Effect on		Effect on	
		Innovation		Innovation		Innovation		Innovation	
Innovation		Mentioned?	Negative	Mentioned?	Negative	Mentioned?	Negative	Mentioned?	Negative
Success factors:			Positive		Positive		Positive		Positive
Bricolage	Yes	-	X	Yes	-	Yes	-	Yes	-
Brainstorming	Yes	-	X	Yes	-	Not Mentioned	-	Yes	-
Culture	Yes	-	X	Yes	-	Not Mentioned	-	Yes	-
Flexibility	Yes	-	X	Yes	-	Yes	-	Yes	-
Focus	Yes	-	X	Yes	-	Yes	-	Yes	-
Passion	Yes	-	X	Yes	-	Yes	-	Yes	-
Small Company	Yes	X	X	Yes	X	Yes	X	Yes	X

ALLIANCE MARKET ORIENTATION, NEW PRODUCT CREATIVITY, AND NEW PRODUCT PERFORMANCE IN HIGH-TECH INDUSTRIES

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Abstract

Market orientation has traditionally been examined as an intra-firm concept. However, as firms often collaborate with other firms to create offerings that have superior value to customers, there is a burgeoning need to explore market orientation as an inter-firm phenomenon. Consequently, this paper conceptualizes alliance market orientation (AMO) as a capability that enables an alliance to (1) jointly and systematically gather market intelligence, (2) inter-organizationally coordinate and disseminate the knowledge gleaned from the market intelligence gathered, and (3) efficiently and effectively respond to the knowledge that is coordinated and disseminated. Using data from 246 dyadic new product alliances in high-tech industries, the authors operationalize AMO as a second order construct, explore its impact on new product outcomes, and investigate four antecedents of AMO: joint top management support, goal congruency, trust, and commitment. The results indicate that AMO has a significant positive effect on the new product creativity of alliances and that it completely mediates the effects of its antecedents on new product creativity and performance. The authors discuss theoretical and practical implications of these results.

Keywords: alliance market orientation, idiosyncratic resources, new product creativity, new product performance, R-A theory.

The marketing concept, a cornerstone of modern marketing management thought since the 1950's, maintains that identifying and satisfying customer needs better than their competitors can put firms on a path toward sustainable competitive advantage. As a key part of implementing the marketing concept, market orientation, with its emphasis on both consumers and competitors, has become increasingly important to the theory and practice of marketing (Ketchen, Hult, and Slater 2007; Kumar et al. 2011).

However, most extant research examines market orientation as an intra-firm concept, whereas firms often collaborate with other firms to create market offerings that deliver superior value to customers (Hunt and Lambe 2000). Accordingly, some theorists posit that market orientation is applicable at the network level and, therefore, can be viewed as an inter-firm phenomenon (e.g., Rindfleisch and Moorman 2001; Spekman, Isabella, and MacAvoy 1999). These theorists argue that firms in a network should effectively and efficiently compete with other networks by developing a superior capability to understand and meet their markets' needs.

This proposed inter-firm collaboration reaches beyond areas such as technology, market access, and logistics, to embrace a market driven culture that values utilizing market intelligence directed at inter-organizationally coordinated actions for gaining competitive

advantage (Elg 2002; Grunert et al. 2005; Hunt and Lambe 2000). Therefore, there are grounds for considering market orientation to be applicable to inter-firm activities, not just intra-firm activities.

One type of inter-firm activity that might benefit from being market oriented is a new product (NP) development alliance. These alliances are especially prevalent in high-tech industries. Three major forces are driving this trend: (1) the growing complexity and costliness of developing new products, (2) the increasingly rapid pace of technological change, and (3) the apparent convergence of markets and technologies. In this dynamic context, by entering strategic alliances to develop new products, partner firms concern themselves with obtaining information on the market, engaging in a high-degree of inter-firm information exchange, and making long term decisions (Rindfleisch and Moorman 2001). In this article, we develop the concept of “alliance market orientation” (AMO) to describe the joint, market-oriented activities of NP alliances. We define an AMO as a capability that enables an alliance to (1) jointly and systematically gather market intelligence (from competitor analyses, studies of customer needs/preferences, and studies of the factors that influence competitors’ and customers behaviors), (2) inter-organizationally coordinate and disseminate the knowledge gleaned from the market intelligence gathered, and (3) efficiently and effectively respond to the knowledge that is coordinated and disseminated.

Why might an alliance market orientation be important? As highlighted by Spekman, Isabella, and MacAvoy (1999), the answer lies in the notable shift to a more market-focused view of alliance activity. For example, Microsoft and SAP formed an NP development alliance and stated in their mission statement that their alliance’s sole purpose will be to serve the market and meet their needs better than their competitors do. In this regard, they indicate that they will take every possible market-related action together. Furthermore, we argue, as long as the sole focus of attention within a given NP development alliance is on the ongoing relationship and inter-organizational harmony, the alliance could potentially miss out on emerging market opportunities. This “missing out” could adversely affect the alliance NP development performance. Therefore, the present study aims to investigate whether the market-sensing ability of the respective alliance matters for NP development success.

The overall purpose of the research is to explore the impact of AMO on new product outcomes of NP alliances in high-tech industries. Toward this end, this article makes several contributions. First, it introduces the concept of AMO and argues its importance. Second, it distinguishes AMO from intra-firm MO and relates it to the inter-organizational relationship literature. Third, it operationalizes the AMO concept and develops a second-order measure for it. Fourth, it develops and tests a theoretical model of the antecedents and outcomes of AMO, using a sample of dyadic 246 NP alliances in high-technology industries.

Understanding Alliance Market Orientation

Recently, there has been a rising interest in examining market orientation from a relationship perspective (e.g., Elg 2002; Helfert et al. 2002; Siguaw et al. 1998; Zhao and Cavusgil 2006). These studies investigate how the degree of market orientation of a partner firm influences the market orientation of another partner and/or the entire value chain, and how their market orientation is related to relevant relationship characteristics (e.g., trust, commitment,

dependence).

Although these studies investigate the concept of market orientation in an inter-organizational context, they examine it as a firm-level concept rather than a relationship property that could be developed at an inter-organizational level. Both Elg (2002) and Grunert et al. (2005) argue that market orientation can exist at the inter-organizational level. The main contribution of the current study is to systematically examine the relational view of market orientation that focuses on dyadic routines and processes as the unit of analysis.

Two closely related frameworks have provided the foundation for much of the market orientation research: cultural (e.g., Narver and Slater 1990) and behavioral (e.g., Jaworski and Kohli 1993; Kohli and Jaworski 1990). Although these approaches have some differences, there is substantial conceptual and operational overlap (e.g., Helfert, Ritter, and Walter 2002). The underlying concepts and activities that are common in both approaches are (1) the understanding of customer wants and competitors' strategies, (2) the inter-departmental integration and dissemination of intelligence within the firm, and (3) the importance of taking decisive action in response to market opportunities. Similarly, we argue that today's competitively intense markets require that NP alliances embrace a value system that requires them to focus on market-orientation's three main activities at the inter-organizational level. Indeed, being dedicated to the voice of the target market, having intelligence integration and dissemination across firms, and using market intelligence for strategic decisions are the essential ingredients for cooperative NP development success (Cooper 1999; Rindfleisch and Moorman 2001).

In brief, our conceptualization of AMO extends the definitions of market orientation to the inter-organizational context. We conceptualize AMO as a higher order construct having three components: inter-organizational customer orientation (IoCustor), inter-organizational competitor orientation (IoCompdor), and inter-organizational coordination (IoCoor). IoCustor is the alliance partners' joint efforts to understand its target market's needs and preferences. IoCompdor is the alliance partners' concerted efforts to identify, analyze, and respond to competitors' strategies. IoCoor is the extent to which alliance partners integrate and disseminate gathered market intelligence across firms, synchronize their NP development activities, and respond to each other's needs and requests to create superior customer value.

Although the concept of AMO shares affinities with the concept of MO, there are three important differences. First, AMO is a collaborative effort at an inter-organizational level. Whereas MO is the organization-wide coordinated application of inter-functional resources for the creation of superior customer value, AMO is the inter-organizational wide resource coordination to better anticipate and respond to changing market requirements ahead of competition. Second, market orientation has been discussed as a potential resource that is housed within the firm (Hunt and Lambe 2000).

However, a firm's critical resources may extend beyond firm boundaries, be embedded in inter-organizational routines and processes, and become idiosyncratic, inter-firm linkages (Dyer and Singh 1998). Studies suggest that the competitive advantage of an alliance is more likely when alliance partners make relationship-specific investments (Jap 1999; Kale, Singh, and Perlmutter 2000; Spekman et al. 1999). Resource-advantage (R-A) theory views these relationship-specific investments as idiosyncratic resources: they are created by the relationship (Hunt 2000).

This study conceptualizes AMO as an idiosyncratic resource that is (1) developed during the

life of an alliance and, thereby, housed within the inter-organizational routines and processes, (2) unique to the alliance, and (3) a higher-order resource (Lambe, Spekman, and Hunt 2002). In this respect, AMO is an idiosyncratic, inter-firm, relationship-specific resource that supports the alliance partners' efforts to generate a position of competitive advantage in the marketplace that will lead to superior financial performance. Third, because MO, as a resource, is housed within a single firm, to understand the routines and processes of MO, one focuses on "firm" as the unit of analysis. In contrast, because AMO is a relational property that is mutually determined by each alliance partner's behaviors in the relationship, a dyadic approach is required.

Also, we note that, while AMO is related to inter-organizational learning, the concepts are different. Inter-organizational learning is viewed as the collective acquisition of knowledge by two firms (Hamel 1991; Larsson et al. 1998), which can be achieved by transferring existing knowledge between partner firms (internal emphasis), as well as by creating completely new knowledge through interaction among firms and their environments (external emphasis) (Lane and Lubatkin 1998). In contrast, we conceptualize AMO as an inter-organizational value system. In this sense, AMO provides alliance partners with strong norms aimed at generating relevant market knowledge, sharing it among each other, and reaching a consensus on its meaning. For that, AMO stimulates the joint learning experience. Indeed, AMO focuses not only on internally focused experiences (e.g., partners learning from each other) but also on externally focused ones (e.g., partners collectively learn from markets). Market oriented alliances are inherently learning alliances. They are guided by a shared view that focuses their energies and resources on creating superior value for their customers. Therefore, AMO and inter-organizational learning are related, but not the same: the former induces alliance partners to indulge in certain market related behaviors that result in inter-organizational learning in NP development alliances.

Theoretical Framework

We rely on resource-advantage (R-A) theory, an interdisciplinary and integrative theory of competition, as the foundation for our theoretical framework. Drawing on the resource-based view of the firm (RBV), R-A theory highlights the essential role of comparative advantages in resources that lead to marketplace positions of competitive advantage (Hunt and Morgan 1995). In R-A theory, resources are defined as the tangible and intangible entities available to the firm (in our case, the alliance) that enable it to produce efficiently and effectively a market offering that has value for some market segment(s). In our study, we conceptualize AMO as an idiosyncratic resource: it is developed by the alliance (Lambe et al. 2002).

Our theoretical framework focuses on the factors that are likely to affect the development and management of AMO as an idiosyncratic resource of the alliance partners (see Figure 1). Drawing from prior research, we concentrate on constructs that are related to the nature of idiosyncratic resources (e.g., Dyer and Singh 1998; Jap 1999; Lambe et al. 2002). Accordingly, we focus on joint top management support, relational quality (trust and commitment), and goal congruence to be key determinants of AMO. Because we model AMO as a key mediating variable of NP development alliance outcomes, we label this model the "Alliance Market Orientation Model of New Product Creativity and Performance."

Finally, consistent with R-A theory, we also examine the effects of environmental characteristics (market density and technology density) on alliance NP development performance.

--- Insert Figure 1 about here---

Consequences of AMO

Our first set of hypotheses addresses the effect of AMO on NP creativity (NP novelty and NP meaningfulness). In a broad sense, AMO fosters meaningful and novel products for two reasons. First, R-A theory views competition as a dynamic, evolutionary, and disequilibrium provoking process. Therefore, firms (in our case, alliances) seek comparative advantage in resources in an effort to develop marketplace positions of competitive advantage and, thereby, superior financial performance. Theoretically grounded by R-A theory, AMO is conceptualized as a higher-order, idiosyncratic resource. Therefore, it has a nonfungible, causally ambiguous, and highly interconnected nature (Dyer and Singh 1998; Jap 1999; Lambe et al. 2002). For R-A theory, idiosyncratic resources play a major role in enabling alliances to produce efficiently and/or effectively market offerings, such as novel and meaningful products, that have value for some market segment(s). Although the sustainability of an idiosyncratic resource's competitive advantage is derived from its rare, causally ambiguous, and highly interconnected nature, this does not mean that members of the dyad cannot form structurally similar product alliance arrangements with other firms. However, the specifics of market oriented alliances vary, making this idiosyncratic resource difficult to duplicate precisely. Therefore, a sustainable competitive advantage may result from an alliance's market orientation efforts.

Second, AMO enables alliance partners to systematically and collectively (1) gather information on customers, competitors, and regulations, (2) analyze the market information gathered for the purpose of developing market knowledge, and (3) use of such knowledge to guide NP strategy, which leads to developing novel products that are also close to target market(s)' desired constellation of attributes. Specifically, market oriented alliances closely monitor target market(s)' needs and desires. They also keenly monitor progress against competitors, which then leads to the development of products that are likely to be superior to those of rivals. In brief, market oriented alliances are likely to generate novel and meaningful products. Therefore,

H1: AMO positively influences (a) NP novelty and (b) NP meaningfulness.

By developing novel and meaningful products, market-oriented alliances will differentiate themselves from their close competitors and, thereby, improve their positional advantages over them. This way, they will likely to increase their NP performance. Therefore,

H2 (a): NP novelty positively influences NP performance.

H2 (b): NP meaningfulness positively influences NP performance.

Antecedents of AMO

Joint top management support. AMO is an idiosyncratic, relational resource that must be managed through focused commitment and the assignment of dedicated alliance managers. Top managers in the alliance provide a well crafted vision that communicates norms for market oriented behaviors and guidance for the type of knowledge to be formed. Hence, joint top management commitment to view the market as the *raison d'être* facilitates the formation and implementation of AMO (Mohr and Spekman 1994; Spekman et al. 1999). This means that senior management of alliance partners must jointly and collectively establish clear values and beliefs about serving market needs, and most importantly, communicate these beliefs to all concerned in the alliance. This way, these beliefs can filter down throughout the alliance and create a shared meaning structure that provides a vision for the members of the alliance. Therefore,

H3: Joint top management support positively influences AMO.

Goal congruence. Goal congruence is the extent to which alliance partners perceive the possibility of simultaneous goal achievement (Jap 1999; Mohr and Spekman 1994). As an idiosyncratic investment, AMO requires dedicated, collaborative effort from both side of the NP development alliance. For that, high goal congruence not only enhances the consistency of expectations between partners, but also assures mutual gains (Erdem, Calantone, and Droge 2006). Therefore,

H4: Goal congruence positively influences AMO.

Relational quality (Trust and Commitment). Two of the most widely acknowledged social norms for governing and coordinating inter-organizational exchange are trust and commitment (Dwyer, Schurr, and Oh 1987; Kale et al. 2000). Trust is the degree of confidence that partners have in the reliability and integrity of each other, and commitment is the belief that ongoing relationship between alliance partners is so important as to warrant maximum efforts at maintaining it. Thus, when these two norms exist, partners have the belief that they will not act opportunistically (Donney and Cannon 1997; Morgan and Hunt 1994). They also encourage alliance partners to act as a cohesive whole in addressing the needs of their target market (Kale et al. 2000). Further, trust and commitment encourage alliance partners to set up idiosyncratic knowledge sharing routines to facilitate the learning and development of market knowledge (Dyer and Singh 1998; Larsson et al. 1998). Therefore,

H5 (a): Trust positively influences AMO.

H5 (b): Commitment positively influences AMO.

Both trust and commitment are the *sine quo non* of relational exchanges. Although both factors influence the quality of the relational exchange, the sequence of these factors is essential to successful collaboration. Trust is formed at early stages of the relational exchange (Dwyer et al. 1987) and, thereby, is effective at reducing uncertainty and ambiguity at these stages. In contrast, commitment is an implicit or explicit pledge of relational continuity between exchange partners that happens only after they have achieved a level of satisfaction from the exchange process. Since commitment entails vulnerability, alliance partners will seek only trustworthy partners (Hunt and Morgan 1995; Spekman et al. 1999). Therefore,

H6: Trust positively influences commitment.

Method

Research Context and Key Respondents

The empirical context for this study includes high-tech companies from several industries: biosciences (e.g, pharmaceuticals, biotechnology, and biopharmaceutical), semiconductors, electronics, hardware, software, and medical equipments. This context is especially suitable for our purpose. First, due to the complex nature of innovation processes in these industries, strategic alliances are widely used for achieving successful innovation and future growth. Second, field interviews with alliance consultants and experts consistently revealed that the core phenomenon of this research –namely, the role of what we call AMO on firms' NP creativity and performance – was regarded as crucial in these industries. Third, a considerable volume of academic research has studied these industries (e.g., Im and Workman 2004; Sivadas and Dwyer 2000). Although strategic alliances and inter-organizational knowledge management are salient issues in these industries, no study has examined the impact of inter-firm market orientation on their innovation efforts.

This study focuses on inter-organizational knowledge management issues in co-development processes. Therefore, finding key informants who are involved in co-development activities and knowledgeable about inter-organizational dynamics is of primary importance. The field and pilot study interviews suggested that senior level executives, such as technology related managers (chief scientific officer-CSO, chief technology officer-CTO, and R&D manager), chief marketing officer (CMO), chief operation officer (COO), chief executive officer (CEO), and chief alliance officer (CAO) were suitable for sources of inter-firm NP development processes. The pretest revealed that these executives are highly involved in co-development activities -- providing a mean score of 5.42 (on a 7 point scale) for involvement in the formation of new product alliance and 6.22 for knowledge about the respective alliance's new product on a seven point scale. The final field study supports this finding – providing a mean score of 5.71 for involvement in the formation of new product alliance and 6.45 for knowledge about the respective alliance's new product on a seven point scale. In both pretest and final field study, executives have on average at least seventeen years of experience in inter-organizational NP development projects, and at least nine years of experience in their present company.

Our study uses a cross-sectional, survey design. Although this type of research is believed to be prone to potential common method variance bias (CMV), we believe that it is unlikely in this study due to following reasons (Rindfleisch et al. 2008): (1) constructs of interests are relatively concrete and externally verifiable; and, (2) survey respondents are highly experienced and hold advanced degrees (e.g., 63 percent of the informants hold a Ph.D. degree).

The unit of analysis throughout the study is two-firm NP alliances for two reasons: (1) The goal of this study is to understand inter-organizational relationship dynamics in NP development alliances, and a relationship requires at least two parties (Jap 1999), and (2) this study strives for exploring the effect of AMO on joint NP development outcomes. Since AMO as a relationship property that is mutually determined by each partner's behavior in the relationship, a dyadic approach represents a more complete picture than a focal firm approach (Anderson, Zerrillo, and Wang 2006).

Although the unit of analysis is the dyad and measures are based on mutual and joint understanding of inter-organizational relationship between partners, data are gathered from a single informant from one firm in each alliance (please see the sampling procedure for the reasons provided).

Sampling procedure

We performed a series of pretests, including in-depth qualitative interviews (N=3), survey pretests (N=22), and follow-up, in-depth interviews with pretest respondents, to develop reliable and valid measures and ensure that survey administration is appropriate for key informants. Specifically, we contacted three executives involved in alliance consulting for over 15 years. From these interviews, we found that strategic alliances in high-tech industries often involve market oriented behaviors that are believed to increase their innovation performance. Alliance consultants also provided comments about scale items, survey instructions, and survey format to help refine the questionnaire. Further, executives noted that due to the heavy travel schedules of senior executives, an online survey might increase the response rate, but only if respondents agreed to participate in advance. Pre-test interviews were conducted with twenty-two, top-level alliance managers in several high-tech industries. These interviews also confirmed an online survey procedure. Consistent output from the in-depth field and pre-test interviews showed that executives were interested in and supportive of the goals of the research.

The sampling frame for the final field survey consisted of 962 firms who participate in dyadic NP development alliances. The frame was obtained from the Thompson Financial Security SDC Platinum Worldwide database, the Federal Register Index, and the Institute for the Study of Business Markets (ISBM). To enhance the response rate, one of the authors personally called each of the 962 key respondents in the sampling frame to solicit their participation in an online survey. Voicemail was left for each executive who was not able to be reached. Respondents were notified about the upcoming e-mails, and they were assured of the confidentiality of both respondent and firm identities. Second and third reminder e-mails were sent after one week and two weeks, respectively. Of the 962 firms, 289 executives notified us that their firm does not meet the study's requirements.

Of the 673 remaining executives, 284 agreed to participate. After we sent the online surveys, we received complete responses from 216 executives (response rate= 32.1 percent). Since the unit of analysis is the dyad, we attempted to gather data from both partners in each alliance. Therefore, we personally contacted the 216 executives, underlined the importance of dyadic data in the study, and requested permission to contact their partners. Of the 216 executives, only 53 would provide the contact information of their partners. The remaining respondents (N=163) provided reasons for not being able to assist us. The most common concerns were nondisclosure agreements between the partners and governmental, anti-trust regulations.

Partner companies were personally telephoned by one of the authors and told that their partner had provided us with their contact information. Of the 53 partner firms, 42 expressed an interest in the study and agreed to participate. After second and third e-mail reminders, we received 30 complete responses. Although we aimed to collect data from both partner firms in each alliance and, therefore, undertook our labor intensive and expensive data collection procedure, we ended up with only 30 matched pairs of dyadic alliance data.

Since this sample size is too small to measure the structural model, we decided to merge the

second set of data (N=30) with the first set (N=216), yielding a final sample size of 246 (response rate= 33.9 percent). We also tested the structural model before (N=216) and after merging two data sets (N=246). There was no statistically significant difference between two models' path coefficients. The annual sales of the sample frame ranged from \$500K to 100+ billion. The mean sales was \$4.4 billion.

Alliance Market Orientation Measure Development

First, AMO was conceptualized to specify the construct domain and to generate items for its components. AMO is conceptualized as having three components (inter-organizational customer orientation- IoCustor, inter-organizational competitor orientation- IoCompdor, and inter-organizational coordination- IoCoor). The literature review provided us with 17 measurement items in total. Second, we had in-depth exploratory interviews with three alliance consultants. They evaluated the items for comprehension, logic, and relevance. On the basis of their feedback, we modified and revised the scale items and presented them to a panel of four academic experts in alliance management to examine the face validity. After the panel made comments and approved, we administered the 17 item questionnaire to a test pool of 22 alliance managers. AMO scale items were tested for reliability and validity based on internal consistency (e.g., Cronbach Alpha, item-to-total correlation, and qualitative responses from the follow up interviews with 22 executives). These tests indicated the existence and importance of the three dimensions of AMO (IoCustor, IoCompdor, and IoCoor). Coefficient alpha results show that all three dimensions of AMO have acceptable internal consistency (IoCustor= .91; IoCompdor= .92; and IoCoor=.88). Further, item-to-total correlations were examined and due to their low values, two items were eligible for deletion. Finally, we contacted each of 22 executives for further insights. According to Gatewood and Feild (1998), qualitative feedback from respondents can be used as a criterion for dropping scale items. Consistently, the two items with low item-to-total correlation were also found to be irrelevant by the executives.

We conducted an exploratory factor analysis. A three factor solution is derived based on the eigenvalues and scree plot. The three factors explained a substantial amount of variance (87 percent).

We also used the final field study (N=246) as a basis for additional scale refinement of the AMO measures. We purified the remaining measures' items in an iterative manner (Churchill 1979). We dropped one item in the IoCustor measure because of the double-loading problem in the exploratory factor analysis, which deteriorates the internal validity. For the rest of the scale items, the within item-to-total correlations were substantially higher than the between item-to-total correlations, thus providing an evidence of discriminant validity. And, as indicated by coefficient alphas, measures have high internal consistency providing an evidence of convergent validity (e.g., IoCustor=.86, IoCompdor=.85, IoCoor=.87).

Control variables. To prevent model misspecification error, to control for potential confounding effects, and to provide alternative explanations for our hypotheses, two control variables are included in the study: market density (MD) and technology density (TD). Market density is conceptualized as the potential demand for the new product in the target market (Im and Workman 2004). It was added to the model to control for the environmental impact on new product performance.

Technology density is defined as a rapid rate of technological change in the targeted market. It also controls the effect of macro environmental factors on new product performance (Zhou 2006).

Analysis and Results

Measurement Models

We evaluated measurement properties by running two CFA's. First, we examine the three dimensional structure of the focal construct of AMO. Subsequently, since our sample size meets the five-to-one ratio of sample size to parameter estimates requirement we proceeded to fit a CFA on the overall model that included the focal construct and other nine constructs (JTMS, GC, trust, COMM, NPN, NPM, NPP, MD, and TD).

The AMO construct. AMO is conceptualized as a second-order reflective construct with three dimensions. Each dimension is first-order reflective measured through their respective indicators. In order to verify whether three underlying dimensions converge into one, we examine the chi square difference between a measurement model with perfect correlation and the other with freely estimated correlation. Results show that AMO has three distinct, latent dimensions ($\Delta \chi^2 = 63.20$, $\Delta \text{d.f.} = 3$, $p < .001$).

Combined measurement model. The estimation of the confirmatory measurement model should come before the simultaneous estimation of the measurement and structural submodels (Anderson and Gerbing 1988). This two step approach helps to assure the measurement model and thereby, avoid interpretational confounding and possible interaction of the measurement and structural model. Raykov's reliability, also called composite reliability, measures the shared variance among the set of observed variables used as indicators of latent variables.

The composite reliability values for all twelve constructs ranged from .77 to .95, well above the acceptable cutoff value of .70 (please see Appendix).

The measurement model exhibited a good fit, which is above recommended standards [$\chi^2 = 2237.85$ ($p < .05$) d.f.=1364; RMSEA= .04; CFI= .97; RFI= .93; IFI=.97]. The standardized factor loadings ranged from .66 to .92 and were all statistically significant at the $\alpha = .05$ level. The standardized factor loadings with their t -values are provided in Appendix. Significant loadings and high composite reliability values demonstrate that all latent constructs have convergent validity. In addition, all the path coefficients between the second order construct AMO and its three first order dimensions (IoCustor, IoCompor, IoCoor) are significant at the $\alpha = .05$ level (AMO $\rightarrow$ IoCustor, $\gamma = .69$; AMO $\rightarrow$ IoCompor, $\gamma = .61$, $t = 6.37$; AMO $\rightarrow$ IoCoor, $\gamma = .73$; $t = 7.61$).

We examined discriminant validity by using two procedures. First, as is recommended by Fornell and Larcker (1981), we computed the square root of the average variance extracted values (AVE) by the indicators corresponding to each of the twelve factors and compared it with the highest correlation that each factor shared with the other factors in the measurement model. The square root of AVEs for each factor was always greater than the highest shared

correlation. Although this discriminant validity test is considered rigorous, we also conducted a procedure suggested by Anderson and Gerbing (1988).

In this procedure, chi square values of unconstrained models (each pair of latent constructs covaries freely) are compared to the chi square values of constrained models (correlation values for each pair of latent constructs are constrained to one). Each time, unconstrained models' chi square values are less than the constrained models' chi square values. The two procedures provide evidence of discriminant validity of our measures.

Common Method Variance (CMV)

We gathered the data from a single respondent in each NP development alliance at a single point in time, which suggests a possible error due to common method variance (Podsakoff et al. 2003). We conducted two separate tests of CMV bias. First, we used Harmon's one factor test to measure whether a single latent factor would account for all the manifest variables. We find that the single factor model did not fit the data well (χ^2 value of 6516.76 [d.f.= 1431], $p < .05$; RMSEA= .16, CFI= .85; RFI= .81; IFI=.85). We conducted a χ^2 difference test against the hypothesized twelve factor model to assess the impact of CMV. The result shows that there is a significant difference between the χ^2 values of the two models. One-factor model is significantly worse than the twelve-factor model ($\Delta \chi^2 = 4278.91$, Δ d.f.= 67, $p < .001$). Thus, we conclude that there is no general factor that accounts for most of the covariance among the latent constructs, mitigating concerns of potential of CMV bias.

Second, we used a procedure called "marker variable assessment technique" recommended by Lindell and Whitney (2001).

Specifically, this approach entails identifying a marker variable that is theoretically unrelated to at least one other variable in the study, measuring its smallest correlation coefficient with the study's theoretical predictors, partialling out this correlation from all bivariate correlations, and comparing the partialled results with the unadjusted correlations among the predictors and outcomes. We conducted this analysis using competitive density as a marker variable because it is theoretically unrelated to study's predictors and outcome variables. Results show that partial correlations among the constructs in the measurement model are significant even after we partial out the effect of CMV. Further, we conducted a 95 % sensitivity analysis to validate the result. Collectively, the results of these two tests suggest that CMV does not pose a serious threat to the interpretation of the results from this study.

The Structural Model

Before we tested the hypotheses, we examined a correlation matrix for the latent constructs (see Table 1). The bivariate correlations are all significant and have the expected signs. There is also variability in the latent construct measures, as reflected by the means and standard deviations.

Since the model examines the causal ordering of antecedents and consequences of AMO simultaneously, structural equation modeling (SEM) with maximum likelihood (ML)

estimation is chosen as an appropriate analysis method. For the final analysis, the data collected from the final field survey has a total of 246 respondents. Although the appropriate sample size issue in SEM is open for debate, it is generally agreed that sample size greater than 200 provides stable results.

The estimation results from the measurement model confirm that all the measure items are measuring their underlying constructs without any interpretational confounding. Since there was no problem with interpretational confounding, we performed simultaneous estimation of structural and measurement model in Lisrel 8.8. The main effects model tests structural links among AMO's antecedents, consequences, and control variables. Figure 1 shows the model used to test the main effects.

First, we examine the overall model fit. Although the chi-square statistic ($\chi^2 = 2035.42$, $p < .05$, d.f. = 1112) is significant due to the sensitivity of the sample size, all base line indices (NFI=.94; CFI=.97; IFI=.97; RFI=.93) and RMSEA (.06) support the view that there is an acceptable agreement with the covariance matrix. Second, we find that AMO is positively associated with NP novelty ($\beta = .51$, $p < .05$) and NP meaningfulness ($\beta = .53$, $p < .05$), in support of *H1 (a)* and *H1 (b)*. *H2 (a)*, which predicted a higher NP performance for novel products, was supported ($\beta = .17$, $p > .05$). In support of *H2 (b)*, NP performance was positively associated with NP meaningfulness ($\beta = .32$; $p < .05$). *H3*, which predicted that joint top management support would lead to superior AMO, was supported ($\gamma = .26$, $p < .05$). In support of *H4*, goal congruence was positively associated with AMO ($\gamma = .41$, $p < .05$). In support of *H5 (a)* and *H5 (b)*, trust and commitment were positively associated with AMO ($\gamma = .23$, $p < .05$ for trust; $\beta = .21$, $p < .05$ for commitment). Finally, in support of *H6*, trust was positively associated with commitment ($\gamma = .58$, $p < .05$). Overall, all of the proposed hypotheses tested in the structural model are supported.

Finally, we reassessed the model with two control variables: market density and technology density. Overall, we found that, NP performance is positively influenced by technology density ($\gamma = .19$, $p < .05$). However, the causal relationship between market density and NP performance does not hold ($\gamma = .14$, $p > .05$).

---Insert Table 1 about here---

The Rival Model

Theory testing calls for testing plausible rival models, not just testing a proposed model. In our proposed model, joint top management support (JTMS), trust (TR), commitment (COMM), and goal congruence (GC) influence the NP outcomes through the key mediating construct, AMO. The proposed model does not have direct paths from the antecedents of AMO to the new product outcomes. In the rival model, we challenge the central nomological status of AMO and permit direct paths from the four constructs to the new product creativity. This way we make AMO nomologically similar to the antecedents. The rival model is suggested by NP development literature, in that JTMS, TR, COMM, and GC can act as antecedents of NP outcomes (Erdem et al. 2006; Harrigan and Newman 1990; Kleinschmidt and Cooper 1991; Sivadas and Dwyer 2000).

We compare the proposed model with its rival based on two criteria (Ramani and Kumar 2008): (1) Likelihood Ratio (LR) test, or chi-square difference test, and (2) percentage of the model's hypothesized parameters that are statistically significant. First, since the proposed

and rival models use the same covariance matrix as the input, we use LR test to compare the models. Since the proposed model restricts the direct paths from antecedents to outcomes and equals their parameters to zero, it is nested in the rival model.

The rival model has a χ^2 value of 2026.21 (d.f.=1105; CFI= .97, RFI= .93; NFI= .93, IFI= .97, RMSEA=.06). It indicates that $\Delta\chi^2 = 9.21$, Δ d.f.= 7, $p > .05$, which means the rival model does not explain the covariance structure any better than the proposed model. Second, in the proposed model, all of our hypothesized paths are supported at $p < .05$ level; whereas in the rival model, 7 out of 13 (54 percent) hypothesized paths found support at $p < .05$ level. Also, while the proposed model has 113 parameters to estimate in total, the rival model has 120 parameters which show the proposed model is more parsimonious than the rival model. Based on the two criteria and test statistics, AMO clearly stands as a central construct in the proposed model and a key construct in explaining alliances' NP outcomes.

Discussion

A core message of this study is that the complexities of NP development alliances require them to consider focusing more on developing outside-in capabilities. We conceptualize this through the concept of alliance market orientation (AMO). We draw on R-A theory to extend our understanding of the AMO concept. We advance the notion that AMO is an idiosyncratic resource. An important issue in our research involves the key central role of AMO in alliances' NP creativity and performance. Our results imply that AMO has, indeed, a key role in boosting NP alliances' outcomes.

Another message of our study is the role of relational quality in developing AMO. In general, the results indicate that relational quality between partner firms positively impacts on AMO, which fosters the flow of the collective market information generation, dissemination, and responsiveness. Our results caution NP development alliance managers to maintain a market focus. Our results indeed indicate that relational harmony (commitment and trust) influences successful NP alliance outcomes *through* the collective market oriented behaviors of alliance partners.

For goal congruence, evidence indicates that it is strongly associated with the development of AMO. As goals become increasingly aligned, there is a strong incentive to develop an inter-organizational market orientation program. Consider an example from a successful technology alliance between AT&T and Intel (Businessweek 2004). Both companies shared a similar vision for the technology progress in intelligent networks and, therefore, saw the possibility of a common goal accomplishment – to make it more convenient and cheaper for customers to get everything from basic phone service and wireless broadband to HDTV quality communication. As put by the CEOs of both companies, their relationship is a disruptive partnership, whose success requires a common goal setting to meet the market needs.

An important finding from this study is that joint top management support seems highly important for developing AMO. Because the top management team is the conceptualizer of alliance strategy, it plays a tremendous role in shaping alliance's values and orientation. AMO is an idiosyncratic investment that requires special care from the top managers of the alliance partners.

Consider, now, the consequences of AMO. According to findings, AMO seems to be an important factor in terms of both the magnitude and the consistency of its effects. AMO strongly influences both dimensions of NP creativity -- NP novelty and NP meaningfulness. Our results support the view that closely monitoring market needs and trends, being keenly aware of competitors' actions and offerings, and the intense inter-organizational coordination, integration, and synchronization of alliance NP development activities result in providing customers with products they had not even imagined. Indeed, one of the alliance executives in our sample indicated that having a common understanding about their market helped them develop a "bifocal" vision, which eventually turned into creative products and enviable performance results.

Finally, our findings show that both NP meaningfulness and NP novelty positively influence the alliance NP performance in terms of top-line (e.g., relative market share and sales), bottom-line (e.g., ROI and profitability), and qualitative objective outcomes (e.g., customer satisfaction and overall performance). However, at the same time, whereas NP novelty had a positive contribution to alliance NP performance, it had less effect on NP performance, when compared to NP meaningfulness. In other words, our findings suggest that alliance NP performance is driven more by increases in valuable and meaningful attributes of new products than by novel ones.

Theoretical and Managerial Implications

Scholars note that NP development alliances are critical in several fronts, yet there is a scarcity of empirical knowledge that investigates their success factors. We advance the literature on NP development alliances by showing that AMO plays a central role in alliances' NP development efforts and provides powerful assurance to the partners of successful pie expansion.

Related to this, we advance the knowledge of idiosyncratic resources and their role in making inter-organizational relationships effective and efficient. Results show that AMO is an idiosyncratic resource which eventually results in differential NP performance of partner firms through developing creative products. Furthermore, the findings of this study provide empirical evidence for R-A theory. R-A theory suggests that the marketplace position of competitive advantage results from idiosyncratic resources of an alliance. This resource assortment enables alliances to produce market offerings for some market segment(s) perceived to have superior value. AMO is such a valuable idiosyncratic resource assortment that is available to NP development alliances.

In addition to the theoretical contributions, our research has several implications for managers. Several leading companies (e.g., Eli Lilly, Microsoft, IBM, GE, Astra Zeneca, Corning) have made alliance management a top priority, based on the premise that partnerships are a fundamental part of the overall innovation strategy and, thereby, crucial for competing in today's volatile economy. On a broad level, our study validates the action of these companies and underscores the role of effective alliance management as a key to sustainable competitive advantage.

Another issue of importance for managers' efforts toward effective alliance management is the *orientation* of the respective alliance: What direction of orientation results in superior alliance NP performance, inward (e.g., relationship driven) vs. outward (market driven)? Our research implies that both should take place. Specifically, although collaborations are inevitable, they don't happen without risks. As one, high level, alliance executive put it in the in-depth interviews, it is risky to share sensitive information with a partner in the long term, for a current alliance partner may collaborate with another firm in the future who is a competitor. This inherent risk implies that it is very important to ensure the relational quality between alliance partners (Kale et al. 2000). This study reinforces the view that relational factors are the *sine quo non* of the effective alliance management, for they contribute to developing an AMO. According to our findings, the market oriented behaviors of alliances strongly impact the development of creative products that eventually result in superior performance results, and developing an AMO requires trustworthy and committed alliance partners. Furthermore, the results indicate that joint top management support, goal congruence, and relational quality (e.g., trust and commitment) enhance NP development alliances' new product creativity *through* alliance market orientation. In other words, trustworthy and committed alliance relationships that are supported and prioritized by top management with aligned goals lead to creative products because these alliances are able to combine these factors in a unique and idiosyncratic way to form a value system that will leverage the market oriented behavior of alliances.

Consider an example from a high-tech industry. High-tech firms develop new products in turbulent and uncertain market environment in a short time. Forming product alliances is an economical and flexible way to cope with this intense pressure. The Dell and SAP technology alliance is one example for a successful alliance management that has had enviable performance results. As reported, Dell and SAP technology alliance's performance results are fueled by their joint market oriented efforts and eventually resulted in superior market offerings for their customers.

Their alliance market orientation has resulted not only from their high quality relationship and aligned goals, but also from the tremendous support from their top executives (Bozman 2004).

Limitations and Further Research

The findings of this study must be viewed in conjunction with its limitations. The first limitation comes from the sample frame. Although the unit of analysis in this study is the dyad and we labored intensively to collect data from both sides of dyadic alliances, for various reasons most of the firms were not allowed to provide their partner's contact information to us. Among 216 firms, only 30 sets of dyadic data were available, which was not a sufficient sample size for theory testing. Therefore, we had to use a single firm approach. We extensively tested for the possibility of common method bias, and the results consistently showed that this bias was not an issue. Nevertheless, our results would have been strengthened by the inclusion of an additional informant from the other side of the alliances in our sample frame.

Another limitation comes from the cross sectional research design, which limits our generalizations regarding causality. Also, our cross sectional approach does not enable us to

explain how inter-firm market orientation evolves between alliance partners. Although this study offers an important groundwork for understanding AMO, more research is needed on how it is formed and developed through time. Related to this, tracking the evolution of AMO and its implications on NP development processes would be useful. For that, a longitudinal study on AMO should be conducted.

Finally, it would be useful to gather firm-level market orientation data to explore whether and how partners' firm-level market orientation contribute to the formation and development of AMO. Exploring the question of whether it is the case that market oriented firms have a propensity for successfully building market oriented alliances would be interesting. Again, such research might require a longitudinal study in which NP alliance partners would be tracked from the initial alliance formation to its dissolution.

In conclusion, previous research has shown that firm-level MO contributes to firm-level performance. Similarly, previous research shows that alliances contribute to new product performance. Our results provide the first empirical evidence that (1) alliance market orientation (AMO) exists, (2) AMO contributes to new product performance, and (3) goal congruence, joint top management support, trust, and commitment contribute to alliance market orientation.

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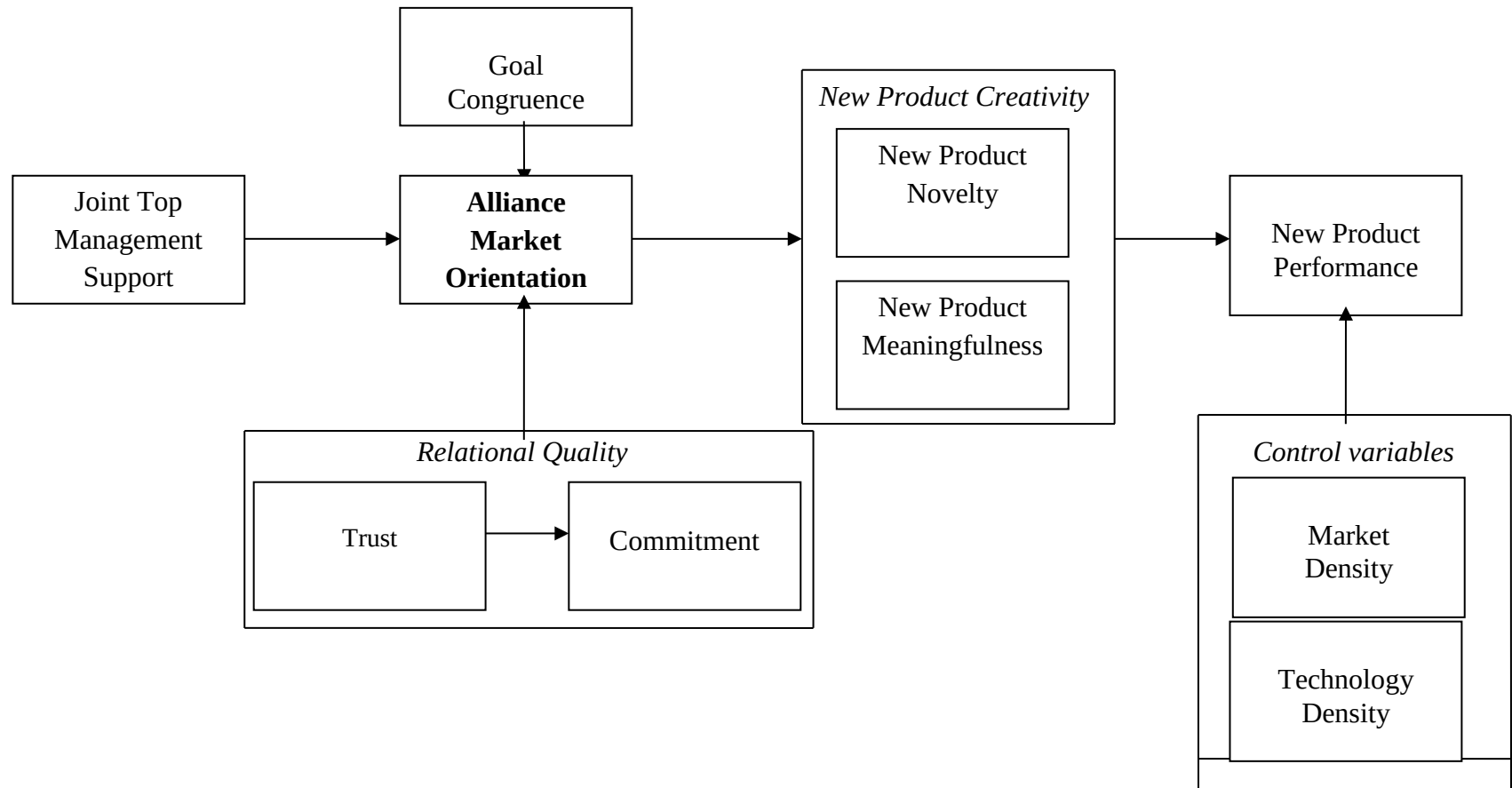
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TABLE 1
Correlations and Descriptive Statistics (N=246)

	AMO	IoCustor	IoCompor	IoCoor	COMM	NPN	NPM	NPP	TMS	GC	TR	MD	TD
AMO	.75												
IoCustor	.69	.76											
IoCompor	.61	.46	.75										
IoCoor	.73	.65	.53	.75									
COMM	.55	.41	.34	.47	.75								
NPN	.46	.35	.29	.40	.25	.74							
NPM	.49	.37	.30	.42	.26	.34	.82						
NPP	.42	.31	.26	.36	.22	.28	.37	.83					
TMS	.63	.47	.39	.54	.29	.38	.39	.33	.77				
GC	.74	.55	.45	.63	.31	.37	.38	.33	.52	.79			
TR	.69	.52	.43	.60	.58	.34	.35	.30	.51	.54	.86		
MD	.35	.26	.21	.30	.17	.47	.49	.37	.46	.33	.29	.72	
TD	.32	.24	.20	.28	.14	.29	.25	.32	.42	.32	.25	.58	.77
Mean	4.75	4.78	4.24	5.19	5.14	5.17	5.89	4.83	5.95	5.36	5.66	5.34	5.10
SD	1.04	1.24	1.48	1.06	1.09	1.13	-.97	1.24	.96	1.22	1.07	1.22	1.31
Construct reliability	.79	.88	.87	.90	.87	.90	.90	.94	.82	.83	.95	.77	.82
Coefficient Alpha	.78	.86	.85	.87	.87	.90	.89	.93	.81	.83	.95	.77	.82

Notes: All correlations are significant at $p < .05$ level. The square roots of the AVE values are on the diagonal, and the inter-correlations among the latent constructs are on the off-diagonal. Alliance Market Orientation (AMO); Inter-organizational Customer Orientation (IoCustor), Inter-organizational Competitor Orientation (IoCompor), Inter-organizational Coordination (IoCoor); Commitment (COMM); New Product Novelty (NP Novelty); New Product Meaningfulness (NPM); New Product Performance (NPP); Top Management Support (TMS); Goal Congruence (GC); Trust (TR); Market Density (MD); Technology Density (TD).

FIGURE 1
Alliance Market Orientation Model of New Product Creativity and Performance



**Appendix
Measurement Scales**

Construct and Source	Description	λ	t-value
Trust (Morgan and Hunt 1994) CR= .95 AVE= .74	In our relationship, both our alliance partner and we:		
	1. are honest	.85	--
	2. can be counted on what is right	.87	18.09
	3. are faithful	.83	16.61
	4. have confidence in each other	.79	15.37
	5. have high integrity	.88	18.24
	6. are reliable	.86	17.63
	7. are trustworthy	.92	20.14
Commitment (Morgan and Hunt 1994) CR= .87 AVE= .58	Both our alliance partner and we view our relationship as something:		
	1. to be committed to	.76	--
	2. important to our firms	.78	12.13
	3. of significance ^a	--	--
	4. our firms intend to maintain indefinitely	.66	10.10
	5. much like being family ^a	--	--
	6. our firms really care about	.82	12.79
	7. deserving our firms' maximum efforts to maintain	.76	11.86
Joint Top Management Support (Jaworski and Kohli 1993; Lambe et al. 2002) CR= .82 AVE= .60	Top Management in both firms:		
	1. believe that alliances play a role in the future success of each firm	.78	--
	2. are committed to the use of alliances to achieve strategic goals	.84	12.42
	3. support the use of alliances when situations call for them	.70	10.60
	4. tell their employees that this alliance's survival depends on its adapting to market trends ^a	--	--
	5. believe that serving customers is the most important thing this alliance does ^a	--	--
Goal Congruence of the Dyad (Jap 1999) CR = .83 AVE= .62	Our firm and our partner's firm ^{R a}		
	1. have different goals	--	--
	2. have compatible goals	.75	--
	3. support each other's objectives	.83	12.42
	4. share the same goals in the relationship.	.78	10.06

**Appendix
Continued**

Construct and Source	Description	λ	t-value
Alliance Market Orientation-Customer orientation (new) CR= .88 AVE= .60	1. Our alliance's business objectives are driven by customer satisfaction	.72	--
	2. In our alliance, we get together frequently to monitor our level of commitment and orientation to serving customers' needs	.67	10.01
	3. Our alliance's strategy for competitive advantage is based on our joint understanding of customer needs	.85	12.57
	4. Our alliance's business strategies are driven by our beliefs about how we can jointly create greater value for customers	.81	12
	5. In our alliance, we get together frequently to measure customer satisfaction		
	6. In our alliance, we get together periodically to review the likely effect of changes in our business environment (e.g., regulation, competition) on customers ^a	.67	9.91
Alliance Market Orientation-Competitor Orientation (new) CR= .87 AVE= .63	1. Senior managers in our firm meet frequently with their counterparts in our partner's firm to discuss competitors' strengths and strategies	.69	--
	2. In our alliance, we jointly target customers where we have an opportunity for competitive advantage	.69	9.78
	3. In our alliance, we jointly respond to competitive actions that threaten us	.88	11.78
	4. In our alliance, we frequently share information with each other concerning competitors' strategies	.80	11.05
	5. In our alliance, we don't work together to generate intelligence on competition ^{R a}	--	--
Alliance Market Orientation-Inter-organizational coordination (new) CR= .90 AVE= .65	1. Senior managers in both firms understand how people across organizations can contribute to creating customer value	.69	--
	2. In our alliance, people in both organizations work hard to jointly solve our alliance's problems	.81	11.49
	3. In our alliance, activities involved in the innovation process are well-coordinated	.81	11.39
	4. In our alliance, the different job activities related to new product development activity fit together very well	.82	11.55
	5. In our alliance, we have inter-organizational meetings frequently to discuss market trends and developments ^a	--	--
	6. In our alliance, people who have to work together are responsive to their co-workers' needs and requests.	.70	10.06

**Appendix
Continued**

Construct and Source		Description	λ	t-value
NP Novelty (Im and Workman 2004) CR= .90 AVE= .56	1.	Exciting	.70	--
	2.	Fresh	.72	10.37
	3.	Unconventional	.71	10.34
	4.	Novel	.82	11.71
	5.	Unusual	.70	10.08
	6.	Original	.81	11.64
	7.	Unique	.76	11.00
NP Meaningfulness (Im and Workman 2004) CR= .90 AVE= .68	1.	Relevant	.87	--
	2.	Suitable	.76	13.96
	3.	Appropriate ^a	--	--
	4.	Useful	.85	16.55
	5.	Meaningful	.81	15.40
NP Performance (Im and Workman 2004) CR= .94 AVE= .71	The new product generated by your alliance have tended to be successful in terms of			
	1.	Sales	.83	--
	2.	Market share	.85	16.34
	3.	Return on investment	.85	16.26
	4.	Profits	.89	17.51
	5.	Customer satisfaction	.80	14.84
	6.	Overall performance	.82	15.42
Market Density (Im and Workman 2004) CR= .77 AVE= .53	1.	There are many potential customers for the product that our alliance provides a mass marketing opportunity ^a	--	--
	2.	Potential customers have a great need for the product that our alliance develops.	.76	--
	3.	The dollar size of the market (either existing or potential) for the product that our alliance develops is large.	.73	9.88
	4.	The market for the product that our alliance develops is growing very quickly	.68	9.35
Technology Density (Im and Workman 2004) CR= .82 AVE= .61	1.	The technology in our alliance's market is changing rapidly	.72	--
	2.	Technological changes provide big opportunities in our alliance's market	.78	10.74
	3.	A large number of new product ideas have been made possible through technological breakthroughs in our alliance's market	.83	11.09
	4.	Technological developments in our alliance's market are minor ^a	--	--

Notes: All items use Likert Scales (1="strongly disagree" 7="strongly agree"). AVE= Average Variance Extracted, CR= Composite Reliability. ^R = Reversed item, ^a =Deleted item.

THE INTERACTIONS OF INTERPERSONAL RELATIONSHIPS WITH INTER ORGANIZATIONAL RELATIONSHIPS

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Abstract

Academic study of the nature of a B2B exchanges has mostly taken ‘the exchange’ as its unit of analysis. However, the manner in which an exchange operates and, if repeated enough times, develops into a business relationship is strongly influenced by the behaviour of the parties’ individual actors. This behaviour will be considerably affected by the actors’ perception of the norms of behaviour appropriate to their relationships with their counterparts in the other party. Using Fiske’s Relational Models Theory the nature of these relationships will be considered and the manner in which they develop will be discussed. Two examples, the LIBOR fraud and the commercial sponsorship of an arts organization, will illustrate the concepts in the paper.

Introduction

This paper suggests that the nature of the exchange which occurs between two organizations as they interact with each other is strongly influenced by two factors. First, the macro strategies that determine which B2B relationships each party develops. Second there are “micro activities that make up strategy and strategizing in practice” (Johnson et al., 2003, p. 3) and particularly the interpersonal interactions of the two businesses’ boundary spanning personnel. However, the nature and impact of these micro activities has received relatively little attention in research into strategy formulation and implementation. Indeed, Ingram and Roberts commented that: “analyses to date have stopped short of incorporating many types of informal, interpersonal relationships that also facilitate the economic interactions of organizations” (2000, p. 386). Furthermore, Johnson et al. argued for “a shift in the strategy debate towards a micro perspective on strategy and strategizing.” (2003, p. 3).

More recently Ellis and Ybema expressed the view that “the literature on IORs - and market-based IORs in particular - is sparse on the ways in which the individual actors involved in interactions make sense of the relation, of themselves and of others.” (2011, p. 283) and then went on to quote approvingly Marchington and Vincent’s judgement that the literature on inter-organizational relations offers “virtually no discussion of the processes that characterize interpersonal relations within and between organizations” (2004, p. 1030). This paper will argue that, by understanding the norms which apply in different relational situations, insights can be gained into the behaviours which can occur in an exchange and how circumstances may cause that behaviour to change. As such it contributes to the discussion (e.g. Rouleau and Balogun, 2011; Jarzabkowski et al., 2007; Johnson et al., 2003) of the need for a stronger focus on the actual activities managers engage in to accomplish their strategic work as part of the practice of strategy.

Norms

The topic of 'norms' is much discussed and plays a significant role in, amongst other investigations, into: the structure of economically efficient relationships (e.g. Heide and John, 1992); the need to develop laws (e.g. McAdams, 1997); contractual law (Macneil, 2000); staff motivation (Fu et al., 2010); and, the causes of international political change (e.g. Towns, 2012). However, 'norms' is a topic whose discussion raises issues which are similar to those which arise in discussions of 'trust' (Blois, 1999). These are that:

scholars from a wide variety of academic backgrounds discuss 'norms';

individual academic disciplines utilise different definitions of 'a norm'; and,

within some individual academic disciplines there is no agreement as to a precise definition of the term.

Feldman in his influential paper states that: "norms are the informal rules that groups adopt to regulate and regularize group members' behavior. Although these norms are infrequently written down or openly discussed, they often have a powerful, and consistent, influence on group members' behaviour." (1984, p. 47).

However, this 'definition' does not comment on a distinction which pre-occupies the attention of many scholars, that is seeing norms as the way people *ought* to behave as distinct from seeing norms as the way they *do* behave. In the former case people comply with a norm because they believe the norm, in some sense, to be 'right'¹ or in other words the norm entails a moral imperative and may result in an individual following it even when their failure to do so would only be known to themselves. The *oughtness* of a norm is not individually idiosyncratic but is socially shared and internalised by members of a group. This internalisation creates a sense of identity within members of the group which subscribes to them (Raver et al., 2010, p. 620). Indeed Fine, who questioned whether or not norms are 'real', comments: "If norms are not real, they are as good as real in providing the groundwork for mutual identification." (Fine, 2001, p. 157).

In comparison the way people *do* behave may be determined, not by their perception of the 'rightness' of their actions, but because they believe that this maximises the pay-off they will receive. Part of this pay-off may be establishing that they are members of a group. As Akerlof and Kranton noted: "following a norm is also seen as a way to prove something about yourself to others." (2010, p. 34). In this context rational choice theory has led to an extensive literature (e.g. Cooter, 2000; Posner, 2000; Ellickson, 2001) which has used game theoretic analyses to predict how people will respond when confronted by a norm. Indeed rational choice theory has treated norms as patterns of behaviour which "emerge from iterated prisoner dilemma games among closely-knit groups." (Scott, 2000, p. 1637-8).

It can of course be argued that people who follow norms for 'ought' reasons may do so to avoid sanctions or to gain benefits.

¹ What is understood to be 'right' differs between cultures (using the term 'culture' in the widest sense to encompass sub-groups within a society).

Such sanctions or benefits may be intrinsic rather than monetary and either category may not involve recognition by others but may incur personal satisfaction or distress. As Hetcher and Opp observed, some sanctions which arise from breaking an 'oughtness' norm are not contingent on detection but "entail some internal sanctioning – experience of guilt or shame." (2001, p. xiii)

Norms are value neutral

While the existence of norms results in "regular behavior patterns that are relatively stable and expected by a group's members" (Bettenhausen and Murnighan, 1991, p. 21), it must be stressed that these "regular behaviour patterns" are not necessarily benign. Indeed, North's suggestion that the existence of norms will ensure that "cheating, shirking, opportunism, all problems of modern industrial organization, are limited or indeed absent" (1990, p. 55) is naïve. For norms do no more than increase the probability of one type of action occurring within the choice set available and there is no reason why such action might not involve cheating, shirking or opportunistic behaviour any more than the reverse.

The existence of norms simply allows those involved in an exchange to do so without having to think out the precise nature of the exchange on every occasion. For example, knowing that opportunism is the norm in an exchange situation is no more or less valuable than knowing that it is not – it merely provides a basis for the exchange partners to understand in advance that negotiations in this environment need to be carried out with great caution². Where the parties to an exchange have expectations regarding each other's behaviour it pays them to behave consistently. Consequently these expectations both facilitate some aspects of an individual's freedom of action but simultaneously restrict other aspects. As Gloria-Palmero pointed out, norms "do not erase individual freedom of choice but contribute to the convergence of plans by increasing the probability of one type of action within the choice set available" (1999, p. 145). Norms thus provide the participants in an exchange with a degree of confidence that they know what they are doing and are thus a major factor in creating the atmosphere within which an exchange occurs.

For example, the norm in one culture might mean that companies would be expected to do the following: not take advantage of product shortages by raising prices; conform to 'conventional' competitive activity; or, set higher ethical standards than others. However, the norm in another culture might mean that companies can be expected to: take advantage of product shortages by raising prices; not conform to 'conventional' competitive activity; or, not set higher ethical standards than others³.

² A negotiator operating in an environment where opportunistic behaviour was the norm commented: "After shaking hands at the end of the negotiation you count how many fingers they've left you with!"

³ Differences in business behaviour arising from disparities between two cultures' norms were observed by Scheer et al. who found "that diverse reactions to positive inequity in the United States and the Netherlands may be explained by culturally based, systematically different approaches to the assessment of equity." (2003, p. 313)

The Evolution of Norms

Norms, comments Ullmann-Margal, “emerge, endure, pass away. While they endure, they may change or be revised” (1990, p. 756). It follows that there is a need, if norms are to be utilised in understanding the nature of exchanges, to have some insights to the causes and the manner of changes to established norms.

Ullmann-Margal argued (1990, p. 766) that there are three categories of causes of changes to existing norms. First, new information becomes available to some of the parties involved. Second, the possibilities open to either party may alter because, for example, of changes in the environment (for example technological changes). Third, the participants involved may change over time and, even if this does not happen, the participants’ values and interests may vary over time. The first two possibilities correspond to the domain of rationality, the third to the domain of value. A fourth possible cause, which is not considered by Ullmann-Margal, is that the fundamental nature of the relationship underpinning the exchange has been transformed from one relational model (Fiske and Tetlock, 1997, p. 278 fn.3) to another.

Fiske’s Relational Models Theory

Fiske’s (1991) Relational Models Theory proposes that all social relationships are constructed according to just four elemental models as “people relate to each other in just four ways” (Fiske, 2004, p. 3). These four models provide the scripts or schemata that allow individuals to relate to the behaviour of others and each of the models “express and embody different values” (Roccas and McCauley, 2004, p. 263).

Fiske’s argument is that interactions can be structured with respect to a Market Pricing Model (MP), Authority Ranking Model (AR), an Equality Matching Model (EM), or a Communal Sharing Model (CS). The core of Fiske’s theory is that “people use the same set of four implicit cognitive schemas to organise all the diverse domains of sociality most of the time” (2004, p. 7). Relational Theory recognises that these four models can guide behaviour or be used to evaluate a situation only with the use of “implementation rules that specify when they apply, to what and to whom, and how” (Fiske and Tetlock, 1997, p. 259). These implementation rules vary between cultures, and even within one culture, their application may be less than obvious when new circumstances arise. For example, a society run on the basis of the CS model when suddenly confronted by an external threat to its existence may have to resort to an AR model based upon prowess of individual members as fighters.

A Market Pricing (MP) relationship organizes interactions with reference to ratios or rates and people evaluate exchanges using agreed quantifiable (usually monetary) metrics. In a MP relationship it becomes possible to combine quantities and values of diverse entities – oranges can be exchanged for apples! In such a relationship “people typically value other people’s actions, services and products according to the rates at which they can be exchanged for other commodities” (Fiske, 1991, p. 16) and the expectation will be that behaviour within the relationship will be determined by norms which support self-centred and competitive actions.

Authority Ranking (AR) relationships arise where the relationships between people are determined by a hierarchical ordering in which a person is, for example, higher, better, or more powerful than another. Where there are AR relationships, superiors can impose their values and interests on their subordinates and the norm is for subordinates to carry out their superiors' legitimate instructions.

An Equality Matching (EM) relationship is where people are distinct but equal and exchanges between them are evaluated by a 'swings and roundabouts' approach rather than exact quantifiable measures. An EM relationship differs from a CS relationship (see below) in that accepting help would come under the CS model while a transaction that entails reciprocity but not gratitude, such as receiving a service from others comes under the EM model. In EM relationships, the norm is the expectation that both parties will manage the process of the exchange in a manner that is perceived to be fair and balanced.

Communal Sharing (CS) relationships exist where a group of people have something (usually not a material 'thing') in common which makes the members of the set in some sense socially equivalent to each other and also acts to distinguish members from non members. It is a relationship within which members recognize collective responsibilities towards each other. The norms of behaviour within the relationship are those which accept common values and motives with an emphasis on congruent and shared goals, collaboration, and compromise. They stand in stark contrast with the norms associated with MP relationships.

The actual behaviours within one interaction under each of these four models are not independent of each other. Indeed, one relational form may provide the context within which the other models have to operate (Figure I).

Insert Figure I about here

Thus it would be a poor Buyer who was not always conscious that their job is essentially to get place orders (MP model), and therefore the MP model will be dominant. However, a good Buyer will:

- a/ utilize any CS relationships that they have with a sales person such as mutual membership of, say, a golf club;
- b/ where he has done a favour to a sales person, expect (EM) to be able to ask for a favour; and,
- c/ if necessary, assert (AR) exact fulfilment of a contract.

Nevertheless, in response to changing circumstances, the emphasis given to each of the aspects of the interaction may vary over time. Thus where a buyer, who has been operating in a market where over-supply is the norm, senses that there is soon likely to be an extended period of shortage of supply, will while still recognising that the MP model dominates, may seek to change the relationship by softening the AR role and giving greater emphasis to EM values – perhaps even evoking CS elements such as their and the Buyer's mutual membership of, say, Rotary.

Two Illustrations

Two very different exchange situations will be taken as examples of the use Fiske's Theory to provide insights into the interpretation of exchange situations. The first is the LIBOR fraud⁴ and the second is the commercial sponsorship of an arts organization.

The LIBOR fraud A number of the major banks, known as 'the panel', operating in London are required to submit information every day to Thomson Reuters which acts for the British Bankers Association (hereafter the BBA) about the interest rates they are or would be willing to lend each other money in defined circumstances. The BBA then announces the LIBOR. This is an exchange situation because these banks need to have access to a benchmark for lending rates amongst all of London's financial institutions and is a form of EM relationship between the BBA and the reporting banks.

LIBOR is the London Interbank Offered Rate and is an average interest rate calculated daily through submissions of interest rates by major banks in London (see Appendix I for a brief explanation of LIBOR). It is the most frequently utilised benchmark for interest rates globally and is referenced in transactions with a notional outstanding value of at least \$300 trillion. The scandal arose when it was discovered that from time to time the rates being reported by some banks were falsified to:

- a/ increase the profits that they would generate from market transactions they were making; and/or,
- b/ give the impression that they were more creditworthy than they were.

Although in 2013 the several international investigations relating to this scandal are on-going, it is already clear that a significant feature of the scandal is that employees of competing banks colluded with each other with the aim of personal gain through the payment of large bonuses as a result of the deals they had made (see Appendix II for illustrations of this collusive activity).

Within any panel bank there will be a small number of traders who have been authorised to submit, on behalf of their bank, the data which is used by Thomson Reuters to calculate LIBOR. These traders will have a relationship with the senior managers in their bank who have delegated this authority. This will primarily be an AR relationship within which the norms of behaviour will have been established over a period of years. This is an AR relationship which exists within the context of the bank's EM relationship with the BBA for the purpose of creating LIBOR.

Insert Figure II about here

These were *ought* norms reflecting the moral imperative to obey the instructions of those legitimately appointed to be their superiors. However it seems that over a period time some of these authorised traders would, when submitting rates to Thomson Reuters, manipulate these rates to take account of their own or their immediate colleagues' trading 'positions'. (See Appendix II)

⁴ The LIBOR fraud involves some very complex activities in the international banking markets. For a reasonably accessible summary of what happened see FSA (2012).

Their intent in doing this being to either increase the profit or reduce the loss they would make on existing trades - with consequent impacts on their bonuses. By doing this they were allowing their CS relationships with a sub-set of their firm's employees to dominate over those of their AR relationships.

Insert Figure III about here

While there is a moral imperative to support members of one's own immediate community it is questionable whether or not this should dominate the *oughtness* of obeying superiors when they issue legitimate instructions. Indeed the interpretation (Wheatley, 2012) of these dealers' actions was that the norms they observed was determined, not by their perception of the 'rightness' of their actions, but because they believe that this maximised the bonuses they would individually receive. Krawiec puts it bluntly saying "traders are greedy" (2000, p. 329)

Ultimately some traders went further and attempted to manipulate LIBOR by discussing, with their counterparts in *other* banks (e.g. with direct competitors) in the panel, what rate they would prefer LIBOR to be. (See Appendix III) Their intent was, at least, to safeguard their trading positions and thus their bonuses. They did this even though, as Wheatley commented, "The perpetrators of such behaviour are likely to be conscious of the dishonesty of their conduct." (2012, p. 18)

Such collusion was possible because, as a result of the complex networking that exists in most major financial markets, a CS relationship had been established between some traders employed by competing organizations. The norms of this CS relationship were those of an informal clique⁵ whose perception of the world was that they were an elite group to whom normal standards of honesty did not apply (Wheatley, 2012, p. 18). Identification with this group implied that a trader not only accepted that greed as a motivation for their actions was a norm but also assumed that generating "higher trading profits than other traders not only results in higher bonuses, but it also confers superstar status on the top producer." (Krawiec, 2000, p. 311-12). The dominant norms observed by the members of this clique did not include recognition of *oughtness* or morally correctness. However a significant feature of their behaviour was the recognition that the continuance of their CS relationship was dependent on elements of EM relationship. Thus if Trader 1 persuaded Trader 2 to adjust their LIBOR submission then Trader 1 would accept that, in the future, they might be asked by Trader 2 to adjust their submission and that they would need to do so if they were to remain a member of the clique (for an example see FSA, 2012, para. 71).

Insert Figure IV about here

Thus what should have been a relatively straightforward exchange situation ("we provided you with some data and we receive other data from you") became damaged because some of the banks were supplying false information. This situation arose because the dominant relationship model within the individual banks changed from AR to CS.

⁵ Evidence of the existence of this clique is indicated by such matters as: the development of nick names (e.g. 'superman' and 'captain chaos') and special terminology (e.g. "wash trades"; "run throughs"; and "market colour" [FSA, 2012].)

Any change of a dominant relationship model will result, in changes to the norms with which individuals operate. In this case the change was dramatic and the norms moved from the *ought* norms to those which did not recognize a moral imperative. It is not clear what caused the CS model to become dominant but it can be hypothesized that it was a combination of the second and third reasons put forward by Ullmann-Margal (see above). That is changes in the environment together with changes in the participants' values occurred because, in the world's financial markets the naked pursuit of personal financial gain, became acceptable.

After the disclosure of the fraud, steps were taken to assure the financial community that in the future LIBOR would be a reliable figure. However, the trustworthiness of the money market operations of a number of banks was thrown into question as is illustrated by the *Wall Street Journal's* headline "Why You Shouldn't Trust Any Libor Rate UBS Touched" (19th. December, 2012). Indeed those banks which have been identified as being involved in the rigging of LIBOR, as well as paying fines of up to \$1.5 billion, are having to expend considerable time and money in trying to rebuild their reputations. Thus the development of new norms damaged the banks' reputations and has led to reappraisals of some of their strategic decisions such as the markets in which they will in future operate.

*Swedish sponsorship case*⁶

This is an example of a business exchange between the Nordic Retailing Company⁷ and an arts organisation, the Scandinavian National Theatre Company, (hereafter referred to as Retailer and Theatre respectively). The essence of the exchange was the provision of finance and gifts in kind (e.g. free advertising space in its magazine and outlets) by the Retailer in exchange for the publicity which arose from being associated with a premier arts organization.

While the relationship was considered a success by both parties, Retailer made the decision during the third year of the relationship not to continue with the sponsorship. This decision was a purely commercial one, based on Retailer's assessment that sponsorship might not have been the best way to add value for the whole of its organization.

From the beginning of this exchange it was clear to both Retailer and Theatre that this was a commercial arrangement and its success would be judged on that basis. That is it was a MP relationship between the organizations. Once their senior management teams had signed the agreement then middle managers were appointed to implement the sponsorship exchange and these middle managers were therefore operating under an AR relationship with their superiors.

Insert Figure V about here

Initially the Retailer's managers and Theatre's managers carefully calibrated their exchanges to ensure that each party was gaining appropriately from the arrangements and the exchange took the form of an EM relationship. This meant that the norms associated with EM behaviour between Retailer's and Theatre's managers were being worked out within the context of each group recognizing that their dominant norms were determined by their AR relationship with their superiors.

Insert Figure VI about here

Over time, for a variety of reasons, some of Retailer's managers who were responsible for managing the relationship became, what might be loosely called, 'emotionally involved' with the Theatre's activities and spent substantial amounts of time with their counterparts in the Theatre's organization. They also formed a personal engagement with Theatre's activities. As a result CS relationships were formed with their counterparts in Theatre. Indeed the CS relationships began to dominate the EM element of the relationship and concern to maintain a measured equivalence of exchange was diminished. Furthermore, for some of Retailer's staff, their CS relationships came to supplant their AR relationship with their employer.

Insert Figure VII about here

In this process, people from both organisations began to form a degree of identification with the sponsorship rather than with their employer and this became their dominating interest.

⁶ See Ryan and Blois (2010) for a fuller description of this example.

⁷ Fictitious name used for reasons of confidentiality

Gradually the amount of time and energy they spent working on the sponsorship became disconnected with the essence of the relationship which was that it was a commercial one and some actions were taken which it was explicitly recognized could not be justified in commercial terms to either employer.

However, when Retailer decided not to extend the sponsorship attention was drawn back to the fact that the whole relationship was essentially predicated on a MP model. For many of Retailer's employees who were involved in day-to-day management of the relationship, being forced to recognise this was disturbing. As such, while Retailer's management decided to end the relationship, some of the managers involved attempted to change management's 'mind' and some openly resisted this decision.

In this case the norms followed by Retailer's managers were initially those of acting within the authority which had been delegated to them and would be expected to be utilized by any of Retailer's managers. These norms were those which Retailer, which had a reputation for profit seeking while being socially responsible, applied to all of its commercial activities. The need to develop a balanced exchange in a context, such as sponsorship, where much is intangible meant that the EM relationship was important. However, as time passed the development of a CS relationship between Retailer's and Theatre's staff led to Retailer's managers developing a 'loyalty' to the sponsorship itself which eroded that owed to their employer. This meant that the norms that increasingly influenced their decisions about any particular sponsorship activity were, rather than being based on an assessment of its benefit to their employer and the need for an EM based balance of exchange, concerned only with the direct success of that activity. In this case the development of CS relationships did not, as in the LIBOR case lead to dishonest behaviour (and certainly not behaviour that financially benefited the managers involved). However, if only by making the management of the ending of the sponsorship more complex, it did lead to managerial difficulties and costs.

Conclusions

Johnson et al. argue that "It is time to shift the strategy research agenda towards the micro; to start not from organizations as wholes - corporations, business units and so on - but from the activities of individuals, groups and networks of people upon which key processes and practices depend." (2003, p. 14). A particular issue is the need for the analyses to offer insights about the macro/micro interaction and how this interaction proceeds over time.

Fiske's Theory Relational Models Theory, while not a dynamic theory, does enable an analysis through time to be undertaken and provides an understanding of the norms within which managers will operate at a point in time. Fiske's Theory recognizes that: the four relational models can operate simultaneously; do not necessarily have equal influence; that their relative importance may change; and, in particular that the dominant model may change. As this paper has argued, where the dominant model changes then the norms which managers follow when operating within the exchange will also change.

The dominant model will initially be a reflection of the strategic nature of the exchange. However, if other relational models gain in importance, then the original dominant model's influence will be reduced and one of the other models might become dominant. If this happens then, while the strategic intent of the exchange may explicitly remain unchanged, management may follow different norms when making decisions. This may have effects both on the 'quality' of the exchange and the costs of implementing planned strategies.

This paper has proposed the use of Fiske's Relational Models Theory as an approach to the study of interpersonal aspects of business to business exchanges. As has been discussed, different norms of managerial behaviour are inherently associated with each of these four relational models and these norms can impact on various aspects of an exchange's success and therefore the successful implementation of a company's strategy.

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Appendix I A brief explanation of LIBOR

LIBOR stands for London InterBank Offered Rate and is an indicative average interest rate at which a selection of banks (known as the 'panel') are prepared to lend one another unsecured funds in the London Money Market. LIBOR is calculated for 15 different maturities and for 10 different currencies so there are actually 150 different LIBOR interest rates. The LIBOR interest rates are announced once a day at around 11:45 a.m. (London time) by Thomson Reuters on behalf of the British Bankers Association (BBA). The banks who are members of the panel are selected every year by the BBA with between 8 and 16 banks (which are viewed as being representative of the London money market) being selected for each currency.

LIBOR interest rates are not necessarily based on actual transactions but each day at 11 a.m. (London time) the panel banks inform Thomson Reuters (which acts for the BBA) for each maturity at what interest rate they would expect to be able to raise a substantial loan in the interbank money market at that moment. The reason that the measurement is not always based on actual transactions is because not every bank borrows substantial amounts for each maturity every day. Once Thomson Reuters has collected the rates from all panel banks, the highest and lowest 25% of the rates are discarded and an average is calculated using the remaining 50% 'mid values' in order to produce the official LIBOR.

LIBOR is taken to be an indicator of the health of the financial system because if the banks feel confident about their financial situation, they report low interest rates but when they have a low degree of confidence in the financial system, they report higher ones. LIBOR directly is used worldwide as a reference rate for: mortgages; student loans; financial derivatives; and, many other financial products. This means that any manipulation of LIBOR can have significant effects worldwide – even on individual consumers.

Appendix II Discussions internal to a bank about a wish to misreport LIBOR

In court documents filed in Singapore, Royal Bank of Scotland (RBS) trader Tan Chi Min told colleagues that his bank could move global interest rates and that the LIBOR fixing process in London had become a cartel.

Traders at RBS extensively discussed manipulating LIBOR rates. In a transcript of a chat on 21st. August, 2007, Jezri Mohideen, who was the head of Yen products for RBS in Singapore, asked other traders to have the LIBOR fixed:

Mohideen: “What’s the call on the Libor?”

Trader 2: “Where would you like it, Libor that is?”

Trader 3: “Mixed feelings, but mostly I’d like it all lower so the world starts to make a little sense.”

Trader 4: “The whole HF [hedge fund] world will be kissing you instead of calling me if Libor move lower.”

Trader 2: “OK, I will move the curve down 1 basis point, maybe more if I can.”

[Source: Swinford and Wilson, 2012]

Appendix III Examples of discussions between two banks about a wish to misreport LIBOR

a/ On 27th. March, 2008 Royal Bank of Scotland (RBS) trader Tan Chi Min asked that RBS raise its LIBOR submission and noted that an earlier lower figure that the bank had submitted had cost his team £200,000. Tan made it clear that the LIBOR fixing process had become a highly lucrative money making cartel. For example, on 19th. August, 2007, in a conversation with Mark Wong a trader at Deutsche Bank,, Tan said:

Tan: “It’s just amazing how Libor fixing can make you that much money or lose if opposite. It’s a cartel now in London.”

Wong: “Must be damn difficult to trade man, especially [if] you [are] not in the loop.”

[Source: Swinford and Wilson, 2012]

b/ On 18 September 2008, a UBS Trader explained to a Broker: “*if you keep 6s [i.e. the six month the Japanese Yen LIBOR rate] unchanged today ... I will f*****g do one humongous deal with you ... Like a 50,000 buck deal, whatever ... I need you to keep it as low as possible ... if you do that I’ll pay you, you know, 50,000 dollars, 100,000 dollars... whatever you want ... I’m a man of my word*”. UBS entered into at least nine such wash trades using this Broker Firm, generating illicit fees of more than £170,000 for the Brokers.

[Source: FSA, 2012, p.4]

Figure I The relative significance of the Relational Models may change as time passes.

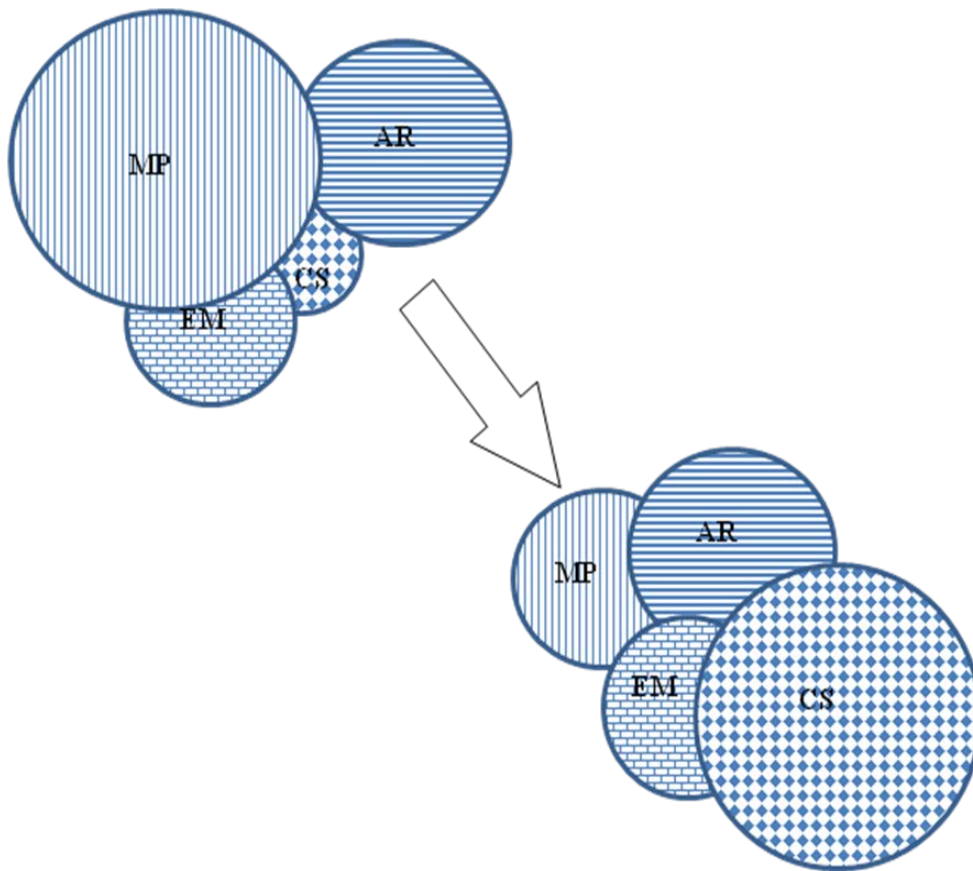
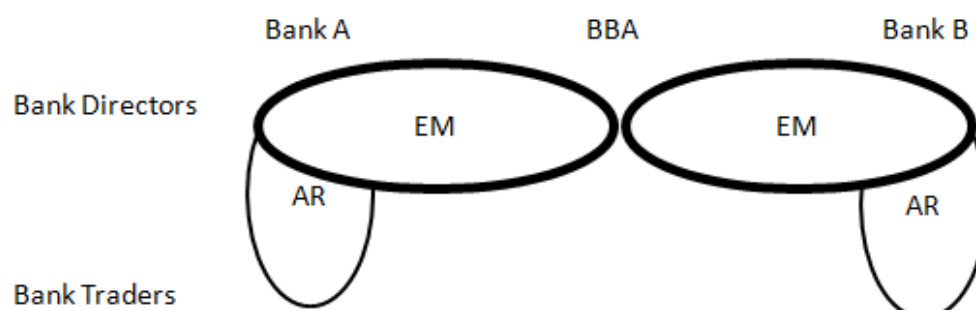
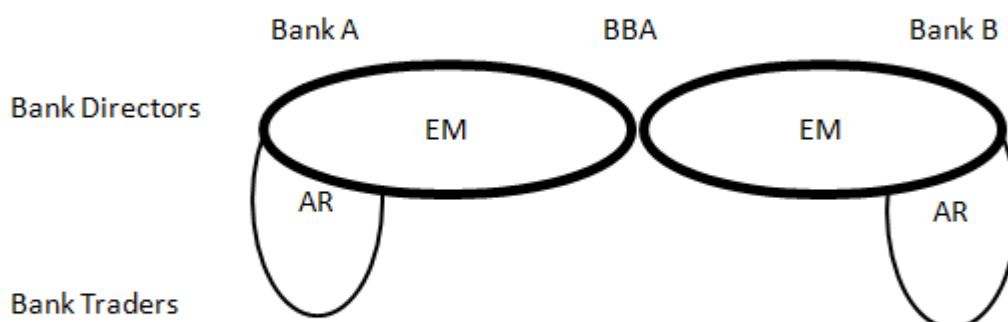


Figure II Established relationships between banks and BBA to create LIBOR



Note: Weight of a shape's outline indicates degree of dominance (i.e. a bank's relationship with the BBA dominates the AR relationships within the bank.)

Figure II Established relationships between individual banks and BBA when creating LIBOR



Note: Weight of a shape's outline indicates degree of dominance (i.e. a bank's relationship with the BBA dominates the AR relationships within the bank.)

Figure IV Collusion between competing banks' traders aimed at manipulating LIBOR

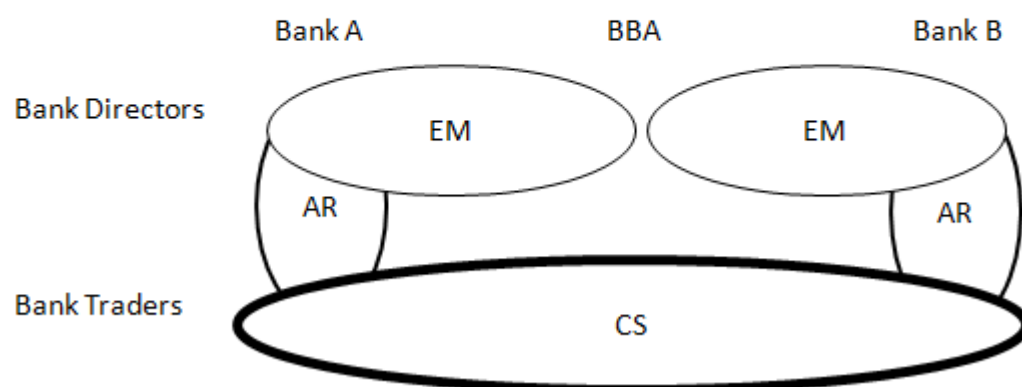


Figure V The Start of Sponsorship Relationship between Retailer and Theatre

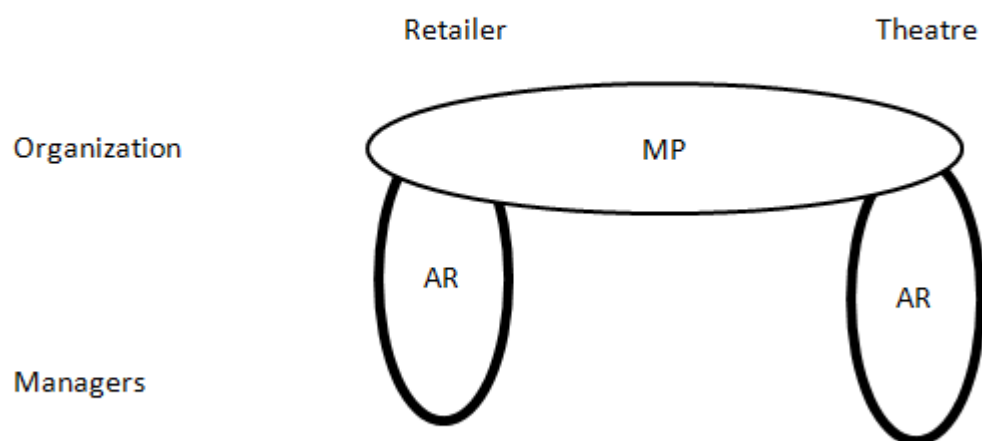


Figure VI Retailer's and Theatre's relationship at early stage of the Sponsorship

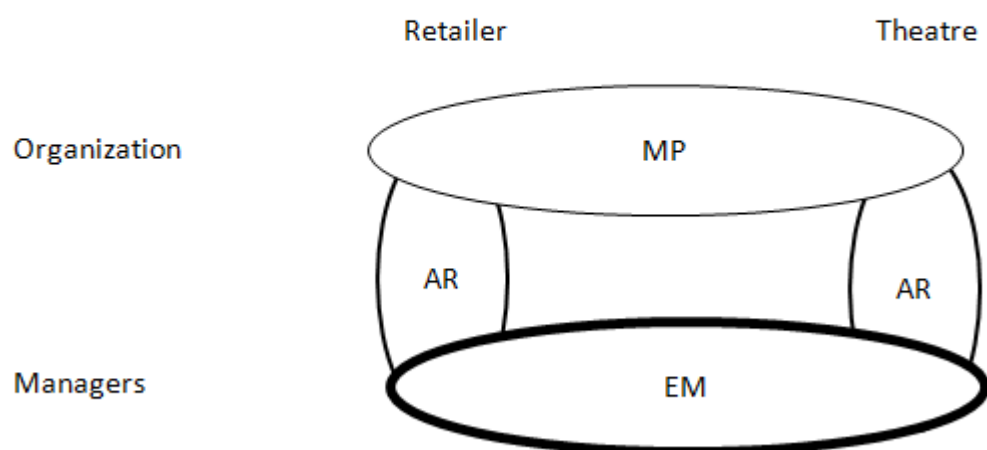
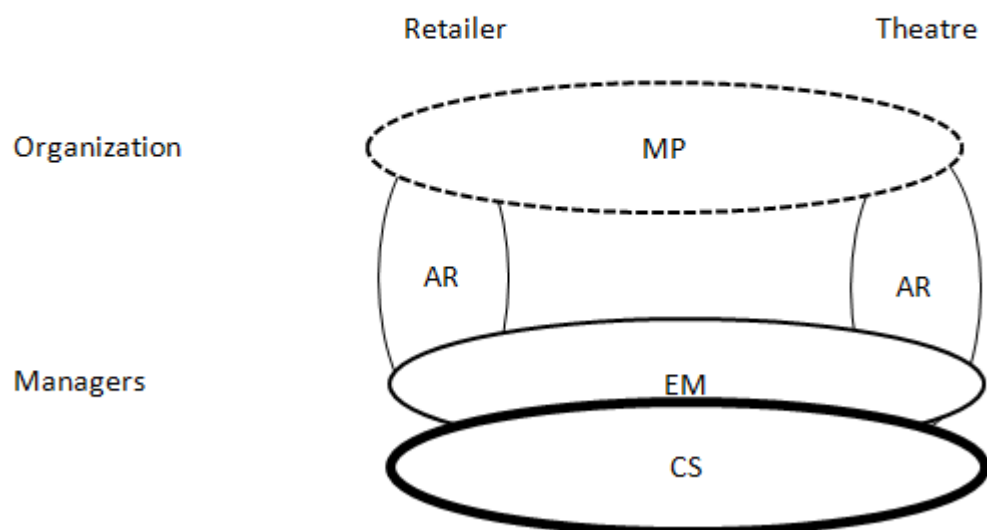


Figure VII Retailer's and Theatre's relationship when Sponsorship Relationship has been developed



NLP – THE LUBRICATOR OF BUYER-SELLER RELATIONSHIPS?

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ABSTRACT

This exploratory study examines buyer-seller relationships from the perspective of salespeople's interpersonal skills. Reflections from an in-depth case study, supported by a literature review, on how Neuro-linguistic Programming (NLP) affects salespeople's interpersonal skills are presented. A key finding is that NLP is perceived as a driver or lubricator in creating long-term buyer-seller relationships. It was found that NLP provides knowledge that has a positive effect on a salesperson's mental ability, behavioural response, mutual feelings sensitivity, and thereby the interaction outcome achievability. It is noted that the findings from this case study are preliminary *perceived effects* of NLP training, but as such they a) provide valuable in-depth insight into *how* NLP knowledge influences a person's interpersonal skills and their perceptions of these, b) give food for thought about the potential of NLP for industrial buyer-seller relationships.

Key words: interpersonal skills, neuro-linguistic programming, NLP, B2B salespeople, buyer-seller relationship

Introduction

From a marketing relationship or network perspective, existing normative marketing theory suggests that firms facing turbulent environments (e.g. like the current uncertain economic times) should “extend” the firm by developing soft-assembled strategies (Clark, 1999). These strategies include expanding a company's network and *relationship competences*. From a micro perspective such competences or skills are embodied in each individual person in an organisation (Wilkinson and Young, 2005). A soft-assembled strategy involves extending the “organisational mind”, which is the aggregated collective sensing, thinking and responding system of all the people in an organisation. It follows that building key individuals' sensing, thinking and responding skills may assist in developing the soft assembling capabilities of a system.

At the core of sensing, thinking and responding skills are *relationship/interpersonal skills*. The development of these have been long-recognized by researchers within the field of B2B. A substantial body of research has concluded that interpersonal skills are essential in the sales process and that these skills are positively linked to sales performance (Anselmi and Zemanek, 1997; Basir *et al.*, 2010; Churchill *et al.*, 1985; Homburg and Jensen, 2007). Further, a recent empirical study by Marck, Ennis and Crawford (2010) investigated how the economic downturn has affected the role of the B2B salespeople. In their research they stated that, “it was quite evident that nurturing and developing the relationship was the primary role of the salesperson and to keep the link strong during the downturn” (Marck *et al.*, 2010, p. 5). Again, this highlights the value of improving the *relationship/interpersonal skills* of the salespeople in organisations facing turbulent environments.

Despite researchers from both marketing and selling proclaiming that interpersonal skills are essential for companies to survive turbulent environments or uncertain economic times and investigations into the factors that are associated with these skills and/or facilitate them, very little academic attention has been given to the widely-used Neuro-Linguistic Programming (NLP) approach in the development of these skills. This is surprising, because NLP claims to hold the key to improving a person's relational and interpersonal skills (Dilts and DeLozier, 2000; Tosey and Mathison, 2003).

NLP originates from the field of psychotherapy (Dilts *et al.*, 1980), and is today a recognised mode of psychotherapy referred to as neurolinguistic psychotherapy (Wake, 2008). However, NLP is also applied to facilitate performance in other areas e.g. coaching, law, teaching, HRM, selling and management (Dilts and DeLozier, 2000). Even though it has been stated within sales literature that NLP training is especially valuable (Jakobsen, 2009; Johnson, 2010) there appears to be little research conducted areas to the specifics of this process (Thompson *et al.*, 2002; Wood, 2006; Borg and Freytag, 2010).

The aim of this paper is to begin to address this gap in the literature by undertaking A) a systematic investigation of the NLP phenomenon, B) an exploratory study on the effects of NLP training on B2B salespeople's interpersonal skills to gain some empirical insight on how NLP knowledge influences a salespersons interpersonal skills, and C) to use these findings to evaluate its potential in buyer-seller relationships.

The concept 'interpersonal skills' is conceptualised in many different ways (Rentz *et al.*, 2002). In this study we will adopt the interpersonal skills conceptualisation and the IPS-EQ model originating from the work of Borg and Johnston (forthcoming). To investigate these issues an in-depth case study (supported by a literature review) has been undertaken using the systematic combining approach suggested by Dubois and Gadde (2002).

The paper is organised as follows. First, the concept of interpersonal skills and the analytical framework, the IPS-EQ model, are introduced. Second, the NLP phenomenon is explored and a literature review is conducted. Third, the applicability of NLP in an business marketing context is elaborated. Fourth, methodological issues are addressed. Fifth, the empirical findings are presented. Finally, the paper ends with a discussion about the implications of the findings.

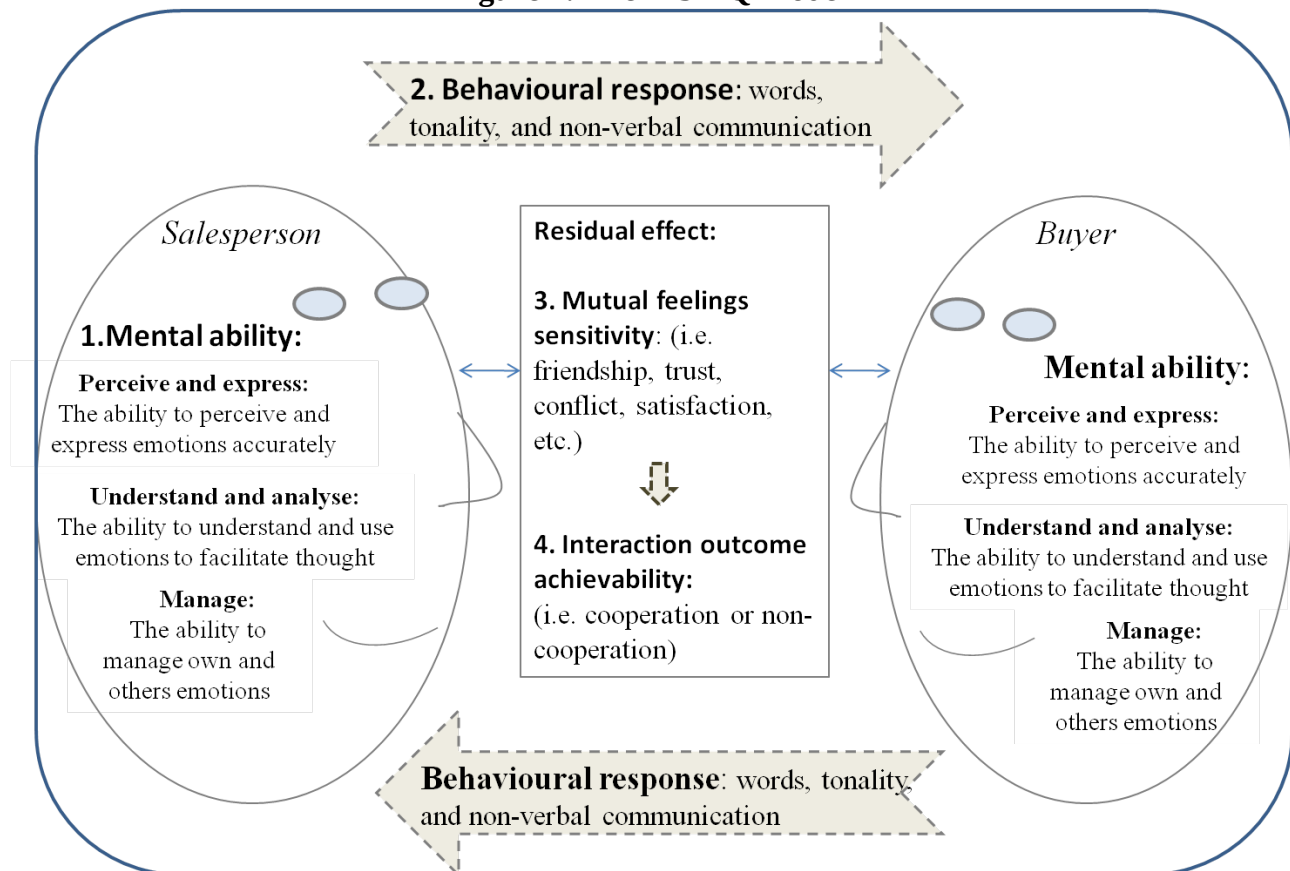
The Interpersonal Skills Concept and the IPS-EQ Model

According to Leigh, Pulling, and Corner (2001), the number one ranked sales paper of the 20th century was written by Churchill, Ford, Hartley, and Walker (1985). In their meta-analysis of identifying determinants of salespeople's performance they concluded that *interpersonal skills* are part of a selling skills level, which constitutes the second most important determinant of the performance of a salesperson. In alignment with this seminal work of Churchill and colleagues, the majority of the subsequent researchers investigating the nature of interpersonal skills in buyer-seller relationships have likewise concluded that interpersonal skills and salesperson performance correlate positively (Anselmi and Zemanek, 1997; Basir *et al.*, 2010; Homburg and Jensen, 2007).

However, although the majority of sales/marketing researchers conclude that interpersonal skills are essential for a salesperson's success, there is little congruence in its conceptualisations.

In their recent work, Borg and Johnston (forthcoming) offer a unifying conceptualisation of interpersonal skills via their IPS-EQ model. This model (which constitutes the theoretical foundation for our understating of interpersonal skills) attempts to conceptualise interpersonal skills in a B2B sales process. The model draws on a range of theories including: the *mental ability models approach* in understanding emotional intelligence - originating from Mayer, Salovey, and Caruso (1997, 1999, 2000) and theories of the relationship between emotions and behaviour (Ben Ze'ev, 2000; Lang *et al.*, 1998). The idea behind Mehrabian's (1971) communication theory is partly adopted. Essentials from the exchanges in industrial marketing and purchasing interactions framework, presented by Bonoma and Johnston (1978), have been included, as well as elements from the interpersonal sense framework provided by Bagozzi (1991).

Figure 1: The IPS-EQ Model



Source: adopted from Borg and Johnston (forthcoming)

The IPS-EQ model as depicted in Figure 1, suggests that interpersonal skills are a function of a person's "mental ability", "behavioural response", "mutual feelings sensitivity" and "interaction outcome achievability". The model is dyadic as it includes both parties' perceptions as well as the residual effect of a buyer-seller interaction. However, in the following, the model will, in line with the purpose of the paper, be explained from the perspective of the salesperson.

Figure 1 indicates characteristics of the salesperson that are central to the interpersonal interaction process. These include a salesperson's "**Mental ability**" which is concerned with the ability to perceive and express emotions accurately. This includes the ability to read other people's feelings and to discriminate between honest versus dishonest expressions of feelings. Also included is the capability to understand and analyse emotions and to use this assessment.

For example, it involves the ability to “mirror the emotions of another person” and thereby take another person’s perspective. Finally, this involves the ability to manage emotions in one-self as well as in others. An example would be to know how to calm down after feeling angry or being able to alleviate the anxiety of another person.

A person’s **"Behavioural response"** is concerned with ways of linking with another. This involves the “communication output” that a person is sending to a receiver; including verbal response, non-verbal response, and tonality of voice. For example, a person with high interpersonal skills might be characterised as “a good listener” and “a good communicator”.

The **"Mutual feelings sensitivity"** is concerned with the nature of an interaction and includes people’s ability to sense the atmosphere of an interaction. This refers to the ability of a person to assess whether there is a good atmosphere when interacting with one or more people. For example, is there a sense of trust, or friendship between one-self and other participants in the relationship? A person with high mutual feelings sensitivity also has the ability to influence or alter the atmosphere; this might be done via humour or by using another strategy that works upon mutual feelings. As the figure indicates, this occurs while the interaction is occurring and requires the capacity to react within that evolving set of circumstances.

A salesperson’s **"Interaction outcome achievability"** is concerned with the ability to get the outcome that is desired from the interpersonal interaction. This outcome might concern actions of a counterpart, for example being able to gain new information that is needed or getting the other party to do a specific task or to behave in a certain way.

The interpersonal skills elements explained above are carried out on a conscious level, but these skills are also unconsciously used. For example, a person might not always be aware that he or she is applying his or her mental ability skills as they work to alleviate the anger or frustration of another person. It is suggested that as all people have a certain level of interpersonal skill they, consciously or subconsciously, employ these four elements in human interaction on at least a minimal level.

Further, articulation of the process of interpersonal interaction and the skills contained within the IPS-EQ model highlight the possibility of developing interpersonal skills. This is discussed further in the following sections.

THE NEURO-LINGUISTIC PROGRAMMING (NLP) PHENOMENON

Despite the wide-spread use of NLP its acceptance in academic disciplines is limited. Einspruch and Forman (1985) have criticised NLP researchers for lacking extensive knowledge about NLP when exploring the phenomenon. To address this critique, an elaboration of this multifaceted phenomenon is undertaken. It is, to the best of our knowledge, the most comprehensive elaboration of NLP presented thus far within the field of marketing.

NLP emerged in the 1970s when Richard Bandler and John Grinder (considered the founders of NLP, together with Leslie Cameron-Bandler, Steve Gilligan, Judith DeLozier, Robert Dilts and David Gordon) laid down the groundwork for the foundation of NLP at the University of California (Mclendon, 1989).

The label 'NLP' reflects the principle that a person is a whole mind-body system, with consistent, patterned connections between neurological processes ('neuro'), language ('linguistic') and learned behavioural strategies ('programming') (Dilts *et al.*, 1980). Despite many attempts, no clear, unified, definition of NLP exists. This is likely because those who founded NLP, and those who later were involved in the development of it, have taken NLP in many different directions (O'Conner, 2001) and thus divergent conceptualisations with resulting different definitions exist. Multiple conceptualisations and unclear positioning have left the status of NLP unclear. The extremes of this are represented, for example by Edwards (1995, p.18) who indicates "its beginning was in the twilight world of psychology, motivation, hypnosis and therapy". Connell (1984, p. 44) claims that "Grinder and Bandler used their expertise in linguistics, psychology and cybernetics to describe the strategies used by master communicators". In contrast Wood (2006, p. 197) characterises NLP as "an approach to human communication that combines cognitive theory, split-brain processing and sensory perception".

There is not even agreement as to whether NLP is best described as a theory, a methodology or is simply a collection of techniques (Craft, 2001; Tosey and Mathison, 2003). Early work seemed focussed on techniques, arguing that NLP presents "specific tools which can be applied effectively in any human interaction. It offers specific techniques by which a practitioner may usefully organise and re-organise his or her subjective experience or the experiences of a client in order to define and subsequently secure any behavioural outcome" (Dilts *et al.*, 1980, p. 1). Later as a growing body of work emerged showing systematic results, this comprehension of NLP as being merely "a collection of techniques" was expanded; hence, NLP is also perceived by some to be "a behavioural science, a behavioural model, a set of explicit skills and techniques". (Dilts and DeLozier, 2000 p. 849).

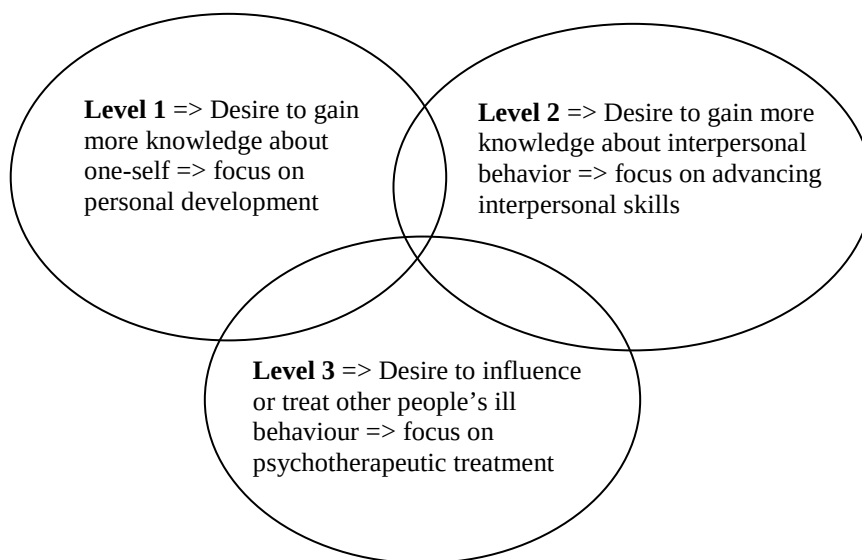
At the core of many of the diversified conceptualisations of NLP is discourse suggesting that NLP has its focus on advancing people's psychological **skills** for understanding and influencing people (O'Conner and Seymour 2002). Thompsen *et al.* (2002, p. 292) state that NLP "helps you to understand yourself and others and teaches you how to communicate effectively with others in order to build better relationships with them". However in contrast, Andreas and Faulkner (1994) suggest that NLP is the "study of human excellence". John Grinder defines NLP as "an accelerated learning strategy, by which one can discover and use patterns in the world" (O'Conner, 2001). Finally, Tosey and Mathison (2009, p. 24) integrate the skills and science perspectives presenting NLP as being about "how people communicate, perform skills and create experiences through patterns of thought and behaviour, mediated by language. NLP helps people create more preferable and useful (to them) experiences of the world, typically by attending to and modifying those patterns of thought and behaviour".

According to Dilts and DeLozier the words "neuro-linguistic programming" indicate the sciences that NLP draws upon, namely neurological, linguistic and cognitive sciences (Dilts and DeLozier, 2000, p. 850). This is closely aligned with Tosey and Mathison (2009, p.183), who state that "today, it can potentially draw on perception from disciplines such as cognitive linguistic, neuroscience and cognitive psychology".

An attempt to integrate the multiple comprehensions of NLP can be found in the partial explanation by Borg and Freytag (2010), which considers the various *reasons* for obtaining NLP knowledge. As illustrated in Figure 2 they argue that there are three reasons (or levels) for obtaining NLP knowledge. **Level one** deals with the individual's desire for self or personal development (Alder, 1992; Tosey and Mathison, 2010a, Bandler, 2005).

Level two deals with the desire to improve one's knowledge of human interaction and improve one's interpersonal skills level (Tosey and Mathison, 2003; Thompson, 2002; Laborde, 2008). The **third level** links to NLP's psychotherapeutic origin and deals with the desire to influence or change another person's behaviour (Dilts *et al.*, 1980).

Figure 2: Reasons for Obtaining NLP Training



Source: adopted from Borg and Freytag (2010)

As the figure indicates, Borg and Freytag (2010) argue that a degree of overlap exists between the three levels. We speculate that this may be the reason why there is an ongoing debate about the ethics of applying NLP in a business and selling context (Haviv, 2007, Tosey and Mathison, 2010a). In other words the debate may emulate from concerns as to whether a technique that was intended to unlock the deeper processes of the mind as part of psychotherapy treatment is being used inappropriately. This would also at least partially explain the doubtful reputation that NLP has in some countries, and the unwillingness of businesses that employ NLP to promote the fact that they are in fact providing NLP training for their employees (Tosey and Mathison, 2009).

This work argues that it is appropriate to use (at least) the processes embedded in Levels 1 and 2 to facilitate development of interpersonal skills. The research in this paper is positioned within level 2, which has its focus on NLP's effect on advancement of this. Therefore we adopt Thompsen et al.'s (2002, p. 292) definition, which states that NLP "helps you to understand yourself and others and teaches you how to communicate effectively with others in order to build better relationships with them". Furthermore, as NLP (often used in conjunction with other things) is one of the world's most popular forms of interpersonal skills and communication training (Tosey and Mathison, 2003) we argue that it warrants further investigation.

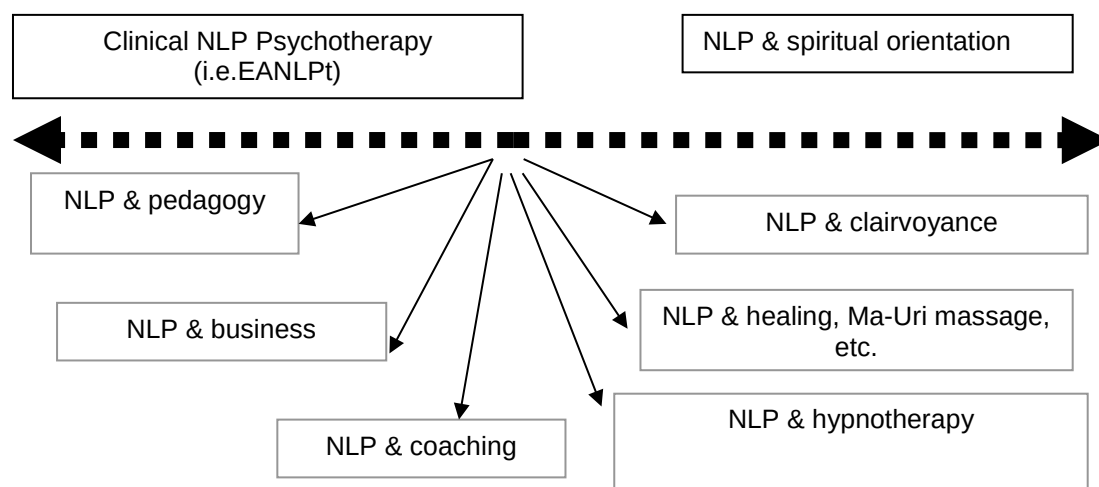
However the NLP phenomenon presents challenges for researchers it because it has not developed or evolved within the traditional scientific system. Many of the NLP models or techniques have only sporadically published academic documentation of their validity. This non-evidence based approach by the founders of NLP has led parts of the scientific establishment to take a critical view of NLP (Drenth, 2008). Some categorise it as 'pseudoscience' (Devilly, 2005).

However, an investigation conducted by Tosey et al. (2005) shows that NLP does build on academic theory and that the theoretical roots of NLP include gestalt therapy (Perls, 1969), person-centred counselling (Rogers, 1961), transformational grammar (Grinder and Elgin, 1973), behavioural psychology, cybernetics (Ashby, 1965), the Palo Alto school of brief therapy (Watzlawick *et al.*, 1967), Ericksonian hypnotherapy (Bandler and Grinder, 1975a; Grinder *et al.*, 1977), and the cybernetic epistemology of Gregory Bateson (1973; Tosey and Mathison, 2003). More recent evaluations by Tosey and Mathison (2010a) suggest that the existing body of empirical research does not support definitive conclusions about the value of NLP.

The lack of evidence as to its value is in part due to the contexts in which NLP is being used. Training is conducted by self-established training institutions or businesses. This development outside established medical/academic systems has led to limited control or standardisation (i.e. of the required amount of training to obtain a certain NLP degree). Instead the field has been left open for those interested to explore whatever its principles lead them to, and wherever their personal interests take them. Today, the NLP “community” cannot be regarded as a uniform field, but has diversified into various streams, e.g. new coding NLP, systemic NLP, DHE, and EANLPt are terms indicating a few of the different forms of NLP that exist.

A review of the extant popular literature available on the web about the various ways NLP is used/advertised is summarised in Figure 3. This presents a continuum along which various applications that include “NLP” are positioned. There seem to be two extremes – spiritual orientation and psychotherapy. There are a substantial number of practitioners who focus on “spiritual orientation” that NLP techniques provide. This is in line with the critiques of Bromley (2007) and Bovbjerg (2001) who argue that NLP is merely a new age phenomenon. However there is another cluster of applications at the other extreme that are grounded in the psychotherapeutic roots and orientation of NLP; this is in line with Wake (2008) who argues that NLP is an accredited mode of psychotherapy. There is a continuum of business applications of NLP, which include many forms of sales training. In Figure 3 these are positioned on the left side reflecting an orientation of sales training as skill-based therapy. This is somewhat misleading as it is probable that there is more than a little variation as to the way NLP is used.

Figure 3: The Spectra of NLP Training Facilities



Source: Own production based on internet desk research on NLP and its training institutions

Knowledge as to the number of NLP training facilities/schools in existence, or the number of people who have had NLP training does not exist. Tosey and Mathiason (2009) suggest that at least 50 training schools are registered in the United Kingdom alone. A simple search on Google of “NLP” resulted in more than twenty-five million hits indicating its profile is substantial but obscuring the ability to investigate the scale of its use. A sampling of these hits provides support for the assertion that NLP has developed into one of the world’s most popular forms of interpersonal skill and communication training (Tosey and Mathison, 2003) with many of the sampled hits addressing its effectiveness, including testimonials, etc.

As is illustrated in Figures 2 and 3, we argue that it is inappropriate to make general statements about NLP as it is not a unified field. Instead, we consider only the context of “NLP and business” in line with our focus on effective selling. A review of the academic business literature highlights that there is a wide range of activities included in the context of “NLP and business”. These include negotiation (LaBorde, 2006), training and education (Brown, 2002; Lavan, 2002, Ludwig and Mendendez, 1985, Tosey and Mathison, 2010a), management (Tosey *et al.*, 2005, Knight, 2002), innovation (Alder, 1992, 1994; Dilts and Bonissone, 1993), TQM and business excellence (Ashok and Santhakumar, 2002; Singh and Abraham, 2008) and Human Resource Development (Georges, 1996; Tosey and Mathison, 2007).

In addition there is a substantial popular literature focussing on NLP in *selling*. This work focuses on preaching the value of NLP knowledge to salespeople (e.g. Bagley and Reese, 1987; Jakobsen, 2009; Johnson, 2010; O’Connor and Prior, 1995). These popular books do not provide hard evidence as to the effectiveness of NLP but present techniques claimed to be NLP-focussed that are alleged to assist in building relationships and trust and thereby to create more sales.

An academic literature review on a number of online databases (Springer, EBSCO, Wiley, Emerald, PsycInfo and JSTOR) in sales/marketing shows that little published research exists involving the application of NLP. The few pieces in marketing that exist focus on the effect of NLP in various areas. For example, Woods (2004) concludes that NLP is valuable in a brand marketing context; Skinner and Stephens (2003) argue that NLP can be effectively applied in connection with marketing communication; and Mainwaring and Skinner (2009) suggest that NLP has value in connection with charity marketing communication. However, this work does not address the underlying reasons as to *why* NLP assists in achievement of improved outcomes.

In addition, the literature review identified eight papers involving the link between NLP and selling; these are displayed in Table 1. The table summarises the nature of the research undertaken, the NLP techniques¹ used and the main findings of the research. A clear pattern emerges. Within the eight papers there is a considerable overlap of the techniques used/considered. The papers show that use of NLP techniques like ‘Rapport’, and ‘Preferred Representational Systems’ are associated with improved sales interaction. This is much in line with the assertions of popular literature. However, none of these papers explore the research question posed in this paper - whether NLP training improves interpersonal skills and that it is this that in turn improves selling ability. We conclude from this analysis that there is an existing gap in the extant literature and a need for further investigation into this process of how NLP can assist (or not) in interpersonal skill development.

¹ It is out of the scope of this paper to introduce and describe all the various techniques; instead we refer to the work of O’Connor and Prior (1995, p. 211-216) for a short introduction of the techniques.

Table 1: NLP Research in the Field of Selling

Researchers	Empirical	NLP Methodology	Main findings in relation to NLP and selling
Singh and Abraham (2008)	Yes	NLP presuppositions PRS*, Disney's model, Reframing Meta Programs	NLP has the capacity to build up the organisational capabilities, such as improved communication, aligning goals, reducing resistance to organisational change.
Borg and Freytag (2010)	Yes	Rapport, PRS* Calibration, NLP presuppositions, Sensory Acuity, Neuro-Logical Levels	This case illustrate a way of applying NLP which has the potential to not only influence the individual salesperson's relational skills but also the relational skills of the entire organisation
Connell (1984)		Mirroring Anchoring PRS*	Salespeople who learn what NLP is and how to use it show improvement in their sales.
Nickels et al. (1983)	No	PRS*, Predicates Eye cues model Rapport building Rapport skills Pacing	NLP is particularly useful to salespeople in their relationships with customers. Rapport building skills, obtained via NLP, increases awareness and listening skills, two of the keys to effectiveness in selling and interpersonal relationships in general.
Thompson et al. (2002)	Yes	No specific NLP technique mentioned	NLP training leads to a significant increase in the adaptive selling measure provided by Spiro and Weitz (1990).
Wood (2006)	Yes	Rapport, PRS* Predicates	Provides evidence about the NLP theory about predicates and PRS*. Provides incremental evidence that the NLP framework of establishing rapport through nonverbal signals merits additional investigation.
Nancarrow and Penn (1998)	Yes	Rapport, PRS* Mirroring, Matching Predicates	Many telemarketing organisations (in UK) use NLP to foster rapport. Suggests that the probability for long lasting relationships <i>may</i> be increased by the application of instant rapport techniques (like NLP) – the lubricants of social exchange.
DeCormier and Jackson (1998)	No	Mirroring PRS*	NLP is applicable in a salesperson's introduction phase in the personal selling process.

*Preferred Representational Systems

According to Hallén and Sandström (1991) interpersonal skills are critical elements in the relationship atmosphere, which includes power balance, co-operativeness, and empathy/closeness. Enhanced interpersonal skills contribute to an understanding of actors' emotional perceptions and views on interaction and thereby build relational competence (Phan *et al.*, 2005). The notion of relationship atmosphere is closely related to actors' perceptions and interactions of what can be done in a relationship (Hallén and Sandström, 1991). While this 'actors' perspective can include various levels, ranging from the individual to that of firms (Håkansson and Johanson, 1992, p. 28), we argue (in line with Wilkinson and Young, 2002) that the individuals in a firm and their individual activities coalesce in a bottom-up self-organising way and thus create the relationship and network atmospheres in which firms operate. It follows that the systematic attempts to build individuals' skills across parts of an organisation will probably impact upon the organisation, the relationships that the organisation is part of and the network that contains those relationships.

The IPS-EQ model (Figure 1) reflects an individual perspective, but it also depicts process (see Young 2011 for further discussion of the importance of this) and thereby contributes to the relationship atmosphere concept. There are also fairly obvious links between elements of relationship atmosphere and the IPS-EQ model presented in Figure 1. Specifically, power balance and cooperativeness can be seen to influence and be influenced by “interaction outcome achievability” part of the residual effect; similarly empathy is part of (and affects and is affected by) the “mental ability” and closeness is part of the “mutual feeling sensitivity” element of the IPS-EQ.

This is in line with the buyer-seller literature that concludes that the quality or achievement of a sale correlates with the ability to create closer relationships, commitment, feelings and trust (e.g. Andersen, 2006; Georges, 2006). More specifically there is literature that highlights the value of interpersonal skills in relationship building. For example, Gray (2004) suggests that interpersonal skills of the alliance manager are essential in creating trust and thereby a success factor in business partnering.

The ability to trust and to build it is at the centre of discussions of development of relationships. For example Håkansson, Harrison and Waluszewski (2004, p.23) argue that “building some degree of trust and commitment appears a necessary condition for conducting economic exchange transactions”. The causes and consequences of trust have been substantially researched in business settings and there is also a small body of work that recognises that at the heart of trust is emotional capability (e.g. Young, 2006), which is also at the centre of IPS-EQ model depicted in Figure 1.

Correspondingly, in the NLP literature the concept of trust is a central theme and part of the key behavioural model in NLP (see Figure 3). According to NLP, trust is created via an interpersonal rapport building process involving NLP methodologies such as matching/mirroring, sensory acuity, representational systems (Laborde, 1994). In other words, adherents of NLP claim that it provides knowledge, which influences the residual effect of an interaction like trust.

Methodology

The research goal of this paper is to explore the *perceived effect* of NLP knowledge on B2B salespeople’s interpersonal skills. Issues researchers exploring the NLP phenomenon have previously faced guided the choice of research design. As previously discussed, NLP incorporates many different models and techniques. We avoid an explicit consideration of these. Instead we seek to explore the effect of NLP training on a person’s interpersonal skills as perceived by them. Others have noted a number of problems and issues associated with this kind of exploration of NLP. First, the perceptions of informants about NLP may lack validity as NLP is absorbed and effectuated by human beings at a subconscious level and therefore may be impossible to research (Sharply, 1987). We recognise this limitation but we are primarily interested in the *consciously perceived effects* of NLP training on a person’s interpersonal skills. At this early stage of our research we do not seek to uncover the actual effects of NLP on interpersonal skills only only perceived selling effectiveness and the perceived role that NLP has in this. These perceptions are analysed at a deep level (using discourse and semantic style analysis) however, allowing some insights into the credibility and quality of our informants’ reflections. Specifically, the primary analyst of the interviews will consider the nuances of the informants’ voice; she has both expertise in qualitative analysis and NLP processes as a result of her two year Masters practitioner degree in NLP training. In addition, the findings are linked to extant theory in the field of selling.

This qualification held by the primary analyst and the combined capabilities of the research team enables the analysis of informants' discussions about NLP and its impact upon them to address a number of the criticisms levelled at previous research. Einspruch and Forman (1985) have criticised existing NLP research for serious errors; including (a) lack of understanding the concepts of pattern recognition and inadequate control of context; (b) unfamiliarity with NLP as an approach to therapy; (c) lack of familiarity with the NLP 'Meta-Model' of linguistic communication; (d) failure to consider the role of stimulus-response associations; (e) inadequate interviewer training and definitions of rapport; and, (f) logical mistakes. However the research skills of this team overcome most if not all of these criticisms.

Research Design

The need to explore the deep processes that characterise the development of interpersonal skills and the response to training dictates the use of an in-depth case study applying a systematic combining logic. This design allows the researchers to go 'back and forth' from one type of research activity to another and between empirical observations and theory, as this expands the researchers understanding of both theory and empirical phenomena (Dubois and Gadde, 2002). Further, the case study method allows the gathering of considerably detailed data (Yin, 2009). Case studies themselves are especially appropriate for exploring new areas (Leonard-Barton, 1990) and especially where the focus is on a contemporary phenomenon within some real-life context (Eisenhardt, 1989).

Over a three year period data has been collected from three sources: A. Interviews. B. Secondary data such as company announcements, strategy papers and other internal documentation. C. Observation during meetings. A total of 20 hours of interviews and 15 hours of observations have been carried out with a focal firm. The interview informants work in management, HR, marketing, frontline sales people and the sales coach team. The focus, in the following reporting of the case, is on the interviews.

Different types of interviews were included, ranging from in-depth and focus group interview to informal interviews that occurred spontaneously. Informants were chosen by means of theoretical sampling, i.e. on the basis of the expected level of new insights they could bring (Flick, 2006). The in-depth and focus group interview used sequential visual displays of the IPS-EQ as well as constructed vignettes exemplifying the four levels of the IPS-EQ model to stimulate discussion. This was combined with a narrative inquiry or evaluating questions methodology (Halkier, 2008), which involved encouraging informants to tell stories, relate experiences and reflections and to make "before and after" NLP training evaluations. This interview style was chosen because as Burr (1995) and Richardson (1990) argue, people tend to organise their experiences over time into a narrative form. Secondly, a narrative inquiry is less focused on historical accounts, i.e. what has happened, but has its focus on what meaning people have derived from what has happened. As such, this methodology allows interviewers access to "unknown" information and is excellent for exploratory work (Matthews and Ross, 2010).

The data was analysed and categorised using a grid analysis (Gammack and Stephens, 1994), and this method was also used for linking the axial coding and theoretical frameworks (Flick, 2006). This is done in order to compare and explore similarities and differences across the various sources, and to extract the *perceived effects* of NLP training on each of the four elements of the IPS-EQ model.

Brief Case Description:

The focal firm is one of Denmark's leading financial service providers, founded in 1851, with a turnover of 9,522 million DKK and employing approximately 4,000 people. The focal firm claims to serve approximately 1 million customers – 513,000 customers directly via 49 private centres (private business area), 85,000 business customers directly via 24 business centres (business to business area) and 500,000 customers are handled by the partnering banks (partner business to business area). All customer groups are also served via the Internet. Approximately 65% of the company's staff are dealing with sales and have some degree of customer contact.

In 1999, the focal firm started its investments in a “sales coach network” philosophy. The idea with this network of coaches was that they would provide selected sales coaches with an NLP coach education. It was then intended that these sales coaches would give training and guidance for the rest of the sales people in the organisation. The intention is that for 80% of their time the sales coaches would work alongside the rest of the sales people in the organisation coaching, nurturing and providing guidance to them. This was augmented with mandatory attendance by all new salespeople at a two-day sales training programme, which would include NLP techniques. This training included the practicing of customer-buyer interaction and how to use various methods learned in those interactions.

Analysis of the Findings

During the interview process it became clear that a) the degree of in-depth knowledge about NLP methodology varied considerably among the interviewees, b) some of the perceived effects of NLP training were perceived to impact on more than one element of the IPS-EQ model. The latter is in line with the expectations of the IPS-EQ model (which guided much of the discussion), as it acknowledges that the four elements – “mental ability”, “behavioural response”, “mutual feelings sensitivity”, and “interaction outcome achievability”- are interrelated.

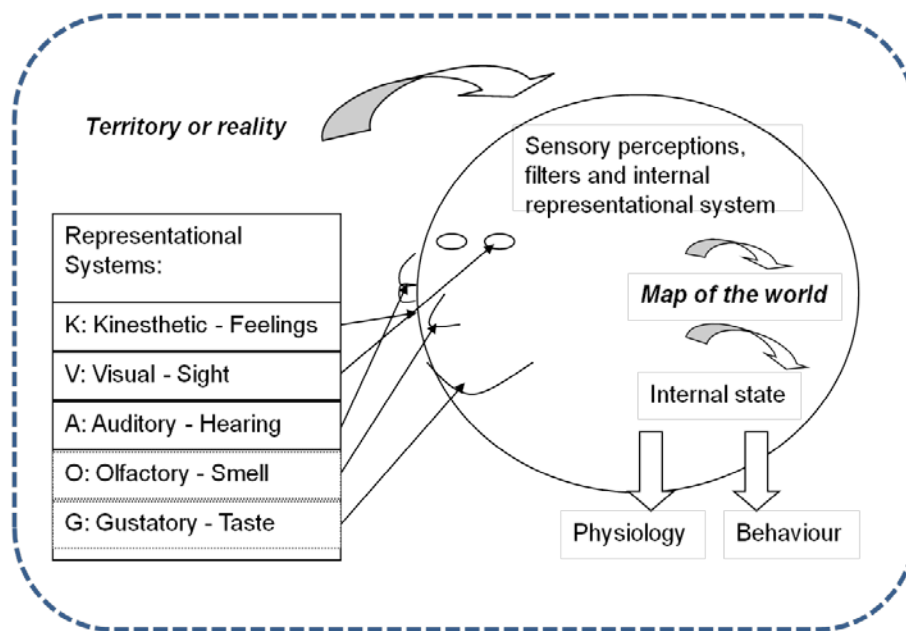
While recognising that these elements are very much interrelated in informants' minds, the findings are presented within the IPS-EQ model framework, with each element considered in turn. This enables us to better distinguish the perceived effect on NLP training on the complex elements of a person's interpersonal skills ..

Findings Linked to the “Mental Ability” Element of the IPS-EQ Model:

This particular element of the IPS-EQ model builds on emotional intelligence theory (Mayer, Salovey, and Caruso, 1997, 1999, 2000) and is concerned with a person's ability to perceive and express emotions, to understand and analyse emotions and finally, manage emotions (for further explanation of IPS-EQ please see Figure 1).

NLP training was perceived by informants to have an effect on this mental ability element. This is a key part of NLP methodology and is linked to one of NLP's key presuppositions. Furthermore, it interlinks with the key behavioural model of NLP, illustrated in Figure 4; this focuses on how individuals take in information from their surroundings, mentally represent these inputs in the brain to form a map of the world, which then impacts on the persons internal state and guides the persons behaviour.

Figure 4: The Behavioural Model in NLP



Source: adapted from Dilts and DeLozier, 2000; Dyrting, 2003; Hansen, 2005; Knight, 2002; O'Connor, 2002

The model suggests that every person has his or her own individual map of the world, which is different from the territory (reality), and that no individual map of the world is any more “true” than any other. In other words the model, and one of the NLP’s key presuppositions, emphasises that each human being has his/hers own subjective construction on their reality (map of the world), which might not be the same as the reality.

Further, the model suggests that a person gets an extremely large amount of information units, some say millions of bits of information each second (Dyrting, 2003; Hansen, 2005). However, this amount of information is absorbed in our unconscious and conscious mind, which then again affects our behaviour. Miller (1957) stated that most people can consciously respond to about seven, plus or minus two “chunks” of information. This finding seems to be valid in the neuroscience today – as Solms (2003, p. 90) opines, “If we compare the consciousness with the amount of information we can withhold in the psyche at any given time, then the consciousness can obtain only seven information units”.

Neuroscience does not know exactly the amount of information our mind-body obtains in a second – only that we are in our conscious mind able to register approximately 7 information units. What neuroscience knows, is that the human brain contains between $10^{11} - 10^{13}$ neurons (or nerve cells) and each one of these neurons are able to communicate (send and receive messages) with up to 10,000 others. The brain consists of very large sets of nerve cell networks and each network is extremely complex. It is believed that all human knowledge and information in some way is coded into these networks (Gazzaniga, 2002).

The behavioural model suggests that all the information we get, continuously enters and is processed via our sensory system, which is part of our nervous system.

A sensory system consists of systems for vision, hearing, somatic sensation (touch), taste and olfaction (smell) – the 5 senses (see Figure 4). All of this information is channelled through our internal filters and is hereafter represented by the brain as our own internal maps of the world. This internal map of the world then constitutes the reality upon which one's internal state is based and guides our behaviour and physiology.

It was argued by the informants that knowledge (and NLP training) about NLP's behavioural model (Figure 4) impacts a person's mental ability in different ways. First, it was proclaimed that NLP extends a person's *patience* regarding the customer's different views and attitudes. Second, the knowledge created *curiosity* to explore the buyers "map of the world". It was mentioned that a central part of their NLP training was focused on training the participant's ability to explore and understand another person's "map of the world". Third, the training underlined for the informants that not all customers are alike and that they therefore have different needs. One informant explained it like this:

"NLP knowledge has expanded my conscious awareness and I now accept that it is his world, not mine. Further, NLP has given me some tools to explore what goes on in the mind of the customer, this allows me to better understand and meet the customer in his world"

Part of the *internal state* element from Figure 4 links to emotions, therefore as the model suggests, to a certain degree emotions are a driver of human behaviour (actions) and physiology (e.g. like getting red in the face or having sweaty palms when nervous). This notion, that emotions play a central role in behaviour, has been introduced in the buyer-seller literature. For example Andersen and Kumar (2006, p. 522) state that "a lack of positive personal chemistry is an often-cited reason why business relationships either fail to develop and/or sustain". Further, Young (2006) has highlighted the diversity of emotions in business relationships. However, the impact of emotions, emotional wisdom, and emotional intelligence in a selling context is less investigated and more research is called for (Bagozzi *et al.*, 2010; Deeter-Schmelz and Sojka, 2003).

In this study, it was suggested by the interviewees that emotions do play a *key role* in selling. It was mentioned that the essence in selling is to create some form of behavioural action in the buyer (also linking to the teaching in Figure 4), i.e. signing a contract, identifying another member of the buying centre, or making a transfer of money, product, etc. Additionally, in relation to emotions in selling, one informant stated, *"the basis of my selling is that the customer likes me as a person"*. This person perceives positive emotion, from the buying part towards the seller, as fundamental in selling. This is in line with Jobber and Lancaster (2009, p. 319) who state that "liking a specific salesperson will positively affect a buyer's attitude towards the products recommended by that person".

NLP knowledge, gained via training was perceived to have different effects on a salesperson's mental ability and the emotional aspect of selling. This reflects the process depicted in the behavioural model (Figure 4). Some informants claimed that the simple idea that emotions influence one's behaviour has led salespeople to *"speak to customer's emotions"*. One salesperson explained that he spoke to the anxiety of a customer (because their sales office was locally based, whereas the competitors' sales offices were located further away, and he played on the fact that the customer was keen on having them close to his business). This aligns with Festinger (1975) and his cognitive dissonance theory, linking anxiety to buying.

Also, for some informants NLP knowledge, gained from the behavioural model had underlined the necessity to “*not to engage in own emotions*” during a sales meeting, involving, for example, having the ability *not* to take emotional remarks personally. Third, it was suggested by the informants that NLP knowledge increases the ability to adapt to customer expectations by adapting their own expectations and linking these to customers’ emotions. This capability is part of the NLP goal of “*behavioural flexibility*”, which relates to the development of the ability to vary one’s own behaviour in order to adapt to a particular situation or to elicit a particular response from another person (Dilts and DeLozier, 2000).

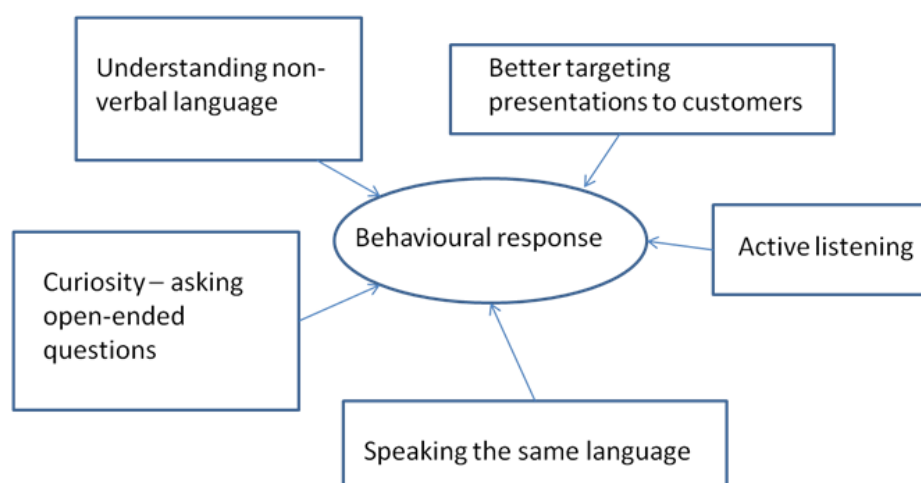
This proclaimed positive impact of NLP on a person’s behavioural flexibility has been tested by Thompson *et al.* (2002). In their research they found that NLP training had an effect on a person’s ability to perform adaptive selling, which is the ability to alter the sales behaviour during customer interaction (Weitz *et al.*, 1986). In their experiment on NLP effectiveness, Thompson *et al.* (2002) tested respondents according to Spiro and Weitz’s (1990) adaptive selling scale.

Findings Linked to the “Behavioural Response” IPS-EQ Element:

The “behavioural response” element of IPS-EQ model was explained in Figure 1. According to interviewees, another NLP presupposition taught in NLP training is reflected in the behavioural response element of IPS-EQ. For example, one informant said when discussing this, “*the meaning of the communication is the response it elicits, regardless of the intent of the communicator*”. This perceived effect of NLP training had an impact on how a salesperson would communicate with customers. In other words, informants accepted that, as NLP posits, it is the salesperson’s responsibility to ensure that the customer receives the intended message. This involves probing and explaining the message in various ways until sure that the customer has actually received the message accurately.

Figure 5 summaries five different effects of NLP training on a person’s behavioural response that were identified by informants. Each of these five effects are explained below.

Figure 5: Perceived Effects of NLP on a Person’s Behavioural Response



Informants agreed that NLP training specifically enhances a person's ability to read non-verbal language; in NLP language it is called enhancing a person's *sensory acuity*. NLP training involves learning that "*a person cannot not communicate – your body language will always communicate*". Academic research by Wood (2006) suggests that, in selling, nonverbal communication accounts for 60-70 % of all interpersonal communication; which underlines the potential value of understanding and mastering this particular ability.

In the literature review, illustrated in Table 1, nearly all researchers who have studied NLP mention the NLP training method that addresses a person's Preferred Representational Systems (PRS) as essential in selling. Similarly, all informants identified PRS as essential. The PRS methodology is linked to NLP's key behavioural model (Figure 4). This model asserts that each person has a preferred sensory system (which they use to represent in their mind the information units they get). The hypothesis linked to PRS is that a salesperson should apply the words (in NLP language called *predicates*), which link to the customers PRS, and then they are "*speaking the same language*" as the customer and meeting "*the customer in his or her world*". Wood (2006) tested this NLP hypothesis (with respect to three representational systems – visual, auditory, and kinesthetic) and found some support for this claim.

Similarly, informants mentioned that knowledge gained via their NLP training about a person's PRS was perceived valuable for them when presenting a product/service. Interviewees stated that they would alter their sales presentation to *match* the customers PRS. For example if they believed a customer to be visually oriented (see Figure 4) then the salesperson would include more figures, use the appropriate predicates, and apply metaphors in his/her selling approach, all in the pursuit of matching the language to the PRS of the customer.

'Active listening' and 'Curiosity' are the two remaining elements that, according to the informants, were perceived to be substantially affected as a result of their NLP training. The two elements are interrelated in informants' minds. They explained that NLP's '*meta model*' and '*meta programmes*' had together impacted their active listening skills and their active questioning techniques. These techniques were used in the quest to gain more knowledge about the personality of a particular customer. According to NLP literature the meta model is part of the early NLP work and deals with understanding a person's specific language patterns, where as the meta programmes are concerned with defining typical patterns or thinking styles of a particular individual (Dilts and DeLozier, 2000).

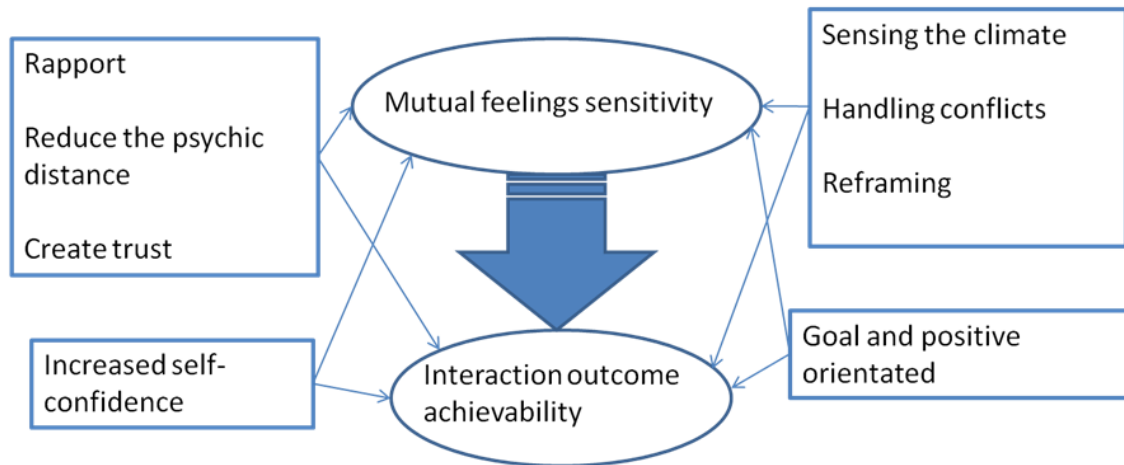
Similarly, in the selling literature, the two capabilities 'active listening and curiosity' are proclaimed valuable for salespeople (Castleberry and Shepherd, 1993; Comer and Drollinger, 1999). Jobber and Lancaster (2009) state that *interest* in people is a key quality for salespeople and further they even suggest that the number one success factor in selling is a salesperson's "listening skills". Again this highlights the potential of NLP, if training actually has the ability to enhance the listening and curiosity capability of a person.

Findings Linked to the "Mutual Feelings Sensitivity" and "Interaction Outcome Achievability" IPS-EQ Elements

The remaining two elements of the IPS-EQ model and the perceived effect of NLP training on these will be addressed together.

This is because the perceived effects of NLP overlap both IPS-EQ elements – ‘Mutual feelings sensitivity’ and ‘Interaction outcome achievability’. The suggested effects of NLP training on these two elements are displayed in Figure 6.

Figure 6: Perceived Effects of NLP on a Person’s Mutual Feelings Sensitivity and Interaction Outcome Achievability



The ability to create rapport is a key element in NLP and is likewise proclaimed essential in selling (Campbell *et al.*, 2006; Nickels *et al.*, 1983; Wood, 2006). It is defined as “the process of building and maintaining a relationship of mutual trust and understanding” (O’Connor and Prior, 1995, p. 215). One interviewee explained the effect of his NLP training which linked to rapport building in the following manner: *“I have via NLP learned to create bodily rapport (via mirroring my bodily posture to my customer), rapport in words (speaking the same language as my customer), using the same tonality and tone (as my customer), and creating rapport in opinions and values (by having the same views as the customer). Via this teaching I have learned to reduce the psychic distance between me and the customer and remove interference on the line and thereby create trust. Removing interference on the line is essential before I can start explaining about our actual services”*.

According to Laborde (1994) the rapport element is in our everyday human interaction: we unconsciously establish some level of rapport – it seems to be a natural feature among most people when they get together. Laborde suggests that good rapport is characterised by a sense of ease with another, trust, and easy flow of dialogue. Informants reflect this view, seeing rapport as a prerequisite to trust.

In the marketing literature, trust has been proclaimed to have a positive influence on buyer-seller relationship development (Morgan and Hunt, 1994), especially in B2B selling (Liu and Leach, 2001, Young and Albaum 2003). In a similar vein, Lichtenthal and Tellefsen (2001) delineate the value of buyer-seller similarity, which also links to the rapport concept (as explained in last interview quote). This once more gives food for thought about the potential of NLP, which trains people in the ability to establish rapport and thereby influence the mutual feeling of trust.

A second effect of NLP training, illustrated in Figure 6, has to do with the ability of sensing and altering the climate or atmosphere. Specific NLP methodologies perceived by the interviewees to be of value. For example in handling conflicts the “*reframing technique*” or the ability to go into the “*meta-position*” were seen as particularly useful. Reframing is concerned with changing the way of understanding a statement or behaviour to give it another meaning, and meta-position focuses on the viewpoint we are aware of at any given moment (O’Connor and Prior, 1995). In NLP training, changing viewpoints is an important consideration; adopting someone else’s viewpoint or adopting a meta-position where one acts as an objective observer can achieve this. Specifically, NLP students are trained to see a problem or a conflict from one’s own glasses, the glasses of the counterpart and the glasses of an imaginary third person, who sees the conflict in an objective manner. These techniques also interlink with the “*behavioural flexibility*” explained earlier.

The final two perceived effects of NLP training have to do with “*increased self-confidence*” and being “*goal and positive oriented*”. Figure 2 addresses the first of these, suggesting that the ‘level one’ reason for obtaining NLP training is associated with a desire for self or personal development. However, Thompson *et al.* (2002) measured the effect of NLP on people’s self-esteem and self-efficacy and found a short-term effect, but no long lasting effect on these concepts. The second effect of goal and positive orientation links to another NLP presupposition, which focuses on setting goals (e.g. the TOTE model) and finding peoples’ “*positive intention*”. The positive intention is linked to the presupposition that underlying any behaviour is a positive intention for the person acting out a specific behaviour; it is focused on what it gets for the person who acts in a specific way (O’Connor and Prior, 1995). The goal and positive orientation was explained by one interviewee like this: “*For example I use future pacing before I meet a customer, meaning that I think ahead in time and reflect on what feeling will I have when the meeting with the client is over, and I see a positive outcome and set the goals with the meeting before I actually go to the meeting*”.

Discussion and Implications

In 1985, Einspruch and Forman concluded that it was not then possible to determine the validity of either NLP concepts or whether NLP-based therapeutic procedures are effective. In 2010, Tosey and Mathison (2010a) concluded that the existing body of empirical research did not support definitive conclusions about the effects of NLP. As has been illustrated in this paper NLP is extensive, multifaceted and non-aligned. This raises the question as to whether it will ever be possible for academia to give any precise verdict as to the value of NLP as a whole as no definitive conceptualisation is likely to emerge. However the problem is an important one. We argue that it is essential and valuable to start exploring this worldwide phenomenon and illustrate a research method that can serve as an important starting point for this exploration.

Our findings highlight the value of grounding NLP research in a comprehensive elaboration of NLP and considering NLP effectiveness in a fairly specific context (here we consider only sales training and self-perception). To the best of our knowledge this has not been done in any other marketing or sales work. The combination of the core frameworks of NLP combined with the IPS-EQ allows effective analysis of the narratives of salespeople about their perceptions of the impact of their NLP training.

These narratives suggest NLP knowledge *has* considerable perceived effects on salespeople’s interpersonal skills. This approach to analysis allows us to further demonstrate a likely way or ways that NLP techniques influence a salesperson’s interpersonal skills.

This is through their influence on mental ability, behavioural response, mutual feelings sensitivity, and thereby the interaction outcome achievability. This pattern of results indicates that NLP does hold part of the key to improving a person's relational and interpersonal skills.

To a certain degree the authors agree with Nancarrow and Penn (1998) when they state that intervention via NLP might be utilized as an important lubricant of social exchange. This claim also captures the potential for the buyer-seller relationship development literature. In particular, researchers interested in relationship competences, relationship atmosphere and trust might be interested in the potential value of NLP. There are also obvious implications for managers. If interpersonal skills generally, and more specifically a salesperson's ability to build trust and commitment, are a necessary condition for conducting economic exchange transactions (as claimed by Håkansson, Harrison and Waluszewski, 2004) and NLP has the potential to enhance these skills, then NLP training represents a potential competitive advantage. Arguably, firms already recognise this intuitively as evidenced by the substantial investment in this training in many parts of the world.

The value of high relationship/interpersonal skills was also highlighted in the introductory part of this paper. This is confirmed via our informants in that they indicate in the overall pattern of their discourse the need to strive for improvement of these skills. There, it was mentioned that not only do salespeople with higher interpersonal skills perform better, but that these skills also seem to be even more valuable in an economic recession period. This paper offers important first hints in understanding the effect of NLP training and it suggests that there seems to be some evidence to the thesis that NLP in fact has the ability to enhance a salesperson's relationship/interpersonal skills, in some contexts at least.

Implications of these findings for practitioners are that first, all their extensive investments in NLP training seem not to be "a waste of money". Second, these potential investments might be exploited further in targeted salespeople training programmes. Third, knowledge about interpersonal skills and training in related areas might be valuable in a salesperson selection process. Fourth, it brings food for thought on what the whole organisation (and not only the salespeople) might gain if trained in NLP knowledge.

Even though this research is "a first step" towards understanding the effect and perhaps potential of this complex phenomenon we believe to have laid down the pathway for, and encourage further systematic. Our future research will consider the deeper processes that characterise the development of interpersonal skills for salespeople and the way in which these correspond to NLP training. The training itself and the validity of its claims (i.e. whether it is possible to link what is actually done to what is claimed) can also be examined. Further research can also consider the unconscious impacts of NLP, using non-narrative methods (e.g. role play) and applying more deeply interpretative methods of analysis including observation to analysis of interviews with salespeople.

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MEASURES FOR INNOVATING BUSINESS MODELS – AN EMPIRICAL STUDY OF GERMAN SMES

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Extended Abstract

Introduction

In one of his most renowned articles, Michael Porter (1996) suggests that strategy does not imply “*being everything to everyone*”. Companies have thus to make choices – which customers to serve, how to best meet their needs, how to price the offers. Joseph Schumpeter (1942) saw the purpose of a businessperson in making new resource combinations, in order to foster economic development. Business model innovation is a tool in this respect. Up to present, the business model concept is still under survey, being regarded through different perspectives and continuing to gain new definitions. The fact that no definition has been widely accepted is a result of the term’s complexity.

The present paper seeks to address business model innovation in small and medium-sized German companies (SMEs). Since the business model literature offers particularly diverse approaches for innovation, the paper aims at comprising literature recommendations in concrete innovation strategies. Consequently, interviews with companies illustrate whether the recommended strategies are, in fact, put in practice.

Theoretical background

Wirtz (2011) sees business model innovation as a defining topic within business model management. The author also considers it to be the area of business model management towards which most interest has been shown in recent years. For Demil & Lecocq (2010), business model innovation represents the core of the business model concept. Business models are a tool to help managers and entrepreneurs navigate in the more and more complex business landscape (Wirtz, 2011). Morris, Schindehutte & Allen (2003) mention that researchers have discussed business models as being architectures, patterns, designs, assumptions, methods and plans. The variety of business model definitions may complicate understanding of what exactly business models are and what their practical applicability is. The present paper thus aims at building bridges between several business model approaches.

Chesbrough (2007) states that each business model has two purposes: to create value and to capture it. This view on the business model is shared by most researchers in the field (e.g. Osterwalder & Pigneur, 2010; Casadesus-Masanell & Ricart, 2011; Wirtz, 2011; Johnson, 2010a & 2010b; Johnson, Christensen & Kagermann, 2008). *Value creation* encompasses the whole chain of activities which lead a company to meet the needs of its customers.

Value capture refers only to the activities through which a company receives a return from its customers. The return is generally a monetary payment, but it can also be advertising or simply the maintained fidelity of a subsidized customer group. Osterwalder et al. (2005) very concisely define a business model as the *blueprint* for operating a business. A summary of the business model concept is given by Eriksson & Penker (2000). According to the authors, a business model fulfills two functions: it first serves for understanding the key mechanics of the business – as seen above, value creation and value capture. Second, it is a platform for experimentation and for organizational improvement, namely for innovation.

The purpose of business model innovation is to replace outdated models as innovation begins by questioning and challenging existing business models (Osterwalder & Pigneur, 2010). Chesbrough (2007) makes a compelling case for business model innovation, stating that R&D and technological innovations are not sufficient in our age. While the costs for developing unique products have sharply risen, their life cycles have shortened. Imitations ultimately lead to the commoditization of once novel products. Innovative business models can therefore make the difference by shedding new light on the needs of the customer.

A key characteristic of business model innovation, discussed at length in the literature, is the change in the value proposition resulting from the innovation. Open for discussion remains, however, the degree of innovation starting from which a business model change is regarded as business model innovation. The present paper considers that a *business model innovation is any conscious, long-lasting change, which goes beyond the industry standard and takes place in at least one of the business model building blocks.*

Goffin, Herstatt & Mitchell (2009) find that chiefly three factors lead to innovations in the business model field: technological leaps, a dynamic market environment, as well as increasing competition paired with changing customer demands. Johnson (2010b) structures the situations which call for business model innovation into threats and opportunities. There are two main types of threats: *commoditization* and *disruptive innovations*. The market opportunities are: *market democratization* and *opening new markets* (exploration), *product and service innovation* (expansion) as well as the *securing of the current business model* (adaptation). Casadesus-Masanell & Ricart (2011) emphasize the need for *opening new markets* in developing countries as one of the most important triggers for business model innovation. Especially the markets at the middle and base of the economic pyramid gain more importance. In order to reach them, companies can innovate by simplifying their business models.

Regarding the success factors for innovation, Cavalcante, Kesting & Ulhøi (2011) argue that an effective business model both plays a stabilizing role and allows changes in the design of the business activities. As well, Johnson, Christensen & Kagermann (2008) recommend that business models should be flexible to change from their very first years. Mitchell & Coles (2004b) note that business model innovation is more effective when performed regularly. It should not be a one-time process, but a recurring one. Consistent efforts in this domain help a company to leapfrog ahead of competition.

Methodology

The theoretical part of the paper served as the basis for the company interviews. Nine interviews were conducted with representatives of established German SMEs. SMEs were chosen as they play a crucial part in German economy. According to the business register (IfM Bonn, 2012a), 99.7% of all German enterprises are small and medium-sized. In Germany, they are metaphorically regarded as the primary employment engine. Indeed, they employ about 60.7% of the working population (Statistisches Bundesamt, 2011). In 2011 there were around 3.69m SMEs in Germany, forming the backbone of the German economy (IfM Bonn, 2012a).

The term “SME” is derived solely from quantitative aspects, such as the staff headcount, annual turnover or, alternatively, the balance sheet total. These three criteria are used in empirical research due to practicability reasons. However, it is sometimes forgotten that behind the quantitative lay qualitative criteria (Becker, Ebner & Ulrich, 2010). Daschmann (1994) and Pfohl (1997) see qualitative criteria as essential to properly identifying to which category a company belongs. Their underlying assumption is that SMEs are governed by other economic principles than large companies. According to the Recommendation of the European Commission (2003), an SME is any company with (1) less than 250 employees, (2) an annual turnover up to 50m € or (3) an annual balance sheet total up to 43m € (IfM Bonn, 2012b).

Each interview was semi-structured and lasted between 30 minutes and one hour. 16 interview questions were developed on the basis of the literature. Although none of the literature sources examined business model innovation in SMEs in particular, all interview questions were relevant to the interviewees. Moreover, they ease a comparison between the actual innovation process in SMEs and the recommendations from the literature. Five of the nine interviewees are company owners and three of them also the founders. All owners act as managing directors of their firms. The remaining six interviewees are employed as head of marketing & sales, acquisition as well as product management. One interviewee is project leader.

All companies are active on the B2B market and three of them are additionally present in the B2C area. The companies were founded between 1928 and 2010. Two companies are medium-sized (with an average of 22m € turnover and 135 employees). The remaining eight are small companies (with an average of 3,1m € turnover and 25 employees).

The interviewed SMEs come from different industries: PR, consulting, environmental industry, renewable energy, appliances industry, forwarding and the craft industry. The literature has underlined the importance of understanding other industries as a step for business model innovation. A practice which is standard in one industry may well be a business model innovation for firms from another industry. Therefore, the insights of the present paper can perhaps also be used as key learnings on intra-industry business model innovation.

Results

One interviewee considers that incumbent companies find it difficult to innovate their business model. However, the interviews show a different picture: All companies which have been on the market for more than one decade have systematically under-

gone changes in their business models – about 20% of which are classical business model innovations. All companies have introduced an innovative element in their business models at least once. Young companies, which have been active for less than one decade, are generally still trying to establish their business model and to pursue it further in its current state. Therefore, they are less likely to innovate their business model during their first half decade.

Nevertheless, one company did exactly this: In the four years since the company was founded, the business model has been changed four times. The company began as online platform which exports environmental technology from Germany to China. A change occurred in the business model, when the company transformed the platform into a more concrete approach. The value proposition became more specific: the company started to act as an information broker for information deficits. This role has been kept up to the present moment. Another change regards the customer segments: the Chinese market was abandoned. The company began to focus activities in Western Europe, an area for which it has extensive market and cultural knowledge and therefore key competencies. A classical business model innovation is the fact that the company started to gain end customers as the main customer group. And finally, the fourth transformation of the business model is the adjustment in the revenue streams. In order for the company to gain financial backbone, provisions were added to the fixed sums received from clients.

Beyond this example, there are many more aspects discussed in the interviews: for instance, bundled vs. unbundled business models. The theory generally recommends that a company chooses one focus – be it product leadership, customer relations or operational excellence. Yet the interviewed companies seem to try to bundle, rather than unbundle their business models. The companies pursue outpacing strategies.

The literature also discusses innovation through simplification. With a simplified business model a company can successfully pursue customers at the periphery of the current customer group. Yet, the companies showed they are less likely to innovate in this field. Five out of the nine companies illustrated certain rigidity in defending the current high-margin customer group. This is due to two reasons: First, the companies' core competencies lie in creating high-quality products and services. Companies would have to innovate several elements of the business model in order to become more cost-efficient. Second, high-quality offers bring high margins. For this reason, companies are reluctant to shift focus from the high-margin customers in order to meet the needs of the lower-margin customers. Two companies are interested in lower-income countries, mainly Eastern Europe.

Eight of the nine companies have diversified their product/service portfolio. For all of them, diversification implied a certain degree of business model innovation. All companies added key resources and activities. Three companies added new channels, two companies gained new key partners, and finally, two of them intensified the customer relations.

An interviewee pointed out that it is easier for companies offering inexpensive products to pursue a bait-and-hook business model, since providing consultancy services is extremely time-intensive. Surprisingly, four of the nine interviewed companies have free offers in the sense of a bait-and-hook business model and they are mainly consultancy services.

Two further companies mentioned that they have free-of-charge offers, yet such offers are the industry standard and therefore not a business model innovation.

All nine interviewed companies have open business models. Eight companies have an outside-in open business model, while four companies have an inside-out open business model. To keep in mind is the fact that an inside-out open business model does not imply the business with customers. Three companies are themselves networks. Worth mentioning is the fact that these companies had this innovative element from the very beginning in their business models.

Networking plays an extremely important role for all companies, regardless of company size and regardless of how traditional the business model is otherwise. One of the key learnings of the present paper is that networking is an essential part of the business model of German SMEs. One interviewee mentioned that partnerships with other companies have gained importance after the 2008-2009 economic crisis. The crisis acted as a stimulus for the company to open its business model and engage in partnerships. The interviewee pointed out that partners greatly contribute to the company's business model and bring much support in the daily business.

The interviewees have described business model innovation as chaotic, agile and based on gut feeling. A company may spend years researching on a certain topic without reaching the desired aim, while, in other cases, an innovation may be achieved at a bewildering speed. More structure in the innovation process can be brought by business model prototypes. Prototyping is a trial-and-error approach and brings fast feedback from clients. Three interviewees believe that business model innovation works best with agile trial-and-error approaches. Yet interestingly, just one company builds full business model prototypes. This is an area which is open for improvement.

Conclusion

SMEs innovate intuitively. Yet, business model innovation is an ambiguous term: If a business model change is an innovation in one industry, it may as well be the standard of a different industry. Innovation is industry-specific and moreover, most of the times, company-specific.

CUSTOMER RETENTION, CUSTOMER LOYALTY AND THE MODERATING EFFECT OF SHARE OF WALLET (SOW) IN A B2B MARKET

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Introduction

What drives customer loyalty towards a business supplier? What determines the success and failure of a supplier's loyalty initiatives? These are some of the fundamental questions confronting business managers. There are two perspectives that address these questions: historically, research has focused on customer retention and satisfaction as the primary measures of customer loyalty (Reichheld & Sasser, 1990; Reichheld, Markey Jr., & Hopton, 2000; Bolton, Lemon, & Verhoef, 2004), with a resultant emphasis on ensuring that a supplier firm's resources should be invested in the most efficient and effective way (Reichheld, 1993; Anderson & Mittal, 2000; Kumar, Shah, & Venkatesan, 2006; Bohari, Rainis, & Marimuthu, 2011). The ultimate goal of increasing long term profitability is thus achieved by growing the value of each customer (Reinartz & Kumar, 2000; Lam et al., 2004; Bolton & Tarasi, 2007), especially when there are learning costs associated with switching vendors (Soellner, 1996).

While a key contribution of the existing satisfaction – customer loyalty model was the description of the antecedent-consequence type of linkages of relationship variables, these linkages simplify reality (Reinartz & Kumar, 2000). Increasing evidence exists demonstrating that exclusive loyalty or 100% loyalty is no longer a truism, with a shift instead towards polygamous or shared loyalty (Uncles et al., 1994; Cooil et al., 2007). Such loyalty is particularly common in industries where products or services can be consumed or used in tandem with each other. The result is that customers share their patronage between multiple brands (Sajtos & Kreis, 2010), between channels (Lariviere et al., 2011) and across various industries (Cooil, et al., 2007). Unsurprisingly, loyalty is now measured in terms of its “share of purchases in the category” (Jones & Sasser, 1995, p. 94), i.e. share of wallet (SOW), or the proportion of purchases within a product or service category that a client allocates to a firm (Jones & Sasser, 1995; Keiningham & Perkins-Munn, 2003). By focusing on SOW, firms should find it easier to create customer loyalty programs, cross- and up-selling applications, and other marketing efforts to achieve the best return on investment (Du, Kamakura, & Mela, 2007).

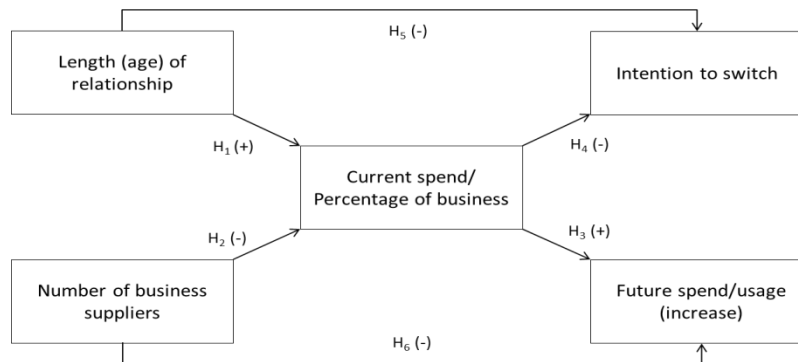
This explains why Coyles and Gokey (2005) argue that focusing on customer SOW patterns in addition to customer retention can offer up to 10 times the value to a firm of focusing on retention alone. Research has also suggested a positive association between customer satisfaction and share of wallet (e.g., Wiegman & Koth, 1999; Keiningham & Perkins-Munn, 2003; Baumann, Burton, & Elliott, 2005; Cooil, et al., 2007; Lariviere, et al., 2011).

Insightful as the (1) customer satisfaction/loyalty and (2) customer loyalty/SOW views are, the structure and directional effect of these variables are not entirely clear. In managerial terms, do we need to consider all three variables simultaneously? If so, how do they interact with one another? A common view is that the longer you keep the customers, the higher will the impact be on SOW (Rust, 2002). Accordingly, the effectiveness of customer-centric marketing requires the enhancement of customer retention and SOW (Sheth, Sisodia, & Sharma, 2000; Rust, Lemon, & Zeithaml, 2004). With the costs associated with acquiring new customers estimated to be as much as five times the costs of customer retention efforts (Peters, 1988; Keaveney, 1995), the influence of retention has to be centrally featured when exploring the interaction among customer satisfaction/loyalty and/ or customer loyalty/SOW. While it is easier to spot customers potentially “lost for good” than others, this does not necessarily imply that these customers stop doing business with a particular supplier completely. Rather, they may merely change their spending pattern (Perkins-Munn et al., 2005).

We take a broader more philosophical and practical view, but importantly, one that is also sensitive to time in the treatment of these variables’ interactions, at a point in time and over time. We build on a recent qualitative research, add new knowledge to the literature and fill an important gap in SOW research by examining and positioning SOW as a moderating variable, and hence (a) an outcome of customer satisfaction but also (b) a intermediate step towards customer loyalty, as shown in Figure A. Accordingly, the purpose of this study is to consider the dynamics of SOW, not SOW per se. Consequently, this study is characterized by description and inductive interpretation. The research method needs to allow for generation of rich data (Wright, Lane, & Beamish, 1988) and an approach that is flexible enough to allow the researchers to “learn information that is independent of, or in contrast to, existing theory” (Sutton, 1997, p. 99). These are integrated with previous cross-sectional and more recent longitudinal findings of SOW (see Cooil et al, 2007; Lariviere et al, 2010). A qualitative research approach is thus adopted, underpinned by the model shown in Figure A.

Our proposed model suggests the importance of studying the impact of the relationship length and the number of business suppliers being used by the customer on future customer loyalty. Relationship length leads to the accumulation of “side bets” or switching barriers as perceived by clients (Becker, 1960; Jones, Mothersbaugh, & Beatty, 2000). A long-term client knows the service provider at a deeper level and may have less anxiety about the service performance. The number of business suppliers can also influence future loyalty, as past research has shown that the higher the number of suppliers used by a customer, the more likely they are to switch to other suppliers (Lam, Burton, & Lo, 2009).

Figure A: Proposed Model and Hypotheses



As shown in Figure A, both the length of relationship between the supplier and customer and the number of business suppliers are hypothesized to influence the extent of customer purchase in terms of SOW. SOW, in turn, is hypothesized to influence both customer switching intention and future spending (in terms of changes in SOW). For some of these relationships there are conflicting results in the literature: for example the length of relationship has been shown to positively impact on current usage of financial services (i.e. current SOW) (Kong & Maute, 2010; Sajtos & Kreis, 2010). However, other studies have found that longer relationships are not necessarily associated with larger SOW (Du, Kamakura, & Mela, 2007). Therefore before undertaking a quantitative analysis of the hypotheses shown in Figure A, we explore, using in-depth interviews, the factors underlying current SOW and future intentions for a sample of business customers.

Method

In order to study the dynamics of SOW, 18 depth interviews were conducted with small-to-medium enterprises (SMEs) in Hong Kong between June 2010 and December 2011, exploring their use of their existing bank/s. The business banking industry was selected for study as the industry is characterized by customers commonly having more than one service provider (Nielsen, Terry, & Trayler, 1998; Howorth, Peel, & Wilson, 2003). Data collection was approached using the principle of saturation, i.e. bringing new participants into the study until the data set was complete, as indicated by data replication or redundancy (Morse et al., 2002; Bowen, 2008). All interviewees were either the directors or general managers of their companies with the authority to choose the bank or banks used. Content analysis was used to analyse the interview information since it is suitable for systematically evaluating the symbolic content of all forms of recorded communications (Kolbe & Burnett, 1991).

Results

Table 1 shows demographic information for the 18 interviewees, and summarises their banking behaviour. The table also illustrates the high level of polygamous loyalty between banks: only two SMEs use only one bank, with the rest dividing their banking activity between two to six banks.

Table 1—Demographic information for the 18 SME respondents

<i>Items</i>		<i>Percentage and number of interviewees</i>	
Annual sales range (HK\$)	Less than 10M	23.3%	(6)
	10M-30M	50%	(9)
	Over 30M	16.7%	(3)
Number of employees	Less than 10	44.4%	(8)
	11-30	33.3%	(6)
	31-50	16.7%	(3)
	Over 50	5.6%	(1)
Number of servicing banks	One bank	11.1%	(2)
	2-3	61.1%	(11)
	4-5	22.2%	(4)
	Over 5	5.6%	(1)
Years of business	Less than 5 years	5.6%	(1)
	6-10	22.2%	(4)
	11-15	27.8%	(5)
	Over 15	44.4%	(8)
Length of time with main bank	Less than 5 years	16.7%	(3)
	5-10	33.3%	(6)
	11-15	33.3%	(6)
	Over 15	16.4%	(3)

Of the 16 SMEs that divided their usage between multiple banks, the majority (13) indicated that they would still replace their existing banks with alternatives if any new bank could offer better pricing and loan processing speeds. This willingness to switch existed despite most respondents having a considerably long history of relationship with their main bank (38.4% having a relationship with their main bank for between 5 and 10 years and 30% having a relationship of 11 years or more). 13 SMEs indicated that they have a stable relationship with their main bank and also a very good personal relationship (i.e. *guanxi* in Chinese) with the key personnel of the main bank (e.g. the account manager). However, 10 of these 13 SMEs reported that though having a positive relationship with their main bank would mean they would keep using the bank, they would not necessarily increase their future SOW, in some cases due to a perception that spreading business between banks provides flexibility and allows the business to capture efficiencies in the use of different banks. For example one respondent stated:

“We have a nearly 20-year relationship with our main bank. I have known the branch manager for more than 10 years and I am very satisfied with her service. She always provides me with the latest banking information relating to pricing as well as personal investment advice. She has asked me many times to shift more of our businesses from my other banks to her bank. I have told her I don’t want to do so. I think having more banks provides me more flexibility in doing business. Also, some banks perform better in a particular service in terms of pricing and efficiency.” (Interviewee H)

“I would use more of a bank’s telegraphic transfer service if any of them charged me less. It’s all about managing your costs effectively.” (Interviewee H)

Our results appear to show that the greater the number of banks being used by a SME, the smaller their current SOW with their main bank. This can be explained by the perceived product and service quality of other banks and the perceived risk of reliance on the main bank (e.g., on loans and credit) could be minimised. For other respondents, using more than one bank appeared to reduce risk, by allowing the business to access the services of another bank if a problem arose with the main bank:

“I’ve had an unpleasant experience with my main bank. My company has maintained a good credit record but when I requested a temporary increase in my loan facilities due to my sudden business expansion, they rejected my request. This taught me a lesson not to put all my eggs in one basket.” (Interviewee D)

“I know them [managers from my two banks] very well and they know us very well too. We’ve been doing business for over 10 years. They try their best to meet my business banking needs. Sometimes they would still charge us higher fees or higher interest, and so we might have to switch to using other banks that offer us lower prices.” (Interviewee K)

Even businesses with a relatively high usage of their main bank’s products and services (with a SOW of 50% or more) appeared to be willing to switch to other financial institutions or to change the usage of their main bank’s services if a better offer arose. For example two interviewees with respective SOW with their main banks of 70% and 60%, reported:

“I will use an additional bank if they can provide us with more efficient bank enquiry services such that we don’t have to wait one to two days for our enquiry to the bank...However, if our main bank can get back to us quicker (on our enquiries), I may consider continuing to use their services.” (Interviewee A)

“I just feel more secure using more banks. Maintaining several business relationships is a normal practice among lots of merchants in Hong Kong. If one bank can’t meet your needs at one time, you can easily switch to your other banks. I’ve had that experience. It gives me more time in dealing with my business. I don’t see why I need to concentrate on using only one bank’s services given this fact. I may consider using more banks in the near future.” (Interviewee N)

Only two interviewees out of 18 used only one bank. Those two interviewees identified their bank’s ability to accommodate their needs, perceived service quality, and a long-term relationship with the bank as the key determinants of remaining with them. Both interviewees indicated they had no intention of switching to a new bank, and their responses suggested some personal resistance to the perceived increased complexity of multiple bank relationships:

“I am a conservative merchant and I don’t bother having many relationships with many banks. It would be a headache for me to manage more than one business relationship.” (Interviewee L)

“This bank has been serving us very well over the past 15 years. We keep using this bank only because they can provide good service quality in terms of accommodating our banking needs and provide us flexibility in using the banking facilities. So the quality of service provided and its customization are basically everything.” (Interviewee O)

While previous research in consumer and business banking has tended to show that satisfaction is positively correlated with customer loyalty in terms of switching intentions (Ganesh, Arnold, & Reynolds, 2000; Madill et al., 2002; Leverin & Liljander, 2006), the majority of interviewees (13) indicated that they would not consider increasing their usage of their existing main bank, and/or would consider switching to other banks in spite of being currently satisfied with their main bank's services. For some, this appeared to be because of a perception that other banks offer comparable services. For example Interviewee F, who uses three banks and who has 50% of business with the main bank stated:

"I believe most banks in Hong Kong offer very similar products with a very high quality of customer service. Like us, we have been very satisfied with all our (three) banks. However, we will still choose other banks if they offer us better pricing and provide more efficient services to us." (Interviewee F)

Other interviewees stated that they were satisfied with the performance of their multiple banks, and were unlikely to change the proportion of business with any bank unless their business needs changed. For example Interviewee G, using two banks, but with 90% of SOW with one bank stated:

"Of course we are satisfied with our existing banks' services. Many times the manager from my main bank has come to me and asked if I could use more of their loan facilities. I have told them I don't need to borrow more money as my business has been quite stable." (Interviewee G)

Research implications and further research

The results suggest that length of relationship and satisfaction may contribute to increased SOW and customer loyalty, but both appear to be insufficient to achieve ongoing loyalty. For our sample, shared loyalty is the norm, and occurs despite high professed levels of loyalty with the main bank.

Previous research in B2C markets has reported that current SOW can predict customer behavioral loyalty, with loyal customers having the fewest number of banks, the highest likelihood of increasing business with their main bank, and the lowest probability of defection from that bank (Garland & Gendall, 2004). However our results suggest that even if customers have a higher SOW, this does not necessarily mean that they will increase the current usage of services from a supplier. These conflicting results highlight the need to further investigate how the number of suppliers may impact on both current and future SOW and customer loyalty, particularly in the B2B area, where research is limited.

This paper builds upon a recent stream of research that has proposed share of wallet (SOW) rather than customer satisfaction and/or customer loyalty as an important strategic objective for managers. As long as business suppliers retain their customers, opportunities exist to increase their customers' SOW. Treating SOW as a moderating variable, this paper contributes to existing literature by focusing on the dynamic interaction between retention and SOW, and considers loyalty as the outcome of such an interaction. Our proposed model illustrates how, through a mix of relational and marketing-led initiatives, banks could increase their SOW, via strategies designed to increase customer retention, SOW and loyalty. Future research is planned to extend these results by a larger empirical study and to further test the six propositions.

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AN EVENT-STRUCTURE-PROCESS ANALYSIS OF INTERACTIONS AND ACTORS' ROLES IN UNSTABLE BUSINESS NETWORKS

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Introduction

An important aspect related to network dynamics is how actors search for stability in their relationships and networks (Holmen and Pedersen, 2002; Sutton-Brady, 2008). One of the reasons for this is that in unstable networks, there is ambiguity regarding each actor's role (Forsgren and Johanson, 1992), resulting in conflict between actors (Ford et al., 2002; Wilkinson and Young, 2002). However, many networks are characterized by at least phases of instability in which the 'rules-of-the-game' seem to change drastically. The aim of this paper is therefore to understand the processes through which actors make sense of, and interact in such *unstable networks*. A particular emphasis relates to the issues of coping with the vagueness of their roles and the tension with other actors in such unstable environments.

Drawing on social exchange theory and the interaction model of businesses on the one hand (Ford et al., 2008), and role theory on the other (Anderson et al., 1994, 1998; Huemer et al., 2004), we undertake a network analysis as a specific and comprehensive case study (Axelsson and Easton, 1992), and empirically capture interaction characteristics through a time and process perspective. As we are primarily interested in the *interaction processes* underlying unstable networks, this will be done via an Event-Structure Analysis (ESA) (Griffin, 1993).

Background

Stability and change have been found to coexist in business networks (Dubois et al., 2003; Hakansson and Snehota 1995). While relationships between actors in a business network have been described as long-term and stable (Ford, 1978; Hakansson, 1982), research shows that the duration of a relationship is not the only determinant of stability (Gadde and Mattson, 1987). For example, changes in actors' positions as a consequence of other actors joining or leaving the network (Gadde and Mattson, 1987), irregularities in the value of trade relationships (Proenca and Castro, 2004), or changes in technology and accessibility to alternative suppliers (Holmen and Pedersen, 2002) may lead to instability in relationships. Such changes are related to indirect relationships, i.e. aspects which may not be linked directly to a focal company, but which are impacting on it via its embeddedness within a wider business network. Business networks are therefore recognised as dynamic structures (Anderson et al., 1994; Easton and Araujo, 1994; Halinen and Tornross, 2010), mainly as a result of the inherent connectedness between actors in time and space (Easton, 1993). Uncovering the underlying processes and related sense-making and coping mechanisms by actors allows for a multi-level understanding of such dynamics, including the marketing activities in terms of networking, i.e. affecting their network position via strategic activities (Ford et al., 2003). However, different levels of dynamics (as well as processes) can be distinguished by focussing on actors, relationships, and the overall network, as well as the translation processes between these levels.

Methodology and Research Design

Based on a comprehensive case-study research approach, we analyse the UK pharmaceutical network in its development from c. 2000 onwards. We used multiple semi-structured face-to-face interviews with key informants from all main actors in the network. A snow-balling method of sampling was used until saturation was reached. Content analysis identified themes and linkages between themes. Based on an abductive approach (i.e. a recursive juxtaposition of theoretical concepts focusing on sense-making, processes and activities, and actor roles, as well as empirical findings), different ‘currents’ of developments in the UK pharmaceutical distribution network are described: layered by actor (individual organization; business relationship; overall network) and over time (from the year 2000 onward) an Event Structure Analysis links certain processes to outcomes which shape further processes (Griffin 1993; Heise, 1991).

Initial Results and Discussion

Distribution of medicines to the UK economy is both a significant and lucrative market, in which sales of medicines to the National Health Service (NHS) are approximated to be worth over £10bn a year. Historically famed as an efficient and flexible network that delivered drugs to patients in a timely manner; in current times, actors are now at the mercy of environmental uncertainty and multi-factorial change (Achrol and Stern, 1998, Bourgeois, 1980). The main players in this network are pharmacies (retailers), wholesalers, manufacturers (or pharmaceutical companies), policy-makers and the associations that represent each of these groups of actors. Recently the interactions within the network have been affected by a significant level of regulatory transformation.

This includes unprecedented product shortages faced by pharmacies and the continuing weakness of the pound that has dropped UK drug prices to amongst the lowest in Europe. The UK medicine market is irrevocably linked to the Euro exchange rate and the value of the pound. EU economics therefore dictate when patients are able to receive medicines. A consequence of this is a significant increase in parallel exports of medicines, which acts as a key contributor to the growing lack of availability of drugs in the country. The parallel trading that traditionally characterises this network has reversed: whilst in the past medicine-related wholesalers were heavily involved in importing activities, currently a strong export of medicines is taking place.

Groups of actors are now making monies by exporting back out of the UK, drugs that have been imported or produced in the UK and intended initially for the use of NHS patients. In connection with this, the traditional roles of actors are changing as other actors engage in more opportunistic tendencies. A consideration for policy makers is therefore to be more mindful of ex-post opportunism as actors seek different prospects from their new network positions (Brown et al., 2000).

Actors in the role of manufacturers have reacted to these changes in the network by imposing quota systems (a coping mechanism), which are contributing to the delays in supply at a local level. Feedback from actors in the role of pharmacists indicates that these imposed quotas are preventing them from supplying necessary drugs to patients. Additionally, UK pharmacies holding a surplus stock of specific medicines are now getting involved in local trading with other pharmacies. This is to prevent other pharmacies from suffering shortages of medicines. Moreover, wholesalers have a legal (and ethical) duty to supply medicines to UK

pharmacies, but have to simultaneously deal with the imposed manufacturer quotas and the attractive option of exporting to other markets with potentially higher returns.

Furthermore, there is a strong concern amongst the main players within this network that this shortage of medicine may facilitate the entry of counterfeited medicines into the country through parallel trading. It has recently emerged that sophisticated international networks of individuals, are engaging in the distribution and supply of counterfeit medicines in the UK, which has developed into a distribution hub for counterfeit medicines (Woods, 2007). As a result of a combination of the above factors, certain actors are now playing a more important role in the network than before (e.g. UK Department of Health, foreign importers), i.e. their network position has changed.

This strong and recognised instability in the network is causing considerable tension between the main actors of the UK pharmaceutical network, with the result that some are now joining forces to prevent or counteract the current fragility of the network, as well as the medicine shortage. There is also a high level of uncertainty regarding what each actor can or “should” do. By analysing the UK pharmaceutical network as a case and by exploring the processes of interactions in this unstable network, our paper contributes to the growing body of literature on network dynamics. Through a better understanding of the interaction processes within unstable networks, we aim to capture the importance of temporality, stability, as well as various process issues of interactions in network studies. Moreover, we provide practitioners and policy-makers with a different way of understanding what is taking place in the UK pharmaceutical network, thereby enhancing their ability to implement actions to guarantee patients’ supply of medicines.

Keywords:

Stability and Change, Event Structure Analysis, Business Networks, Interaction Process, Temporality, Role Theory, Environmental Uncertainty; UK Pharmaceutical Network

CUSTOMER PORTFOLIOS IN USE: ISSUES OF IMPLEMENTATION

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Abstract

This paper focuses on how customer portfolio models actually are used. Although customer portfolios are widely used, most articles focus on how to identify portfolios models and how to allocate resources in order to develop a balanced customer structure, and the critical aspect of the way in which portfolios are used in practice is largely ignored. Few authors have considered how firms transform and implement the aims deducted from a portfolio model and what prevented firms from action based on their customer portfolios. Most portfolio models are one-sided, they take the perspective of the other partner into account only to a limited extent, if at all, and they often assume that companies can act independently of their relationships. However, interdependencies between buyers and sellers often exist, and this interdependency can prevent a firm from freely choosing which new customer relationships it wants to develop and which existing customer relationships it wants to moderate or even discard. The question of how a portfolio model can be used as a part of orchestrating within a firm and between firms is left out of most portfolio models. To address this subject, orchestration within and between firms is discussed and the issue of communication and legitimising is addressed. The paper contributes by setting up a framework that helps to identify some of the weaknesses of the existing models and to improve the understanding of how customer portfolio models can actually be applied, seen from a relational perspective.

Introduction

Handling customers and their different needs is a central issue. In literature (Anderson and Narus 2001; Terho and Halinen 2012; Turnbull, 1990) portfolio models are often a recommended tool for handling customers in accordance with a focal firms strategic aims and prioritisations. As claimed by Piercy (2010, p. 350) managing the interface between a firm and its customers is a central strategic task that requires close attention by firm management. Customers are assets demanding careful attention from the whole organisation, in which salespeople play an entrusted role in nursing and developing the customers (Ingram et al. 2002). Dealing strategically with customers holds internal and external aspects for the sales organisation (Johnson and Selnes 2004; Piercy and Lane 2009). Externally, aspects are related to understanding the mainspring of the market and internally it relates to aligning the sales organisation to the market potential. Markets are continually shaped and re-shaped through the activities of the firm, its competitors and other actors that open new market possibilities.

In the process of handling customers as assets in this continually changing environment prioritisation and resource allocation based on the firm's strategic aims becomes important (Dudley and Narayanndas 2006; Piercy 2010). Handling the decision of whether to invest or not is dealt with through customer portfolios (Johnson and Selnes 2004; Terho and Halinen 2007). Customer portfolios denote one of the key levels at which business markets are managed (Möller and Halinen 2000; Terho and Halinen 2012; Wilke and Ritter 2006). A firm's customer portfolio can provide an overview of the various customer relationships of the firm, making comparisons, prioritising and allocating resources possible (Freytag and Mols 2001; Turnbull 1990). In other words, customer portfolios present a possibility to balance the implementation of strategic aims of the firm with composition of its customer base. Although knowledge of the value of portfolios and a number of portfolio models have been developed over time (e.g. Campbell and Cunningham 1983 and Zolkiewski and Turnbull 2002), little seems to be known on how portfolios can be useful for the alignment of the sales organisation based on prioritisations and allocations made in practice (Leek et al, 2002, Terho and Halinen 2007). So far the implementation of the customer models has rarely been mentioned in academic literature (Terho and Halinen 2007). As a first step to provide insight into the way in which customer portfolios can be used and what may prevent firms from implementing customer portfolio models, we will present a conceptual framework revealing the major issues at stake in the implementation process of customer portfolios.

The characteristic of a firm's portfolio commonly reflects the context in which the firm operates and the nature of its customer relationships (Terho and Halinen 2012). The relationships of firms with their customers differ in disposition, as relationships may be more or less close (Anderson and Narus 2001; Brodie et al. 1997; Campbell 1985; Day 2000; Grönroos 1993; Håkansson et al. 2009; Clarke and Freytag 2012). In a qualitative study Terho and Halinen (2012) found that firm's customer portfolios vary in terms of structural and relational complexity. They identified that firms' portfolios focused either on partnerships, dynamic network or broad market-like portfolios, emphasising that this raises considerably different drivers and challenges for customer relationship management. The assumption that the exchange conditions of different types of customer portfolios tend to raise very diverse challenges for management is also proposed by other authors e.g. (Johnson and Selnes 2004; Möller and Halinen 1999).

Alignment in accordance with prioritisation and allocation of resources should reflect the nature of the customer relationships that are embodied in the customer portfolio. It should be reflected whether the firm's portfolio is characterised by loosely coupled relationships or more tight relationships. In case of more tight relationships with customers a firm will be able to act less independently and will have to capture and understand more carefully how customers will react to changes. Alignments in accordance with the portfolio planning will therefore not only be a one-sided affair in which the firm's own sales organisation has to be aligned, on the contrary, the strategic aims and prioritisations of the customers in the portfolio also need to be taken into account. Based on this our research questions are:

1. What are the important issues in implementing customer portfolios in close relationships?
2. How can the focal firm address these issues?

The paper is organised as follows: First of all, we briefly review relationship and network in relation to portfolios, and factors affecting the implementation of a portfolio are discussed. After this we introduce a model of the dyadic actions that can be taken based on buyer seller relationships, and the strategic consideration of the different situations are discussed and finally, we present a conclusion.

Relationship and network based portfolios

When a firm holds close relationships to customers it can influence the portfolio of these customers, but it cannot unilaterally orchestrate or manage relationships and make prioritisations as interdependency between the actors exists (Håkansson and Ford 2002). The outcome of a relationship relies on prioritisations and allocations by both actors and looking at the potential of a relationship as something that a firm can control may be a too restricted perspective in the business arena (Ritter 2007; Campbell 1985). The core idea of a portfolio is to guide the process of building, developing, maintaining, changing, and terminating relationships (Turnbull 1990). A portfolio should help guide, manage, effectively prioritise, and allocate a firm's limited resources to ensure the best collection of customer relationships (Turnbull 1990). A firm must manage a portfolio of relationships as a totality, according to the customers' respective contributions to the firm's short- and long-term success (Ford et al. 2002:99). The actual expected value and cost of each relationship may differ over time (Turnbull 1990; Turnbull and Zolkiewski 1997). It is crucial for a firm to understand how and when to influence the relationship.

Firms are said to enter into close or cooperative relationships due to expected higher payoffs. These payoffs may occur as a result of adaption of resources, activities and/or actor behaviour. Close relationships are based on the premises that the involved partners trust in each other's commitment to the relationship, and a potentially higher pay-off can be realized. As the shaping process of the market conditions continuously changes the expected higher payoff, the involvement in a close relationship can be changed or vanish. As a consequence one or both firms may want to allocate resources differently in favour of other customers or suppliers. However, the firm may be prevented from doing this as being in close relationships holds a number of burdens, which may influence at a later point of time the advantages of a relationship. Håkansson and Snehota (1998) described the "dark side" of relationships in 5 dimensions:

Unruliness – the loss of control, some of the control is given to others and the firm will become dependent on the decisions of the partner.

Undeterminedness – the uncertain bet, the focal firm does not know the future potential of the relationship and the expectations by different actors may vary greatly.

Energy – resource demanding, relationships binds resources that can only be invested once.

Exclusiveness – the preclusion of others, the choice of one partner usually excludes the possible choice of other partners, as the first partner may feel insecure about the intentions of other partners. Stickiness – you never know when and from whom there will be requests, and cooperating in a close relationship you will seek to get the highest possible payoff.

These five dimensions of close relationships may hamper the possibility to act in accordance with a focal firm's sales portfolio. On the other hand, a firm must continually attract and build relationships with more or less valuable customers, expecting that new customers may grow in the long run (Johnson and Selnes 2004). In other words, new customers provide a potential, but at the same time represent an insecure bet. On the other side, a focal firm might be stuck with customers from whom it is difficult to disengage, resulting in an expected low payoff in the future. A strategic question is therefore to what degree a focal firm is embedded in a certain net of relationships and to what degree is it possible to change the net and at what speed? When a firm has engaged with a certain customer and this customer is important for the development of the focal firm, it can be difficult to take in new customers. These new customers may be considered competitors by the present customer and as a threat directly (less potential sales) or indirectly (spread of knowledge). It may also be the expectation of the current customer that the two firms align strategies in order to position the firms stronger in the market, and allowing a new customer may weaken this positioning. In addition, taking in new customers may be seen as a move away from the relationship as fewer investments may be made. This will cause the relationship with the supplier to become less attractive in future. Handling new customers with similar needs may be seen as a threat by the present customer and lead to less attention towards the relationship and finally cause solutions to be less individualized. One-of-kind then becomes One-among-many. Customer reactions may be harsh and even cause the customer (to threaten) to leave the relationship.

Such potential customer reactions may not be openly revealed in a relationship but need to be imagined or calculated in a scenario. Relationships between firms are based on relationships among a number of actors at different levels of the firms. It is therefore a special challenge to obtain all necessary information in order to make a valid portfolio analysis. Various actors and not only those directly involved in sales will be in contact and be in possession of valid information concerning the nature, content, burdens and developments of a relationship. Managing relationships from a relationship perspective demands a solid market information system (Clarke and Freytag 2012). At the same time it requires an understanding of the internal processes of the firm and how various actors are in contact with customer, how data for the market information system are provided and how the firm should act in accordance strategic aims, prioritisations and resource allocations.

In other words, sales portfolios need valid information, but at the same build on the premises that it is possible to align internally and externally. External alignment concerns the understanding of market possibilities and the burdens in which relationships embed firms. Internal alignment concerns the understanding of the various aspects of operations in-side the focal firm and in particular what is at stake for various people in the relationships. In the following we will concentrate on the challenges in achieving internal alignment.

Factors influencing the implementation of a portfolio

Resources should be allocated according to the strategic aims of the focal firm. However, in order to meet the strategic aims firms need to prioritise and allocate work on a day to day basis (Corcoran et al. 1995). The management of the customer portfolio is a dynamic and on-going process to be conducted on a daily basis by actors interacting within the individual relationships, not an event taking place at one point in time. In other words, relationship portfolios are not selected as such but developed over time in the interaction with customers (Theo 2008, 63). The sales organisation is important in the process of implementing the portfolio and contributes to the process by creating and delivering customer value. Attention must be paid to aligning the structures and processes around customer strategy (Piercy 2010). A relationship between a firm and a customer may have multiple interfaces, as the customer may have access to several actors or departments within the firm; thereby the contact is not limited to the sales people of the firm (Wotruba, 1996, Cunningham and Homse, 1986). In this sense many individual actors of the firm are involved in the customer interaction and it may therefore be difficult to control the allocation of resources. It is likely that handling of relationships will vary from customer to customer. In this paper we look at the perception of the sales organisation as playing a critical strategic role in the interface between the customer and the firm and thus critical in the implementation and strategic orchestration of a firm's customer portfolio (Lane and Piercy 2004; Piercy 2010) although, in such situations the sales organisation will seek to integrate the efforts of the complete firm towards the customer (Wotruba 1996).

Daily operations have to be orchestrated. We use the term orchestration instead of managing as we see the task of management as envisioning and offering guidance instead of controlling means of execution. Firms may try force decisions through, however this may cause actions that will inflict the relationship negatively and at the end lead to a lower payoff from the relationship with a particular customer. Therefore sales management must understand the rules of legitimate behaviour in the relationship and how it may be able to influence the partner firm in a certain direction (Ritter & Ford, 2004).

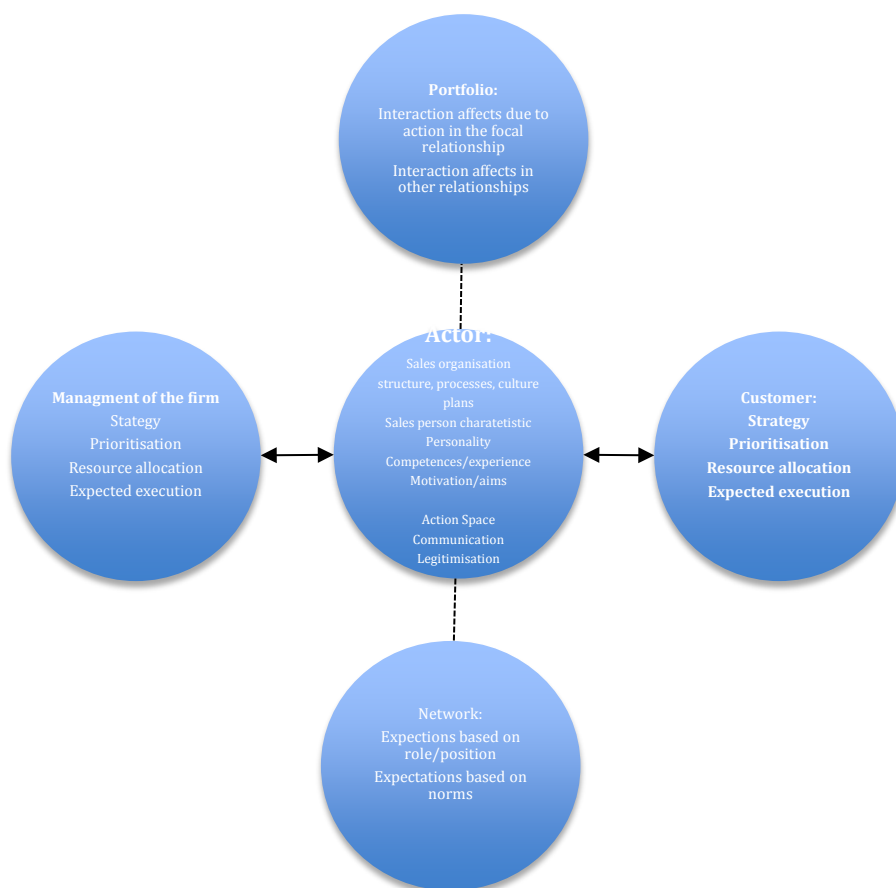
How to orchestrate is a matter of influencing the actors of the firm, the single relationship, the total portfolio of relationships, and the network in which the firm is embedded. The way in which behaviours can be influenced is formed on the basis of perceptions and interpretations of the past and the present situation (Håkansson et al. 2009). At the same time, influencing behaviours will affect future perceptions and interpretations.

Furthermore, the sales organisation is affected by relationships established with the customers. Depending on the stage of the relationship, the customer will have expectations to the actions of the actor, as bonds between two counterparts are created over time (Johansen, 1989, p. 73). Sales persons may have to form, reinforce or modify the customer relationship through exchange with actors in a customer relationship according to the prioritisation in the firm's portfolio.

However, the exchange is not one-sided as the customer made prioritisations and allocated resources in accordance with his strategy and will want to influence the exchange in a certain direction. The way in which the negotiation/exchange takes place will depend on the prioritisations by both parties.

The sales organisation and sales people act according to the strategies and guidelines conveyed to them by management regarding the relationship in question. This may potentially cause some dilemmas or problems as the sales organisation and sales people cannot focus entirely on one customer at a time, but need to take other factors into account. When firms have more than one customer, the entire portfolio of customers must be considered. Acting towards one customer may have an effect on other customers (see figure 1). In addition the general position the firm has in the network will have to be taken into account, when prioritisation is made within and across relationships. In other words a number of trade-offs between network position, portfolio planning, relationship management and the strategic aims and prioritisations exists. The trade-off gains further momentum because no single actor can be said to be in charge. A number of actors at various levels in the selling firm are involved in the decision making process. Because of the two-sided nature of the process a similar process can be said to take place in the buying firm.

Figure 1: Factors influencing the actors' action



A firm's effort to change a relation, for instance to further develop or lower its activity and resource commitment to the relationship, may cause a situation in which the parties no longer share mutual interests and change the way in which they interact, finally causing a conflict which puts a burden on the relationship. The change in priority may put pressure on the actor, who has to communicate and implement the changes. As a sales person in a relationship can become part of a quasi-organisation, into which he is socialized. The sales person can be put in a dilemma between the consequences of a prioritisation made by his firm and the consequences of decisions conveyed to the customer; thus the sales person can be placed in a loyalty dilemma or loyalty conflict. In order to avoid conflicts the firm must work with its understanding of the relationship. Two important factors are communication and legitimisation. Legitimacy constitutes rules that establish which influencing behaviours are seen as fair and right, and which are not (Kumar and Das, 2007, Provan, Kenis, and Human (2008). Legitimacy is central to the development of systems such as organisations and social networks (Human and Provan 2000). Communication is the vehicle by which behaviours are made known within the institution, especially with the purpose of solving disputes and aligning perceptions and expectations communication pivotal (Moorman et al. 1993). Legitimacy and communication may therefore be seen as important aspects of the relationship, internally as well as externally (Mohr et al. 1996). The aims of the cooperation, the available capabilities, the understanding of the potential for the relationship and the degree and urgency of changes need to be communicated both internally and externally.

When the portfolio planning is to be implemented in daily life, communication becomes important in order to avoid misunderstandings. The acts of communication have been described as the thread that holds any social organisation together, if not the skeleton that determines its structure (Pool, 1973, p. 3) and are equally important in relationships. Communication is essential in setting priorities and coordinating activities to accomplish the objectives of each party (Mohr, Fisher, and Nevin 1996).

Internally in the organisation communication is important for employees to understand the prioritisations and how to pursue them. Joshi and Randal (2001), found that effective communication has a significant impact on a sales persons performance and customer orientation. However, firms will have to communicate with many actors at different levels and not only internally.

Over time certain rules (legitimacy) for interaction will develop. The communication pattern and legitimacy within the relationship will be affected by other relationships in the network and the network will be affected by individual relationships (Kumar and Das 2007; Provan et al. 2008).

When changes need to be made, the partners have to renegotiate their mutual interests and needs and communication becomes an important part of the negotiation process.

Effective and efficient communication can help create or retain trust and commitment and reduce uncertainty between the parties. As an example the communication frequency could increase for a period of time (Håkansson et al, 2009). However, communication can also be the cause of conflicts.

Communication includes a wide range of aspects of interest for the understanding of interaction in relationships. At a formal level communication concerns technical, economical, legal, time and knowledge issues. At an informal level communication also includes social issues and the way in which the actors deal with each other. Communication includes not only oral or written information, but also actions taken by the actors in a relationship. Actions may sometimes speak even louder than words!

Relationships hold the obligation and the necessity to aim at fulfilling own objectives and allowing other actors to do the same. Therefore common grounds will have to be developed and shared. It is not easy to handle legitimate claims if for example a firm wants to change the importance of the relationship and reduce its activities and resources. Offerings and relationships come at a cost for both parties involved. The relationship and the offering must be seen as legitimate by both firms in the relationship. If the relationship and the offer is not seen as fair, it creates tension in the relationship. In other words, the organising form and the give and gets must be seen as legitimate. Cornelissen (2004) has framed the problem of legitimacy in the following manner: "... persons and groups with legitimate interests in the organisation are recognized and accounted for, and these individuals and groups all need to be considered, addressed and/or accommodated by the organisation to bolster its financial performance and secure continued acceptance of its operations" (p. 59). Working in a relationship as a salesperson or a buyer brings the problems of legitimacy to the point. Actors as salesmen and buyers are employed by one organisation. At the same time they work within a quasi-organisation, i.e. the relationship. When these actors try to get the relationship to run as smoothly as possible, they run the risk of at least partly neglecting some of the expectations to the outcome of the relationship by their own organisation. Optimizing the content of one organisation may be at the cost of the other, which may create pressure on the salesman or the buyer to align the objectives to the organisation. Still these may be troublesome as aligning to one's own organisation may be regarded as illegitimate behaviour in the relationship. Partner based relationships will therefore often hold pressure from the organisation and from the relationship, and meeting the wants of both parties at the same time can be difficult if not impossible.

Changes in the relationships, e.g. if a firm wants to reduce its activities and resource engagement or even terminate the relationship, can produce legitimate claims and the potential exercise of a power sanction from the customers, as the wish to terminate the relationship is not shared with the partner. In other situations both parties might want to exit the relationships but have to cooperate due to high interdependency (Håkansson and Snehota 1998).

Manoeuvring in relationships independencies exists requires an understanding of the nature or tune of the relationship and its orchestration. If orchestration is seen more like a jazz session and not like conducting classical music, making portfolio planning on a day-to-day basis work is very much about understanding the effects, possibilities and limits of empowerment (Bowen and Lawler 1992). On one hand, empowering employees may lead to more engagement and more well addressed offerings. On the other hand, training costs may be higher and customized offerings may have a number of costs. In other words if the tasks of prioritisation and resource allocation should be carried out, there is a need for understanding how communication and legitimisation and socialisation processes within and between partners may take place and what space for manoeuvring is available.

How to implement the portfolio

As pointed out at the beginning of this paper, the aim is not to discuss and compare portfolio models. Our aim is to gain a better understanding as to how portfolio models actually come into play and what constitutes the challenges of using a portfolio model under particular circumstances, e.g. when firms have close relationships with customers. We have made the point that it concerns not only what Piercy (2010, p.256) called “shifting sales management from “command and control” to coaching and facilitation” with respect to the salespeople in the selling firm, it concerns doing the same towards the customer with whom the firm holds a close relationship.

Terho and Halinen (2007, p. 729) pointed out that successful implementation of portfolios is the “managers’ commitment to customer relationship management“. This indicates that making use of portfolio models is not a one-sided affair, if business performance should be improved.

Understanding what relationship management in portfolio planning means understanding the generic choices that can be made based on portfolio planning: develop, stabilize, downgrade or exit. In other words, a firm’s strategic choice based on portfolio planning can be to downgrade relationships with customers that are no longer profitable or have become too expensive or even exit these relationships. And to grow relationships in which the customer has become strategically important or profitable. Alternatively, the firm can choose to stabilize a relationship that serves well as it is. As described above a firm cannot make the decision on its own. Customers make similar considerations and prioritisations as selling firms. Therefore, considerations and prioritisations will at least to some extent be aligned. If some kind of alignment is not achieved, conflicts will potentially occur. A first step to understand the two sides of a relationship is to admit that at a generic level the customer can potentially aim at developing, stabilising, downgrading or leaving a relationship (see figure 2).

Figure 2: Strategies based on portfolio

	Grow relationship	Stabilise relationship	Downgrade relationship	Exit relationship
Grow relationship	Corresponding aims	Minor gap	Substantial gap	Threatening gap
Stabilise relationship	Minor gap	Corresponding aims	Minor gap	Threatening gap
Downgrade relationship	Substantial gap	Minor gap	Corresponding aims	Substantial gap
Exit relationship	Threatening gap	Threatening gap	Substantial gap	Corresponding aims

Seller and buyer may have corresponding aims for the relationship or minor or major gaps in the aims may exist. How severe the gaps are depends on the importance of the customer, how closely related the partners are and what rights the customer can exercise over the firm and even prevent it from fulfilling its goals, causing the relationship to become a burden.

When seller and buyer have similar aims for a relationship, the challenges of alignment should not be complicated. Although the aim is the same, the process may be important, in particular when changes are involved the timing can become critical. Additionally, the fact that a number of different levels and departments in both organisations are involved emphasizes the importance of orchestrating the process internally in the two organisations and across the organisations. Understanding the communication and legitimisation issues in the process of change is central. Violation of communication or behaviour patterns may create unnecessary tension in a process in which the aim of both parties is the same.

When the parties do not have similar aims for the relationship, this can be seen as a game changing strategy process that we will look into in the following section.

Game changing strategy

When firms do not have similar aims and want to prioritise differently, a potential conflict is apparent. A first step is to analyse to what degree differences in aims exists (see figure 2). Such difference in aims may not be obvious to the counterpart, as seller and buyer do not always communicate their aims to each other directly and openly. Monitoring the relationship is therefore of significant importance (Clarke and Freytag 2012). Still partners in close relationships may want to disguise their intentions, making the monitoring process intricate, and hiding the real aims can become a treat to a relationship. When aims are revealed, the process to a great extent becomes the one of negotiation, determined by a number of factors. First of all, relationships vary in importance. In important relationships firms may respond more openly to make sure that the relationship will continue, whereas in less important relationships firms may be less willing to give in (Fisher et al.,

2011). Secondly, the handling of a particular relationship will be considered in connection to other relationships (Alajoutsijärvi et al., 2000). When other relationships are potentially affected by the handling of one relationship, this will tend to be taken into account. For example leaving a relationship may damage the reputation of the firm and make the firm try to stay in a relation, although exit appears to be the obvious choice. Thirdly, the speed in which changes may be made or an exit made from a relationship is another dimension in the process of handling different aims in a particular relationship. Leaving very fast can hurt a partner significantly and should therefore be taken into account. A slow withdrawal from a relationship may therefore be a better option, as it will give the partner time to adjust (Alajoutsijärvi et al., 2000). Fourthly, handling relationships holds a question of being more self-oriented than oriented towards others. Being very self-oriented may harm possible future business options, but being very oriented towards others can also be damaging.

In other words, handling portfolios from a two-sided perspective builds on four major factors:

- the importance of the relationship
- the connectivity of relationships
- the timing in the changing process
- the degree of orientation towards oneself or others

As handling relationships can involve a number of actors internally in the selling organisation, it is important to understand the orchestration process. A tool for handling relationships is the composition of the sales force (Wotruba, 1996). A firm may compose its sales force to represent its prioritisation of customers. To customers that value long-term relationships and are given high priority by the focal firm, it should allocate salespersons that have concerns for the customers and focus on building long-term relationships rather than salespeople that are mainly concerned with achieving sales (Usunier 1996). As opposed to this the company may want to downgrade a relationship and will change the salesperson to one who is good at hard selling and focuses on the interest of the selling firm rather than the interest of the customers (Lewicki et al., 2010, pp. 422). This is, however, not without complications, as the relationships are often closely connected to the salesperson and the relationship can be damaged by changing the salesperson (Piercy 2010). In some cases a firm needs to hire, train, and continually motivate employees to build relationships.

Another critical aspect of handling customers in accordance with the aims of the selling firm only is that the customer also has various ways of acting. A customer with multiple interfaces to a firm has access to several actors or departments of the selling company and is not limited to the use of one sales person. Therefore it becomes difficult for the firm to control the allocation of resources and the customers that are expected to be downgraded. The above discussion highlights the importance of understanding what the customer sees as legitimate behaviour and what kind of rights the customer can exercise over the firm. This will influence what kind of burden the relationship may become for the firm in the short and long run.

Conclusion

Handling customer portfolios implies a number of issues. First of all, it is important to understand the nature of a relationship and how it may inflict on a firm's possibilities to act. A relationship means that two parties have aims, make prioritisations and want to allocate resource and operate. This will potentially lead to a conflict when the aims and prioritisations of the other part are not taken into consideration. It is vital to understand what is seen as legitimate actions by the other firm and at the same time to understand what kind of pressure conflicting aims and prioritisations will have on the organisation. Communicating internally as well as externally to obtain understanding of the situation and to indicate own aims is essential in the implementation of the portfolio. In the process of working towards the aims and prioritisations in the portfolio the sales organisation and sales force is of focal interest. In the process of handling customers the sales organisation and the sales force has to balance the aims of own organisation and the aims of the customer. The balancing process holds a number of issues: to understand the importance of the customer and to act in accordance with this; to understand the connectivity of relationships; to understand the importance of timing; to understand which self-interest the firm has. On the whole, orchestration of customer portfolios deals with the alignment of the strategic aims and prioritisations revealed in the portfolio, the organisation of the sales force and the customer's aims and prioritisations.

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B2B MARKETING STRATEGIES AMONGST SUPPLIER SMEs IN THE SWISS WATCH INDUSTRY

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Summary

Most industries have been losing market share due to the recent world financial crisis. Even though the marketing strategies of watch brands are constantly studied by B2C marketers, it is difficult to find a research about their suppliers and the way they are trying to improve their position in the B2B value chain. This research aims to highlight the way industrial suppliers interact with these well-known brands and what marketing strategy they are implementing. Exploratory interviews have now been carried out in the region of *Arc Jurassien* (at the border of France and Switzerland). The findings presented in this paper include a preliminary analysis of current marketing practices of selected supplying SMEs (n=14) in the Swiss watch industry. In conclusion managerial advice and axes for further research are presented.

Keywords: marketing strategy, relationships, watch industry, supplier, B2B

Extended abstract

1. Introduction and research question

During the last century, the watch making industry has developed itself in rhythm with the technological improvements brought to the product (mechanical watch, chronograph, quartz watch, automatic watch and different modules of “complications”). Simultaneously, the manufacturing and the structure of the industry have evolved as well.

The crisis of the '70, due to the development of cheaper quartz movements and to the pressure of the Japanese and South-Asian competition has lead to a reorganisation of this industry. More than 90'000 persons were employed in the watch making industry in 1970, and this figure dropped to 35'000 in 1984, then climbed up presently to 50'000 (FHS, 2012) This fact is not due to a phenomenon of relocation of the manufacturers, because the image and the positioning of the watch industry is deeply linked to the origin of production (certificate Swiss Made, “poinçon de Besançon”, “poinçon de Genève”, “label qualité Fleurier”).

Nowadays, the worldwide economic environment, the technological innovations and the aggressiveness of the Asian competition continue to transform the watch industry of the *Arc Jurassien* and keep the pressure high on the financial results of the watch brands whose suppliers must absorb the inventory fluctuations (Oberli, 2011) and need of production capacity.

The year 2012 was the absolute record for the Swiss watch industry, during which more than 30 million of pieces were produced, mainly high-end range, for a value ex-factory of more than 20 billion Euros (FHS, 2012).

All these elements have provoked an integration of the production and the implementation of different strategies for the watch brands (major groups and independent brands) as well as for their suppliers. Whereas the marketing strategies of brands are regularly analysed, the specialised suppliers, whose bargaining power is limited (Porter, 1986), are kept in the shade or simply ignored.

This article explores the strategic environment of watch making suppliers through the requirements of the watch brands and the kind of relationships they have together. We put forward the hypothesis that the bargaining power and flexibility of suppliers is limited as opposed to their clients, the watch brands. Our research question is: “how do suppliers in the watch industry manage their relationships with the watch brands in a proactive and innovative manner not to simply play a passive role of subcontractants”?

We will describe the network in which these companies, mainly SMEs employing less than 150 people, evolve and if they have flexibility or not. After a brief review of key articles in B2B marketing, we will present the preliminary findings of a qualitative field research. The analysis of this information will lead us to evoke a couple of managerial recommendations and tracks of further research.

2. Literature review (selected)

Supplying and subcontracting are topics not often analysed in the B2B literature, with the exception of a limited number of industrial marketing references including Michel, Salle & Val-la (2000), Dayan (2002), and Malaval & Benaroya (2009). Researchers in industrial economy propose typologies that allow for the description of relationships with suppliers, as Patchell (1993) and Holmes (1986) who identify three types of supplying: capacity production, specialisation subcontracting and supplier subcontracting.

For manufacturing of complex products (up to 750 components to make a complex mechanical watch), the externalisation of selected competencies is a solution to stay competitive and follow a strategy of keeping lower production costs (Tzokas & al., 2000; Shy & Stenbacka, 2005). Tajeddini & Trueman (2008) emphasise the importance of the suppliers' role in the performance of brands for which it is key to rapidly bring value to the end customer, following a technical development of the product as well as of production technologies.

Bensaou & Anderson (1999), in the car manufacturing sector, argue about the concepts of dependence, opportunism, adaptation, and implication in the commercial relationships through the analysis of the motivation of car manufacturers to make specific investments with a supplier. These elements refer to the concept of flexibility in the relationships supplier-client recently developed in marketing, in particular by Donada & Dostaller (2005) and Ivens & Mayrhofer (2009).

For approximately two decades, much research has been done to better understand the supplier-client relationship. Donada & Nogatchewsky (2005) identify two tracks of research: one from the transactional approaches (social exchange, power and dependence), and the other from the interactive approaches (with a logic of networking and relationship marketing), as analysed by Ford (1980, 1984), Hakansson (1987), IMP Group (1990) and Authors (1998). More recently, Lamprinopoulou & Tregear (2011) have emphasised the importance of network building strong vertical connections to a successful marketing amongst SMEs.

Our current research is anchored in this interactive approach for which Donada & Nogatchewsky (2005) present the four dimensions used to study the relationships supplier-client, i.e. the economic performance (financial results and created value), the harmonious co-operation (proximity, confidence, adaptation), the mutual satisfaction of partners (quality of the relationship and tools of communication used) and the development of the relationship (confidence, duration, communication and structure of networks).

3. Methodology

Our approach in this exploratory research phase is qualitative. In order to bring a broad diversity in terms of craftsmanship and sub-sectors of the watch industry, we have selected a dozen of CEOs and commercial managers of SMEs supplying watch brands with key components or services. Company turnover is between 1 and 20 million Euros, and their headcount from 6 to 150. All of them are located in the *Arc Jurassien*, at both sides of the border between Switzerland and France. Semi-structured interviews lasting between 60 and 90 minutes have now been conducted. Thematic of the interviews has been carried out. At the end of each interview, an adaptation of the B2B-RELPERF scale (Lages, Lancaster & Lages, 2008, p. 691) was completed by the participant in order to qualify the dimensions and intensity of the relationship between the suppliers and their key account and to provide an additional quantitative element to the research.

Along with this field approach, we have started to setting up a database with all companies (more than 600) involved with supplying components and services in the watch sector. We intend to build up a typology of them and conduct in the next stage of the project a quantitative survey on the relationship supplier-client.

4. Initial findings

We have observed different types of suppliers: the ones who are involved into the manufacturing of the watch itself (components for the motor, the dial, the case, etc.), and other suppliers of tooling and machinery, complementary products, packaging and services. Some suppliers deliver directly to the brands, other ones are “suppliers’ suppliers”, in second line. The full typology with hierarchy of suppliers will be part of our final paper. We have also observed a strategy of vertical integration around the watch brands in order to better control the value chain and rationalise the manufacturing process and the logistic flow, mainly in the major groups as Swatch, Rolex, Richemont, LVMH and PPR Gucci (Authors, 2012).

The majority of the suppliers interviewed wish to play a more important role in the value chain, increase their number of clients and thus decrease their dependency on one or two large customers. They seek to regularly be in contact with their clients in order to bring them value for money. The most frequently heard words were “quality” and “innovation” (often “co-development” with a key account), followed by “fair prices” and “leadtimes”. The key success factors (Porter, 1986) most frequently evoked were “coping with our core business” and “proximity and reactivity to clients”. Proximity not only means geographic, but also intensity of commercial relationships based on a long-term confidence and problem solving.

It is without surprise that marketing activities are limited mainly to a presence in key industrial fairs and exhibitions, entries in professional directories, maintenance of the professional network of key partners, and development of personal networks (importance to follow the changes of people in the watch industry). The internet sites of the companies analysed are basic (one third of our database of suppliers, i.e. 200 companies, have no web site!), they have a limited number of print material (sometimes a targeted mailing is done to show new products or solutions) and the most used “marketing tool” is the phone. Clearly, the suppliers interviewed practice one-to-one marketing.

We have observed three levels of relationships between suppliers and clients: a tight collaboration, almost daily, with key accounts; a more or less regular relationship once referenced at a client; exploration of new clients to be referenced in the future.

With the exception of two firms, no marketing research is conducted on a regular basis. In both cases, research was carried out after a change of management in order to monitor the customers’ satisfaction and evaluate the market potential. Business intelligence is done through personal contacts, mainly in fairs and exhibitions, statistics of professional unions (*Fédération de l’horlogerie suisse, Convention patronale de l’industrie horlogère*) and in reading professional magazines.

5. Limitation of the research and discussion

The main limit of this exploratory research is of course the number of interviews. However we can already compare the reality of the sector with the literature. We have verified the observation of Michel, Salle & Valla (2000), i.e. the limited flexibility of suppliers versus their clients. On the other hand the activities of supplying are not “basic” in the sense of Malaval & Benaroya (2009), because most operations and components bring a high degree of added value to the final product. The will and capacity of innovation depend mainly on the nature of the relationship supplier-client.

Conclusions of Tajeddini & Trueman (2008) have to be moderated: innovation and competitiveness of brands may occur thanks to their suppliers through a push as well as a pull strategy. To be rapid, flexible and adaptive to clients’ needs is a golden rule, according to Badot & Cova (2011).

The strategic considerations of interviewed SMEs are more difficult to analyse compared to the literature: the interviews reveal a tension between the watch brand to verticalise their value chain, integrating suppliers of strategic components, and a will of most suppliers to keep independent.

Amongst the dial makers, there is even a strategic alliance of three of them to guarantee co-operation and prevent an acquisition by a major group. Referring to Holmes (1986), specialisation and delivering exclusive products and solutions remain a competitive advantage to avoid such an issue.

At that stage of our research, there is no strong managerial recommendation to do for the supplying SMEs of the watch industry, except in the first instance: firstly, do not stop prospecting new customers, despite the good economic situation of Swiss watches on the world market; secondly, do not stop innovating to bring more and more value, products and services) to the clients.

The next stage of our research will allow for a broadening and deepening of the initial sample of SMEs to obtain a representative sample based on the industry typology for the distribution of a quantitative instrument. Additionally we expect to identify clusters or segments of suppliers with key similarities/dissimilarities in their marketing strategy. The third and final stage of the research will include interviewing more watch brands (purchasing department) to compare their vision of suppliers with the suppliers' one towards brands, regarding B2B marketing strategies.

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7. Listing of interviewed SMEs (to date)

Suppliers

Porte-Echappements SA, La Chaux-de-Fonds (*échappements horlogers*)

Escad SA, La Chaux-de-Fonds (*vernissage de cadrans*)

Guillod Gunther, La Chaux de Fonds (*boîtiers, usinage, traitement de surface*)

Huguenin-Sandoz SA, Colombier (*articles métalliques de merchandising*),

Lauener & Cie SA, Boudry (*décolletage*)

Cheval Frères (Groupe IMI), Besançon (*décolletage*)

Decogil (Groupe Gil), St-Aubin (*décolletage, polissage et anodisation*)

Bergeon SA, Le Locle (*outillage industriel*)

Cornu & Cie SA, La Chaux-de-Fonds (*fabrication de bracelets, fermoirs et boucles*)

MTS, La Chaux-de-Fonds (*traitements de surface*)

Metallo Tests SA, La Chaux-de-Fonds (*laboratoire d'analyse de matériaux*)

Watch brands

Rolex, Genève (*fabrication complète de montres de luxe*)

Louis Erard, Le Noirmont (*assemblage de montres mainstream*)

HYT Hydro-mechanical watches, Bienne (*assemblage de montres high-tech*)

Intercultural Aspects in Supply Chain Management – Successfully managing intercultural hurdles along the international supply chain

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EXTENDED ABSTRACT

Keywords: intercultural aspects · supply chain management · business relationships · culture · global

Introduction

Already in the era of Amerigo Vespucci and Hernan Cortés when the first explorers tried to circumnavigate the world, international supply chains existed. Today, in extremely competitive global surroundings, many economies have established free trade agreements in order to take a stand against the stress of competition in international business relationships. Therefore, decision makers in international companies face the challenge of dealing with a wide knowledge about intercultural management along the supply chain in order to successfully interact with other global players. This paper identifies current trends in intercultural aspects in supply chain management (SCM) and discusses their significance and relevance in order to successfully manage international supply chains in today's global environment. The classical method of literature review is applied in order to achieve a relevant overview regarding the determined search criteria. In doing so, the following three research questions are addressed in this work. The first deals with a possible definition of intercultural aspects in SCM; the second examines whether and which research directions concerning intercultural aspects in SCM can be defined; and the third summarizes the main intercultural barriers for a successful supply chain.

In the following sections the research method of literature review is described and the data results are clustered and evaluated in order to discuss and present solutions to the research questions. Finally, some indications for further research in the field of SCM dealing with intercultural aspects are stated.

Literature Review

This paper is focused on a bibliographic revision leaving empirical investigations for further consideration. In order to gain a comprehensive overview of what has been written in the public domain and which type of research has been conducted concerning the topic of intercultural aspects in supply chain management (SCM), an extensive literature review is undertaken. Taking information integrity as the primary objective, the following parameters were carefully selected for the literature review. In the first instance, the search criteria, data bases and timeframe were established. These primary terms of data acquisition are crucial for the results of the whole study.

The search criteria consisted of a set of keywords in order to scan databases and involved the terms “supply chain management and intercultural aspects”. The data acquisition was conducted by means of the databases EBSCO (Business Source Premier), Emerald, JSTOR, Science Direct and SpringerLink in the full text search modus. In terms of timeframe, the parameters were defined for the years from 1980 to 2012. Both the selected databases and the timeframe were broadly based in order to gain a wide overview of the searched terms and their position in different fields of contemporary existing studies.

After having conducted the search in full text modus in each of the mentioned databases, the respective results were saved in separate Citavi projects. As an overall result, 698 pieces of literature were found and showed the following distribution across the five different databases mentioned: EBSCO (Business Source Premier) with six, Emerald with 143, JSTOR with 168, Science Direct with 249, and SpringerLink with 199 contributions.

At this point, a content analysis consisting of relevance sampling (Krippendorff 2003) and categorization was carried out. The initial review methodology defines the criteria for a repetitive review of search results. In order to be able to concentrate on the important articles within the overall result of 698 articles, the decision was made to only consider texts written in English, Spanish, or German. Furthermore, book reviews, article summaries and workshop papers were disregarded for the moment. Subsequently, all 698 results were reviewed regarding title, abstract and keywords in order to filter out irrelevant search results. In addition to these formal criteria, some supplemental restrictions with regards to content were also applied. Articles in the fields of marketing, sales, education, tourism and human resources in general were discarded, as well as articles dealing with historical or geographical aspects. Moreover, articles discussing topics located in Australia, New Zealand, Africa, Turkey and the Scandinavian countries were left out.

As an overall outcome after relevance sampling, 118 results stemming from the five different databases showed the following composition: EBSCO (Business Source Premier) with four, Emerald with 54, JSTOR with 20, Science Direct with 20, and SpringerLink with 20 results. Those results were saved in separate Citavi projects and as a final step consolidated into one overall Citavi project using the Citavi import operation. During the process of consolidating five Citavi projects into only one Citavi project, duplicates were automatically removed. Through the cross checking method, several articles and books were added and the final result consisted of a total of 89 journal articles and 21 books. The consolidation identified the relevant literature regarding the topic for further studies wherein the findings could be considered as a particular link between the two scientific disciplines of supply chain management and intercultural studies.

Thereupon, an even deeper analysis of the final results by means of clustering was applied. All articles were re-examined, and priorities as well as research directions were assigned to each one of them. As a result from this final step, eight cluster fields could be identified, comprising of cross-cultural studies, cultural studies, ethnological studies, intercultural communication, legal issues, politics especially exportation, supply chain management and sociopolitical studies. Two of the mentioned clusters, cross-cultural studies and supply chain management, were subdivided into a clear form and specifications. Cross-cultural studies were defined in a clear form and with two areas of specialization, namely cross-cultural studies in ethnology and cross-cultural studies in RFID technology. Supply chain management was defined in a clear form with one area of specification: supply chain management in cross-cultural studies.

Based on this detailed description of how data acquisition, relevance sampling and clustering were conducted, the following part of the data analysis presents the theoretical findings of this study.

Data Evaluation / Theoretical Findings

After having conducted an extensive literature research on the terms supply chain management and intercultural aspects, none of the articles considered provided a definition of intercultural aspects in SCM. Thus, considering the literature findings, it seems that the first research question, “is there a definition of intercultural aspects in SCM?”, remains unanswered whereas it could be implied that an answer is not easily found as a complex and complete definition in one article, but instead could be built up by summarizing together bits and pieces of various articles during overall research on the topic. Nevertheless, focusing on the term supply chain an approach toward a definition could be the statement of Handfield (1999, page 2) who determined that “the supply chain consists of all the activities and processes associated with the flow of goods and information from the raw materials stage to the end consumer of the product or service. The integration of those activities mentioned and processes among the members of the supply chain is frequently called supply chain management”. Focusing on the intercultural aspects, it is to be said that the term embraces the required knowledge and preparation needed in order to overcome individual culture shocks more easily and to take and implement efficient decisions rapidly in a different cultural surrounding than one’s own. Thus, intercultural knowledge is a major resource for firms and nations. Intercultural knowledge management capabilities are crucial to enhance the core competitiveness of firms and nations (Fink et al 2005). Summarizing the explanation dealing with the first research question; intercultural aspects in SCM are understood as the knowledge of cultural differences applied to the activities and processes among the individuals managing the flow of goods and information from the resources stage to the final product or service. Dealing with the second research question, “Which research directions concerning intercultural aspects in SCM can be defined?”, elsewhere in this paper we have emphasized on the integration of two scientific disciplines of supply chain management and intercultural studies. The integration and understanding of the previous would provide a specific advantage to practitioners due to the growing globalization in today’s business interactions.

Firms knowing the particularities of the entering market can facilitate the entry process while have a better chance of building long-lasting business relationships. Knowing the norms and culture of particular market-societies (Mattson 2003) would help into the previous. Yet, both the integration and coordination of inter-firm activities are essential to the supply chain (Rose-Anderssen et al 2010) because before stepping outside the own company in order to do business globally, such procedures have to be known internally. Canen and Canen (2002) argue that logistics could help understanding, sensitizing, and consideration of cultural diversity in management education. They also claim that cultural plurality is an asset, rather than a constraint. So, having together for example procurement planning, communication, joint ventures in multinational-cultural teams it looks as those different activities and units are being part of the whole supply chain management in international firms. The argument that culture is believed to be one of the most influential factors to shape individual values and to affect personal behavior (Kassim and Abdullah 2010) suggests that in an ordinary supply chain, culture begins with individuals acting and interacting that supply chain. Luo and Shenkar (2006) state that people interact and interpret events differently based on their cultural and linguistic differences. Hence, there is indication that culture might have an

impact on the supply chain because individuals could have different cultural backgrounds while managing the flow of goods and information along the chain; similarly to what was asserted previously. At this point it should be highlighted that this paper deals with the denomination culture as the individual culture of persons who participate in the process of SCM representing different roles and responsibilities, for example agents, intermediaries, representatives or similar. In contrast to that, the organizational culture which refers to the personality of a company, making it unique in the eyes of in- and outsiders (McAfee et al 2002) and due to Cadden, Humphreys and McHugh (2010) could provoke failure of strategic supply chain relationships if lacking mutual benefits is not objective of this investigation.

Culture is even so important that, for example, in EU law, it is included in the Treaty and has survived into the EU Constitution. The previous reflects specific institutional needs for such a basis. Culture has surfaced in legal argument before the European Court of Justice (Tunney 2005). However, culture is a broad and blurry concept because it is associated differently depending on the context (Vom Brocke and Sinnl 2011) and it is a challenging variable to research, in part because of the multiple divergent definitions and measures of culture (Leidner and Kayworth 2006). Given the circumstance that culture is indeed important to the supply chain, it brings the argument back to the initial question of which research directions concerning intercultural aspects in SCM can be defined. Taking one step back to the literature review in the process of relevance sampling, the pieces of literature comprising articles and books were examined and priorities and possible research directions assigned. The question is whether the selectively applied clusters as umbrella terms could be taken into consideration as the 'real' research directions. Re-examining the said clusters, as cross-cultural studies, cultural studies, ethnological studies, intercultural communication, legal issues, politics especially exportation, supply chain management and sociopolitical studies, their study looks very promissory to advance in the field. The research directions concerning intercultural aspects in SCM are as wide-ranging and diverse as the clusters dealing with culture and SCM but also examining ethnological, legal or even sociopolitical aspects, among others.

Finally, the third research question, "What are the main intercultural barriers for a successful supply chain?", is examined. Second to none, there is no "culture-free" context of organization, because even if organizational solutions or contexts are similar, they are always culturally constructed and very imperfectly interpreted as the reaction to a given constraint (Sorge 1982). The increasing globalization of business has heightened the importance of understanding national cultural influences in inter-organizational relationships from both a cross-cultural and an intercultural perspective (Griffith et al 2006). Furthermore, the notion that cultural differences can be a significant barrier to doing business is now commonly accepted (Harzing and Feely 2008). However, there is a lack of understanding of how conjoining cultures might collide in the daily execution of conjoint management practices; and further, how such conflicts may be resolved (Kidd 2001). But obstacles to intercultural communication are not always restricted to cultural misunderstandings (Lauring 2011). Saner, Yiu and Søndergaard (2000) argue that after all, many of the conflicts a multinational company must solve are in countries with very different legal, cultural, political and economic systems. Nevertheless, this study does not only consider the stated example of multinational companies but also exporting, importing and forwarding businesses, agents and the many other intermediaries and participants in SCM. In 1980, Geert Hofstede published the results of his research on the consequences of culture in the international business world and was one of the pioneers in the field of intercultural research including individual and organizational culture. Based on a quantitative model of the four dimensions (power distance, uncertainty avoidance, individualism and masculinity), he statistically measured similarities and differences between national cultures of 15 different countries and a variety of companies and industries.

Nevertheless, the culture dimensions measured through Hofstede's model are highly inter-related, and national culture is the result of the interaction among these dimensions. Thus, it is the mix of the different aspects, rather than the single dimension itself (Cagliano et al 2011). As a consequence, the main intercultural barriers for a successful supply chain can always be seen as a composition of various elements, like the cultural dimensions of Hofstede's model interacting with each other. At this point complexity is added through the fact that the emergence of the global marketplace necessitates that SCM must be refocused into a global or network context. The global supply chain is more than a change in name, it is a significantly different set of problems and therefore a new definition of what type of manager will be successful is needed (Harvey and Richey 2001). Returning to the definition of a supply chain established at the beginning of this chapter and taking into account the number of different research areas determined through the second research question it seems logically connected that a global supply chain is a structure of high complexity. There is a need for very diverse research in the different research areas in order to prepare adequate recommendations or solutions to present day problems transpiring in global business. To successfully manage an international supply chain, it takes more than knowing that operations decisions are made differently in different countries or regions (Pagell et al 2005). The objective would be to create multicultural competencies to facilitate effective implementation of global supply chain strategies (Harvey and Richey 2001). Such competencies will include the understanding of interactions of individual's intercultural elements with SCM activities.

Reflection and Further Need for Research

The starting point of the investigation was the term intercultural aspects in supply chain management and the problem of how to successfully manage intercultural hurdles along the international supply chain. Based on a literature review that involves an overall summary on the major sources of intercultural and supply chain research, a framework is given in order to answer the three presented research questions as a whole. The literature review gives an insight into research considering intercultural aspects in supply chain management. The three research questions have thus been assessed and the results indicate the following:

- (1) "Is there a definition of intercultural aspects in SCM?"
Intercultural aspects in SCM are to be understood as the knowledge of cultural differences applied to the activities and processes among the individuals managing the flow of goods and information from the resources stage to the final product or service.
- (2) "Which research directions concerning intercultural aspects in SCM can be defined?"
The research directions concerning intercultural aspects in SCM are as wide-ranging and diverse as the clusters dealing with culture and SCM, but also investigate ethnological, legal or even sociopolitical aspects, among others.
- (3) "What are the main intercultural barriers for a successful supply chain?"
The main intercultural barriers for a successful supply chain can always be seen as a composition of various elements, like the cultural dimensions of Hofstede's model interacting with each other.

One of the objectives of this paper is to create more awareness of intercultural aspects in supply chain management and preparedness for further research on the combination of these two topics.

In fact, several gaps in supply chain management research dealing with intercultural aspects were uncovered and should be considered in future contributions. The findings can provide helpful support for the management of supply chains across cultures. However, in the reviewed literature the importance of several additional aspects was pointed out but has not been presented in this article. The mentioned umbrella terms of knowledge management, trust, time perception, negotiation and leadership are also crucial to successful intercultural supply chain management and will be considered in the research following this paper.

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ENTREPRENEURSHIP AND THE RISE OF THE SERVICE ECONOMY

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Abstract

With 70-90 percent of GDP of developed economies in the service sector, researchers are showing growing interest in the specific role of service in economic growth. While economics has long tended to associate the service sector as suffering from “Baumol’s disease” of low productivity, social theories and service research are stylizing services as a phenomenon indicating an “Age of Access”, where ownership has lost its meaning for value creation. An entrepreneurial perspective reveals a widely unnoticed role of services as drivers of innovation and economic growth: Service economies emerge driven by consumers and organizations who use service contracts in order to delegate a growing range of rights to manage resources to enterprises. Service contracts are the means to allocate ownership rights over assets to actors who identify the highest valued use of resources. The rise of the service economy is driven by entrepreneurs.

Introduction

As economies grow they transform from industrial to service economies. Consistently, developed economies command a share of value created in services sectors of around 60-80 percent (see Figure 1). Politicians and economists have been noting this with mixed emotions. Early-on economists have expressed concerns, that the service sector inhibits productivity and therefore its rise indicates economic decline – a diagnose phrased as “Baumol’s disease” (Baumol, 1967; Triplett and Bosworth, 2003).

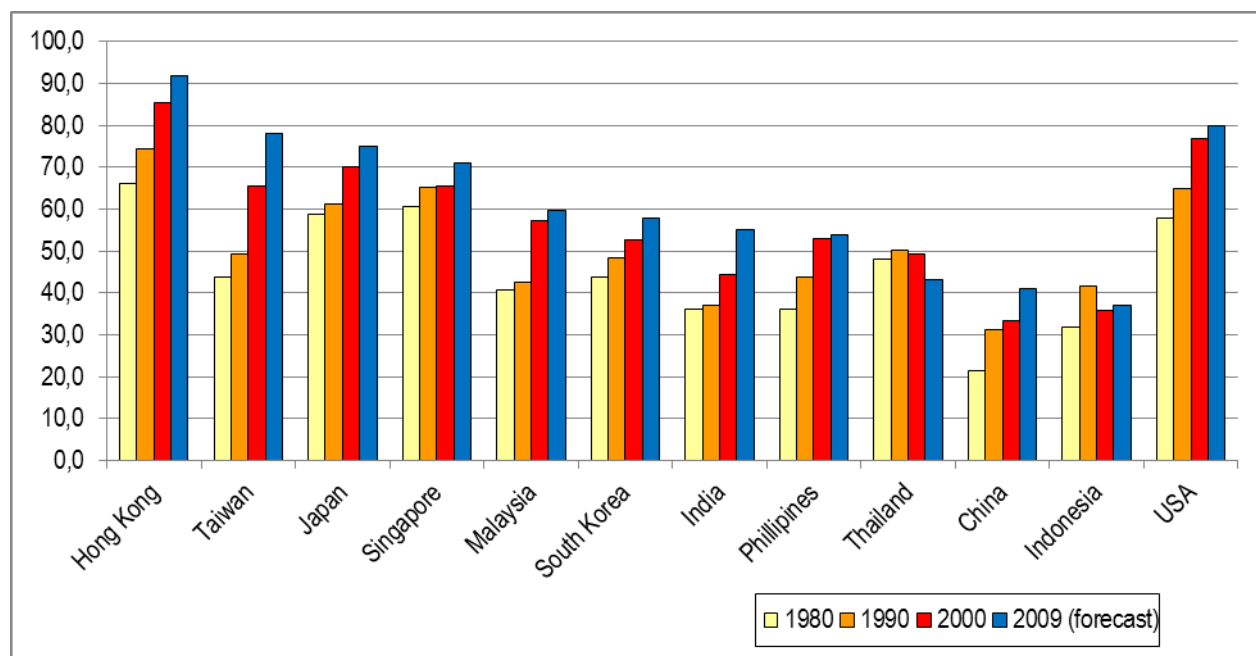


Figure 2: The dominance of the service sector through selected economies

Source: EIU 2009

In the light of the recent financial crises, the current debate echoes this perspective on services. US president Obama made a point of “bringing manufacturing back” to the US as part of his economic re-election program (Goldfarb, 2012).

In October 2012 the European Commission announced a reversal of its initiative for industrial competitiveness the outright goal to re-strengthen the share of manufacturing (European Commission, 2012).

However, there is no strong evidence that service industries restrain growth. First, there researchers struggle to provide a sound definition of services: Service research has struggled to provide a valid definition of services (Lovelock and Gummesson, 2004). The emerging "Service-Dominant-Logic" gaining attention in service and management research is quite tautological, as it proposes every economic activity as an element of service delivery, with manufacturing of goods as a special case (Vargo and Lusch, 2004). A growing body of research is questioning Baumol's disease: Studies regularly identify business services as the major drivers of the growth of the service economy and also identify business services as a powerful source of productivity gains (Triplett and Bosworth, 2003; Woelfl, 2005).

An emerging body of literature suggests that an essential characteristic of a service is the provision of benefits without the transfer of ownership (Lovelock and Gummesson, 2004). For example, most people would consider selling a car as a goods business and renting a car as a service business (Lovelock and Gummesson, 2004; Ehret and Wirtz, 2010). In entrepreneurship research, ownership is one central institution, furnishing entrepreneurs to organize business projects for the exploration and exploitation of business opportunities (Mises, 2007; Foss et al. 2007).

This article proposes that service contracts provide a crucial means to organize entrepreneurship activity, by allocating entrepreneurial responsibilities thereby empowering firms to navigate towards most promising opportunities. The article is structured as follows: The second section introduces the non-ownership perspective of services. The third section provides an Austrian rationale for service contracts as institutional means for organizing entrepreneurial activity. Next, the article proposes an anatomy of service contracts based on their use in the entrepreneurial process.

As major implications, service activities are most significant in the business sector and related to a transformation of industries and firms. Service growth is an indicator of the transformation of business. Policies focusing on the revival of manufacturing can succeed as long as they take notice of manufacturing as a services platform with innovation potential and business transformation. If they are aiming to establish a return to blue-collar jobs, they are locking economic potential.

Non-ownership Perspective of Services

Service research emerged as a response to phenomena of value creation that fall outside paradigms largely focused on manufacturing businesses. Accordingly, researchers tended to define services as specific categories of output that distinguished them from standardized, material products. Widely-held key characteristics of service-outputs are their intangibility, heterogeneity, inseparability and perishability (IHIP) that reflect crucial management challenges of service businesses (Zeithaml et al. 1985, Lovelock and Gummesson 2004). An interesting feature of services that is not reflected in this standard categorization is revealed in the rise of business services. In many cases, like the outsourcing of support services in our canteen example, the substantial change when substituting internal operations by an externally sourced service may well be the introduction of an organizational interface drawing a line between a service provider and its client. The fundamental event that has transformed a manufacturing support-activity into a genuine service process is the division of labor between the client and the provider. The crucial difference is that the client has delegated responsibility and managerial control to an independent firm.

This resonates well with one stream of service research that argues that services provide value by liberating clients from costs and burdens of ownership (Judd 1964, Lovelock and Gummesson 2004). For example, you can enable yourself to use a car either by buying or renting one. Most economic statistics would classify the first case as a goods business, and the second as a service business. This is the basic idea underlying Lovelock and Gummesson's (2004) proposition of the rental-access paradigm of services. The main factor differentiating goods-centered from service-centered transactions relies on the transfer of ownership rights. In this light, services are simply transactions without the transfer of ownership rights, in contrast to trading goods for money.

In that light, services are a response to the fact that ownership burdens its holders with costs, responsibilities and liabilities that can outweigh its benefits. As a car owner you are exposed to fluctuations in market prices and dependent on its current location. These features make car-ownership unattractive for the occasional transcontinental business or holiday trip, but much more attractive for frequent commuting or spontaneous rural escapes (Ehret and Wirtz, 2010). However, if companies perceive assets and people as a burden, why do they find service providers who are willing to take on these responsibilities? One misleading implication of the rental-access paradigm would be to conclude that ownership is disappearing entirely in the service-economy. While services free users from burdens and responsibilities associated with ownership, service providers often take over ownership and see this as a business opportunity (Rifkin 2000). Business services build on the re-allocation of ownership from clients to service providers, rather than mere replacing ownership. But when and why does the re-allocation of ownership and responsibility imply benefits? This question is at the heart of three related research streams on the theory of the firm, which we present next.

The Service economy through an Austrian lens

Austrian theory of value and its implication for services

The Austrian value theory touches a common ground with both, Service-Dominant-Logic and Property Rights Theory. Menger acted as a pioneer of subjectivist theories of value, stating that in addition to its causal power to satisfy a need, potential users must also perceive a need, get to knowledge about the goods contribution to needs satisfaction and get into possession of the good (Menger 2007; Blois, 2002).

Thus, on top of intrinsic technical characteristics of a resource, perception, knowledge and possession are mandatory for turning an object into a good. Value may be conditioned by the objective characteristics of a good, but is determined by subjective valuation and social conditions (Menger, 2007; Ballantyne and Varey 2006).

This implies, that resources are bundles of multiple uses and that their value is a function of users perceiving and valuing these uses (Mises 2007).

The marketing function is perhaps the strongest testimonial of subjectivist value theory, where companies spend a significant share of their capital in order to spot emerging usage patterns, influence the perception of potential users and design offerings for value enhancement of users at a profit for business.

From this perspective, the rise of services in the course of economic development comes with little surprise. As economies grow richer, the uses for a given resource will multiply. To the extent that users and businesses develop differentiated modes of resource use, business activities will focus on potential uses of resources rather than on managing the resources themselves.

Not surprisingly, the share (not the volume!) of primary resource extraction and manufacturing in business activity shrinks in favour of the services rendered from the resource base. The service economy is a testimonial of the subjectivist dimension of economic goods.

The institution of ownership and the emergence of the service enterprise

Economists define ownership as residual rights over an asset as well as the right to obtain the residual income from the asset that remains after all contracts have been fulfilled (Barzel, 1997; Grossman and Hart, 1985). Thus, owners enjoy the highest authority over an asset within a given institutional order. Property rights theory claims that ownership becomes vital in the face of economic uncertainties. While contracts define rights to use, change, obtain income from or sell an asset, the owner enjoys authority and bears responsibility for all benefits and costs not specified in contracts (Furubotn and Pejovitch, 1972). Thus, the income of the owner is uncertain and takes the form of profit or loss (Barzel, 1987; Grossman and Hart, 1985).

Its strong roots in uncertainty bring ownership into a close relation to entrepreneurship (Foss et al. 2007; Barzel 1987). From the property rights perspective, Barzel states that profit is the reward of the entrepreneur for self-policing (Barzel, 1987). The Austrian school of economics emphasizes ownership as a mandatory condition for the exercise of entrepreneurship. Ownership empowers entrepreneurs to put assets to the highest valued uses and entitles entrepreneurs to capitalize the resulting profits (Mises, 2007, Rothbard, 2004; Foss et al., 2007).

Mises' catallactic perspective of ownership, elaborates the crucial connection between ownership and services: "Ownership means full control of the services that can be derived from a good." (Mises, 1981, p. 678). While resource users may use a service by the means of specified service contracts, owners enjoy the authority to define the terms of resource use, including services not yet known (Barzel, 1987; Grossman and Hart, 1985). While Mises convenes with property rights theory that, profits are the reward for entrepreneurial control of assets, he extends this with reference of market dynamics. Within a competitive market economy, ultimately consumers decide about asset valuation with their purchasing decisions. Consequently, ownership is only a benefit for those, who are able to foresee consumer decisions and employ assets to the highest valued use. Thus, within a competitive market economy, the relationship between ownership and entrepreneurship becomes reciprocal: While entrepreneurs need ownership in order to direct business projects, competition forces owners to exercise entrepreneurial functions if they want to preserve the value of their resources (see Mises, 1981, pp. 678-680). As entrepreneurs want to become owners in order to direct their business projects, competition forces owners to act as entrepreneurs if they want to preserve or increase the value of their assets.

The expansion of a capital using economy enforces the differentiation between the domain of owner-entrepreneurs who control the deployment of resources to business projects and resource-service users who are mainly interested in purchasing specified services rendered from the resource base for consumption or production purposes. In this perspective, the rise of the service economy indicates the allocation of ownership rights to entrepreneurs and specific rights to resource-users.

The role of ownership in the direction of business projects

Ownership grants its holders residual decision rights over the related assets and entitles the rights to capitalize the residual income from these assets. Both elements are vital for the entrepreneurial process of the exploration and exploitation of business opportunities.

Ownership and the exploration of business opportunities

Residual rights over an asset empower entrepreneurs to explore new uses for an asset. Ownership has a technical and an economic function. Backed by ownership rights, designers, researchers or engineers can engage in exploration of opportunities, by modifying and experimenting and applying assets (Lewin, 1999; Shane and Venkataraman, 2000). Thus, ownership provides the legal resource to abuse resource and identify sources of value.

The economic dimension relates to the market value. On competitive commodity markets, market prices gravitate towards the marginal cost. As a consequence, entrepreneurial profits shrink towards zero. Entrepreneurs will find business opportunities beyond the domain of commodity markets shaped by intense competition (Lewin, 1999; Lachmann 1977; Chiles et al, 2007, 2010). Thus, ownership provides the backbone where entrepreneurs recombine resources in the hope to realize higher valuation compared to current market prices – the domain of the firm. Within the domain of the firm, entrepreneurs recombine resources (or in Austrian terms “higher ordered goods”) to consumer products (“lower ordered goods”). Or in plain words, firms transform resources from commodities acquired on markets into means of production for the provision of future products. Ownership constitutes the legal backbone for the production.

Engaging in production provides entrepreneurs with the opportunity to explore new modes of value and thereby identify profit opportunities. However, mere recombination does guarantee neither enhanced value nor success.

Ownership and the exploitation of business opportunities

Ownership grants its holders the rights to define specific rights and the terms of access and use of assets. Thus, ownership rights provide the backbone for entrepreneurs to design service offerings, and negotiate the terms of trade. Property rights theory states four core categories of property rights: The right to use an asset, to change it, to obtain income with it and to sell the object (Furubotn and Pejovitch, 1972). The residual rights empower their holders to specify rights to their assets and price them in order to maximize the value (Barzel, 1994, Grossman and Hart, 1985). As part of commercial activities, owners will seek to define a bundle of rights to use services of their asset base in a way that maximizes the value of the asset.

Service contracts and the structure of production

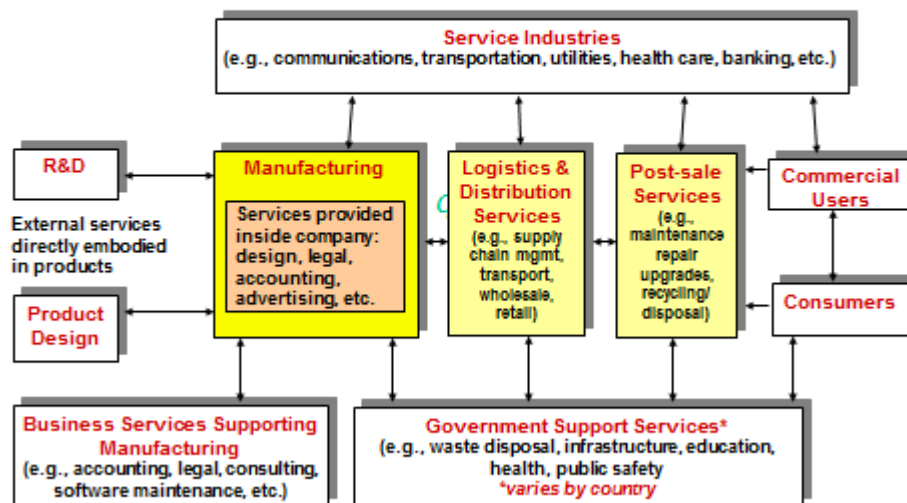
Service contracts reflect the entrepreneurial dimension of the division of labour. Ownership rights allocate entrepreneurial responsibilities and entitlements to the entrepreneurial actor, and access-rights to service benefits to resource users (Foss et al, 2007; Mises, 2007; Casson, 2005; Endres and Harper 2010; Harper and Endres, 2012).

One fundamental form of division of labour is that between the household and the firm. As the organizational domain of consumption, the household's members' main interest is on the access to services. As the domain of the organization of production, members of the firm are predominantly interested in the domain for new types of outputs and the means and processes of production. The domain of consumer services reflects this division of labour between household and firm. The transformation of consumer goods into consumer services sectors reflects the transfer of entrepreneurial responsibilities from the domain of the household to the domain of the firm (Mises, 2007).

A good example is private car ownership. A household may buy a car to serve its transportation needs. The technical design will call for provision of energy, that in theory the household could maintain itself. In economic reality, a service system predominantly comprising of filling stations has emerged to address that need. Technically, a household could (and some do) care for the technical maintenance of a car. Again, in reality a service system of parts suppliers and garages serves this. Households with funding needs might transfer the ownership of the car to rental or leasing companies. Not least, in urban areas, a growing range of households is starting to delegate car-ownership to car-sharing schemes. To various degrees, all these services build on the delegation of ownership rights from the domain of the household to the domain of the firm. It is hard to imagine car-transportation as a feasible means of transport without the delegation of substantial ownership rights from the domain of the household to the domain of the firm.

Service contracts and business organization

Businesses can also use service contracts to allocate entrepreneurial responsibilities and profit opportunities. By using service contracts, those firms who are in the best position to exercise the role of the entrepreneur, can assume asset ownership whereas firms residing on using the asset's service close service agreements with the providers. The service contract allocates the role of the entrepreneur to the service provider and the role of the resource user to the service client. The provider takes on the entrepreneurial responsibility related to the asset and therefore is entitled to capitalize the residual income. By the same token, clients can use the services of the assets for their business project, without taking entrepreneurial uncertainties.



Source: Quinn, 1992

Figure 2: Service contracts and Business Organization.

Thus, service contracts empower managers to define the domain of entrepreneurship within a value network (see . Figure 2). Historically, companies started this practice by outsourcing activities like IT-management, logistics or marketing services to specialized service providers (Quinn, 1992; Arora et al. 2004; Chesbrough, 2011).

Gradually, companies have been expanding the scope of external service providers for example to contract manufacturing or external R&D to the extent that almost any relevant business operation can be hired as a service (Quinn, 1992; Ehret and Wirtz, 2010).

As a consequence, companies have been moving to more fine-grained ownership constructs. For example, airplane-engine manufacturers like Rolls Royce have opened up service businesses by selling power-by-the-hour contracts to airlines. By the means of the service-contract, the provider takes-on responsibility for the technical risk related to engine performance. As compensation is based on engines under operation, the provider has an incentive to detect early and resolve fast interferences to flight operation. In practice, airplane engine manufacturers invest in an engine tracking-system and a communication network enabling them to direct maintenance teams to the fast resolution of issues related to flight operation (Ehret and Wirtz, 2010).

This contractual construct frees the management of the airline to focus its attention on those operation that presumably show the highest impact on business performance, like positioning of the airline, establishing and maintaining a network, customer service or branding. Engine manufacturers get additional profit opportunities by offering services. However, this requires the move of the strategic focus from selling modules to a service operation. As a consequence, manufacturers prioritize investments into the reliability of airplane-engine operation, backed by information technology and maintenance. These investments have the potential to benefit both, the airplane by getting an improved efficiency of airlines and the service-provider by getting a profit opportunity.

Anatomy of Service Contracts

Understanding services as offerings of benefits without the transfer of ownership opens a new perspective on the entrepreneurial dimension of services. Ownership is a vital institutional resource for entrepreneurs (Mises 2007; Hayek, 1973). Ownership entails residual rights over a resource (Barzel, 1987; Foss et al. 2007). Thus owners enjoy the highest legal authority over an asset. This is vital for both, the exploration and exploitation of profit opportunities (Shane and Venkataraman, 2000). Entrepreneurs holding residual rights can experiment with and recombine resources in order to explore value propositions that are not available on product markets, for example in a research lab or in an IT garage. For exploitation, residual rights entitle the entrepreneurs with the freedom to sell them according to their conditions. One characteristic of ownership rights is a vital pillar to service businesses: The freedom to define so-called specified (“attenuated”) rights for an asset and sell them to paying clients (Grossman and Hart, 1985). Owners enjoy the right to define specified rights that entitle other parties to use the assets under specified conditions for example the payment of service-fees or certain rules of conduct. Examples are a landlord owning a house and offering rental contracts for specific flats, a car rental company, owning the cars and offering rental contracts to car hirers or a machine manufacturer offering rental options for industrial companies.

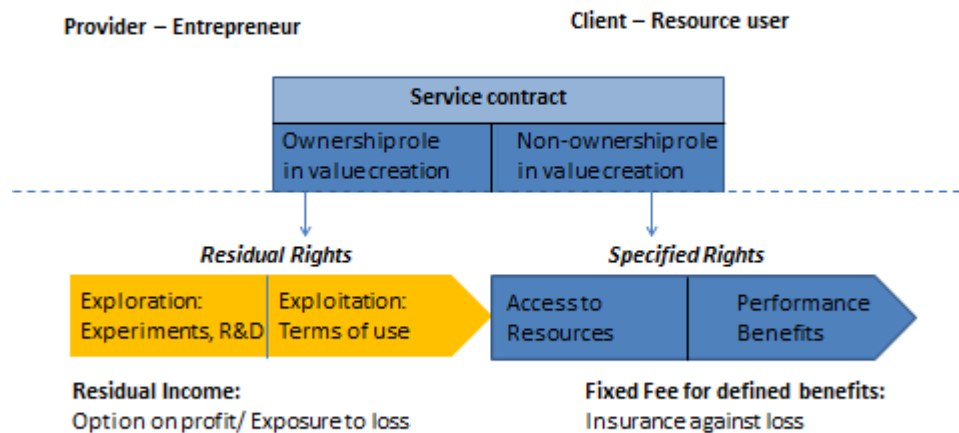


Figure 3: Anatomy of Service Contracts

Residual rights have a vital income aspect. The holder of residual rights is entitled to pocket in the residual income flowing from an asset that remains once all legal obligations related to the asset have been met. In the positive case, the owners' residual income turns into profit, in the negative case it turns into a loss.

This structure makes service contracts a vital legal instrument to allocate entrepreneurial responsibilities in relation to an asset (see Figure 4). Owning residual rights of an asset, entrepreneurs enjoy the right to put them to the highest valued uses in exchange for bearing the uncertainties related to failure and potential loss. From the client perspective, service contracts provide a vital means to enjoy benefits related to an asset without bearing related entrepreneurial uncertainties. As soon as clients are able to define benefits they aim for and feel capable to judge the financial value of related services, the service contract becomes an attractive option.

In a service transaction the client enjoys the right to obtain a benefit from the provider, at a specified quality in exchange for paying a specified price. The provider offers the obligation to deliver benefits for the client as defined in the contract in exchange for a contractual agreed service fee. For the provider the contract is an option to make a profit: the transaction turns into provide as soon as the costs are below the revenue flowing from the transaction. The service client acquires the

Conclusion

From an Austrian perspective the rise of the service economy is a systematic feature of the evolution of an entrepreneurial market economy.

The driving force of the expansion of markets are entrepreneurs who explore new uses of resources. Thus the rise of services indicates that a given resource base is put to an increasingly diversified array of uses as expressed in specification of service contracts. The service economy is a logical expression of the enhanced diversification of value creation we would expect in the course of economic growth.

Service contracts are the result of the division of entrepreneurial responsibilities. In a service-relationship, the owner exercises the role of the entrepreneur while the client takes the role of the resource user. Providers relieve clients from the burden of ownership by the means of service contracts in exchange for the option to make a profit. The rise of the service economy indicates the restructuring of economic organization in the course of economic growth, by transferring entrepreneurial responsibilities from households to firms (in the case of consumer services) or between firms (in the case of business services).

To the extent that economic growth stimulates competition, we can expect a reversal effect of between ownership and entrepreneurship. The more owners operate in domains under competitive pressure, the stronger will be the force to transfer ownership to actors with the highest potential to explore and exploit business opportunities.

In the entrepreneurial perspective, the service sector is rather the result of the division of labour in the course of economic development, than some new form of output or a new logic of value creation. The entrepreneurial perspective provides a consistent explanation, why a substantial share of service activity takes place within the manufacturing sector itself.

Implications

Implications for Austrian economics

To date, scholars from the Austrian school have rarely directed attention to the rise of the service economy. The anatomy of service contracts opens an avenue for Austrian approaches to the study of the service economy. First, the Austrian emphasis of the role of ownership in the entrepreneurial process helps to support a meaningful and clarified concept of services. In the Austrian perspective, the rise of the service economy is a logical consequence of the growing division of labour in the course of a growing economy. Services are the result of an economic rational, to allocate entrepreneurial responsibility to the service provider and resource use to the service client. Academic research has barely noticed the potential contribution of Austrian economics in this field. In order to capitalize on this opportunity, some Austrian concepts need to be elaborated. Most importantly, Austrian capital theory has still to remove the limitations imposed by its pioneering contributions to capital theory. While Böhm-Bawerks roundabout methods of production and Hayeks capital theory highlighted have contributed to show the effect of capital investments, they kept trapped by the paradoxes caused by the technical analogies (Böhm-Bawerk, 1891; Hayek, 1935). Since then, Austrian economics has moved to theories of the firm that captured as well the salient features of business organization (Lewin, 1999; Foss et al, 2007; and is gradually moving to the stage of the network (Harper and Endres, 2010; Endres and Harper, 2012). The Austrian perspective on service contracts provides a missing piece to the puzzle. Service contracts resemble a contractual perspective on the period of production. In a contractual perspective, the period of production is defined by entrepreneurial decision rights and entitlements rather than the technical features of the process. A contractual definition of the period of production, elucidates the entrepreneurial element. In the Austrian perspective the rise of the service economy is an expression of the re-allocation of ownership in line with entrepreneurial opportunities in the course of economic growth.

Implications for Service Research

Service has become a vital and vibrant research domain that makes significant contribution to the advancement especially in the management and marketing disciplines. However, service researchers still struggle to provide valid and meaningful definitions of services (see Lovelock and Gummesson, 2004).

The pioneers started by defining services by highlighting phenomena where goods-dominant marketing or management approaches ran on empty, like outputs characterized by intangibility, heterogeneity, inseparability of production and consumption and perishability (IHIP). While these concepts opened perspectives of crucial but hitherto unnoticed features of value creation, they failed to found a valid definition of the service area. The rise of services has inspired researchers to propose a Service-Dominant-Logic that highlights that service relates to the quasi-universal phenomenon that economic activity is only valuable to the extent that it renders service to consumers (Vargo and Lusch, 2004). In the Service-Dominant-Logic, every economic activity is rooted in service provision. While the Service-Dominant-Logic transcends limitations of the pioneering IHIP approach, it is largely tautological. If everything is a service, what is the contribution of a service-logic? In the face of the emergence of a service economy, such a service dominant view is unable to explain the observation the move towards services in the course of economic growth

The contractual perspective paves a way for a meaningful as well as valid definition of service. The contractual view roots service as an element of a crucial everyday problem of both, business-actors as well as consumers: The sharing of entrepreneurial uncertainties and profit opportunities between service clients and providers. The contractual perspective reveals the force of the entrepreneur in the rise of the service economy. Entrepreneurs contribute to the rise of the service economy.

The contractual perspective helps also to root the service phenomenon to the initial observation that stimulated the emergence of the service-domain, that vital economic activities take place beyond extracting resources and manufacturing products. The contractual perspective opens the avenue to elucidate the role of entrepreneurial activity in the rise of the service economy. Entrepreneurs drive the rise of the service economy in three ways:

1. They identify new services rendered from resources
2. They transform uncertainties of managing assets, relieving clients from burdens of ownership.
3. They stimulate the re-allocation of resources of an economy towards the highest value-contribution potential.
- 4.

The entrepreneurship perspective unveils a systematic force in the rise of the service economy that has gone unnoticed by service research so far.

Implications for Public Policy

From an Austrian perspective the concerns against the productivity effects of the service sector are ill-founded. The major share of the rise of the service sector takes place in the domain of business (Woelfl, 2005). The growing demand for business services results from a re-organization of companies in order to draw business activity closer to value creation opportunities. In that regard the rise of the service sector is a feature of entrepreneurial activity (Ehret and Wirtz, 2010). However, another insight from the contractual view is that manufacturing itself is a vital element of the service system. The wide-held view to conceive services as intangible forms of value creation is misplaced. In a contractual perspective the share of tangibles in value creation does not matter. The service phenomenon is largely driven by the need to allocate entrepreneurial rights and entitlements in line with value creation opportunities. So there might be forms of manufacturing revival which are a consisting feature of the rise of the service economy. However, these could take forms not predicted by economic policy, potentially disrupting traditional forms of manufacturing and stimulating new industries and domains of job creation (Anderson, 2012). However, these are likely to take forms that are not predicted by policymakers.

By the same taken, economic policy has largely under-estimated the role of service sectors for innovation and growth. Service-domains like banking and video-gaming have become industries that stimulate technological development and growth as well in the manufacturing sector.

Managerial Implications

Strategic management is currently moving its focus of attention from product strategy towards the design of business models (Zott and Amit, 2008; Chesbrough, 2011). The service economy provides a vital backbone for this move. Based on a service economy, managers have gained an increased flexibility to navigate their business towards the most promising profit opportunities (Quinn, 1992). As almost any business function can be hired as an external service, companies can focus on specific domains in order to excel. The reverse applies as well: In the context of the service economy, those companies who are relying on mediocre internal service-provision are likely to be punished (Mises, 2007). While academic research has revealed salient features of that characteristic, managers will feel short of systematic explanations of business model design. However, service-entrepreneurship reveals a useful maxim in support of management activity: Identify uncertainties that your company is better prepared to manage than the competition. There will be many different factors that impact these uncertainties. But two likely important ones are the provision of innovative services not established on the market yet and the consolidation of business operations. The first is apparent in novel service offerings established by service companies, such as internet search or building global communities. Here entrepreneurs expand the service-base of an economy. The other direction is the consolidation of redundant resources and activities under the governance of a business service provider, like in outsourcing arrangements. Here the entrepreneurial contribution of the service provider to reduce the entrepreneurial scope of business clients, by taking on activities that have lost direct relevance for position offerings. This is a direct consequence of standardization and commoditization of business activities in the economic market place. However, an industry-wide transfer of ownership of ownership to business service providers hands incentives for investments into efficiency and quality improvements that would be absent within the domain of integrated firms.

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VARIATION IN VALUE CO-CREATION
ABSTRACT FOR THE 6TH INTERNATIONAL CONFERENCE ON BUSI-
NESS MARKET MANAGEMENT (BMM 2013)

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Background and literature

This study builds upon on the stream of literature predominately evolved within the business-to-business (B2B) marketing literature regarding value co-creation in business relationships (Prahalad and Ramaswamy 2000, 2002, 2004a, 2004b). This literature posits the strategic importance of how suppliers and purchasing customers through joint-interaction secure quality supply offerings through an iterative joint problem-solving process. In this study we probe into reasons for variation in value co-creation, understood as a transaction-related process, within and between business relationships.

Though often held to be a further development in marketing involving a focus on service aspects of offerings (Vargo and Lusch 2004, Vargo and Lusch 2008), it may alternatively be viewed as return to traditional forms of supply and trade. In these traditional settings, prior to the development of manufacturing industry and the offering of mass produced standardized goods, supplier and purchasing customer interaction could be regarded as an inherent component in trade to secure quality design of this individually adapted offering (Ritzer and Jurgenson 2010).

The co-creation process is regarded as predominately a dyadic phenomenon involving features of value creating-related interaction between two actors in the context of a business relationship. The notion of co-creation involves strategically founded governing of customer and supplier interaction (Zwick et al. 2008). This implies that value co-creation may be controlled. However, in this stream of literature, it is the “business relationship”, rather than the “customer” that is to be “controlled”. This is opposed to the dominant goods-oriented logic within marketing with aim is to manage customer preferences (Vargo and Lusch 2004, Vargo and Lusch 2008). Value co-creation involves accordingly highlighting reciprocal dependencies (Thompson 1967) within business relationships and developing these to ensure quality supply.

Borys and Jemison (1989) apply the term “hybrid organizations” conceived by Thorrelli (1986) to describe a mode of organization between “market and hierarchy” involving a network of autonomous firms interconnected through relationships. This approach identifies four key elements involved in creating a relationship: 1) purpose, 2) boundary definition, 3) value creation and 4) hybrid stability (Borys and Jemison 1989). This classification evokes variation as an important feature of value co-creation in the realm of inter-firm interaction taking place between markets and hierarchies. Borys and Jemison (1989) provide a set of 8 research propositions regarding hybrid organizations. Wilson and Möller (1996) point to that study concerning hybrid organizational forms have mainly been related to studying mergers, acquisitions and joint ventures.

Wilson and Möller (1996) propose therefore using the “hybrid organizations” framework to study supplier relationships since “..their concept of a new hybrid structure emerging when two organizations join together in a relationship that requires intimacy is a powerful and compelling concept” (ibid. p.59). The challenge posed by the co-creation model is in “...establishing ambiances that program consumer freedom to evolve in ways that permit the harnessing of consumers’ newly liberated, productive capabilities”(Cova et al. 2011). This creates a fresh new management challenge in securing competitive advantage, one where players are relatively equalized in relation using power and where they form an ethical standpoint are viewed seeking openness. In this study we accordingly focus on two of these propositions which we have organized in an inter-causal manner: 1) value creation viewed in the context of 2) supplier arrangements. Note that we apply a balanced terminology, since the term “purchasing” as well as “sales” represents a specific perspective to transactions denoting supplier arrangements as relationship features embedded in business relationships.

Following the co-creation logic, companies develop mutually the dyadic business relationship context to technically develop interaction to secure customer value objectives. The network is more uncontrollable provided that it consists of a conglomerate of actor relationships. Within business relationships, transactions represent a fundamentally vital form of activity facilitating the transfer of title to a configuration of product, service and information entities denoted as the supplier offering. These transactions may be classified as degrees of from arms-length relationships, involving sole value creation type transactions, to “joint value creation” type transactions (Grönroos 2011). This underpins that there are degrees of actor closeness regarding value co-creation in actual business relationships. Borys and Jemison (1989) point to sources of variation in value creation in hybrid organizational forms associated with mutual understanding, types of dependencies (Thompson 1967), and more problematic management. Provided that value creation in hybrid organizational forms is associated with variation this brings to awareness a research question whether it is beneficial for the actors involved in a business relationship at all times to increase the degree of co-creation. We seek accordingly to apply value co-creation in our study, not as a normative managerial imperative, but rather to, at this phase of research inducing its characteristics as an empirical phenomenon and thereby develop empirically based theory or model indicating factors causing variation in the value co-creation both in the context of a single business relationship as well as variation in co-creation between business relationships.

Literature-based discussion

Within the business relationship interaction represents basis for learning in both an operational and long-term perspective. However, literature on how to actually implement and use value co-creation as a business process is limited. B2B marketing literature predominately concerns developing value co-creation as a management principle rather than taking this principle to business practice. This is relatively clearly expressed in how Vargo and Lush (2004, 2008) describe their service-dominant (SD) logic as a new view of marketing as opposed to the traditional goods-dominant (GD) approach. Literature on hybrid organizations provides fundamental guidelines as to conceptualizing variations in supplier-purchasing customer relations (Thorelli 1986, Borys and Jemison 1989, Wilson and Möller 1995).

In this study we seek to model value co-creation more closely to operations based on a classification of business relationship: 1) purpose, 2) boundary definition, 3) value creation and 4) hybrid stability (Borys and Jamison 1989) with the aim to better understand how and when to implement and operate value co-creation processes in business practice. It is therefore a fundamental assumption that the appropriateness of implementing value co-creation as a guiding principle of supplier-purchasing customer interaction varies. We seek to clarify the nature of variation in appropriateness of implementing value co-creation in terms of strategic outlook as well as daily operations in a network setting consisting of multiple interacting business relationships. To seek this linkage with operations it is vital to take into consideration some emergent critiques of S-D logic with its embedded notions of value co-creation. Chan et al. (2010) point to how customer participation in value creation may imply job stress for those involved in increasingly intensified interactions between the supplier and purchasing customer. The same authors also point to how participation in value creation may vary across different cultures.

Lindgren et al (2012) also point to that it is unrealistic to view all business relationships as subject to intense value co-creation. In line with Gadde et al. (2010), arms-length business relationships may be called for when trading simple standardized products. Furthermore, once a long-term contract on a purchasing a relatively standardized component has been agreed upon, the transactions within the contract period may accordingly be relatively automated limiting the intensity of co-creation.

From a network perspective Ford (2011) points out that co-creation in relationship may involve a wider network context of the supplier having sets of business relationships, as well as a purchasing customer being impacted by their set of business relationships. Furthermore, each transaction will from a network perspective involves networking; co-creation involving more than encounters embedded in single business relationships. Networking to achieve value co-creation involves accordingly managing a multiplex number of business relationships in relation to a specific transaction. Since each business relationship has unique characteristics networking in relation to transactions increases value co-creation complexity. Interaction in transaction-related network of actors to secure supply-related operations may involve a diverse set of activities such as logistics support, finance, payment, government approvals, subcontracting etc. A firm often outsources such activities since these activities demand specialized resources increasing the numbers of contact-points involved in value co-creation. On the other hand, the importance of networking may be downplayed in relation transactions involving purchase on non-strategic mass-produced items (Kraljick 1983).

Developing understanding of variation in value co-creation is proposed studied through closer investigation of “supplier arrangements” (Borys and Jemison 1989) with focus on:

Information, goods and service technology involved.

Co-creation involving communication and information sharing in the business relationship.

The network context of each business relationship the supplier arrangement is embedded in.

This provides an approach to studying value co-creation applying the business relationship as the unit of analysis taking into consideration connectivity features of each business relationship with other business relationships to distinguish variations in value co-creation processes embedded in specific business relationships. We view accordingly the transaction as a process distinct from operations (a set of different value-creating processes). Value co-creation represents a specific way to organize and carry out the transaction process prior to, during and after the transaction event itself. Furthermore, this evokes a further area of research related to co-creation based on a detachment between the actual value-co-creation process and operations where value creation takes place. Interaction between operations and value co-creation may also represent a cause for variation in value co-creation that may be detected by evoking the technology involved in operations and how this technology impacts on value co-creation.

Value co-creation as a management principle, although here described complex at a strategic level, the actual co-creation process is apposed to exhibit variation including degrees of complexity when actually used to support operations. Co-creation processes may take place in relatively simple unimportant business relationships as well as in the more strategically vital ones. In addition, the actual co-creation process may vary from simple to complex in a same business relationship depending on a range of factors including the network atmosphere (Gadde et al. 2011). These are features that may be classified in accordance with theory on hybrid organizations (Borys and Jamison 1998). In this study an operations-based approach to value co-creation is furthermore merged with a network approach. This means that focus includes directing attention to the technical aspects of value creation through logistical flows of goods, information, people and monetary objects (Heskett et. al 1973) in networks of business relationships as perceived from a “focal actor” viewpoint. By “focal actor” we mean the research object in focus and not necessarily a dominant supply chain player in its empirical network setting. This view of network-embedded logistics flows is weighed against a picture where value creation takes place in multiple more or less coordinated interacting value creating flows of monetary funds, people, goods and information managed by different actors.

The reason for developing this more complex approach to managing value co-creation is that a company should economize its co-creation efforts. The firm must learn to know its business relationships, how they interact in relation to individual transactions as well as in a more long-term setting. This is important since transactions and supply transformations vary, so also must co-creation vary. This is essentially because value co-creation should also imply developing business practice. Value co-creation is a process involving measurable costs. The co-creation process should be designed adapted to both individual (short-term) transactions as ongoing networks of (long-term) business relationships. Therefore, value co-creation in business relationships embedded in industrial networks is proposed a multifaceted management principle involving managing interactions between a network of actors involved in transactions and supplies of goods and services (value creation through transformation – “flows”) that may be modeled as simple and static to complex and dynamic interaction processes. This interaction is hypothesized as impacted by technical features of flows of goods, information, people and monetary objects these actors manage internally and in relationship to other actors. In this manner we attempt to model linkage between co-creation in line with SD-logic and operations.

Purpose

This study views value co-creation as a business process interlinked with other business processes. Value co-creation understood as a process makes it a part of operations and at the same time it is closely interlinked with transactions. Operations are manageable at an operational level. Is the co-creation process manageable or is it an uncontrollable product of interactions? Merging this view with a network view increases the complexity of value co-creation. Value creation in general, in different business relationships as well as networking in relation to a specific transaction, involves interactions not only between the supplier and purchasing customer, but also with a range of different actors both in a short term as well as from a long term perspective.

The purpose of this study is accordingly to evoke at a relatively strategic level the embedded nature of value co-creation in a network setting through searching for at core for empirical evidence of how value co-creation both supports and is impacted by operations. Through uncovering interaction between what we model as a hybrid organizational context of value creation through flows involving “supplier arrangements” (Borys and Jemison 1989) we seek to detect how 1) technical features embedded in the business relationship, 2) organizational features of exchange including the design of communication processes, and 3) interaction between heterogeneous business relationships may expand understanding of variation in value co-creation. There is potential for modeling this view.

Method

A case study of a logistics service provider in the petroleum logistics sector in Norway is investigated together with its various business relationships. The company owns and operates location where they themselves carry out a range of logistical services including port, terminal and materials handling facilities. In addition, they rent out parts of these facilities to specialized companies servicing the offshore petroleum industry in various manners. The most evident customers are the oil companies operating the Norwegian oil fields.

This study has already been initiated and due for completion by March 2013. It will involve multiple interviews with the focal company (different specialists) as well as interviews with their suppliers and customers. It has already been detected that the network configuration is not limited to a hub and spoke configuration since some actors the focal company has business relationships with have direct business relationships with each other not involving the focal firm. Interviews will accordingly also cover this form of complexity involving value co-creation by-passing the focal firm. Since this study is limited in scope, and involves accounting for a range of different potentially very complex interactions, the level of detail in describing this detail must be limited. This will involve developing a research model for guiding upcoming inquiry.

Proposed Findings

This study is not concluded. However it is envisioned that value co-creation may be modeled at a strategic level from the ideas described in the discussion of the analytical framework.

The main contribution is that this model may be illustrated with our upcoming empirical findings. These findings may refine our current working model provided in as text in the preceding discussion. It is also expected that new and unexpected insights will emerge through our interactions with the companies in question.

Contribution

Modeling value co-creation framework that evokes variation in co-creation processes supporting operations as well as impacted by the nature of operations within and interlinking firms in dyadic business relationships. Furthermore, this view is expanded to include both long-term network as well as more short-term networking. Importantly, the co-creation process is seen as a form of networking that seeks to couple the transaction with operations in a network setting to secure customer value. The important aspect of this is that customer value is revealed as dynamic, a factor that is believed subject to learning in an empirical network setting. From a normative viewpoint, value co-creation should accordingly be managed as a process closely tied with operations (also processes); a value creating flow interacting with operations (which here are not viewed as necessarily limited to a single firm often spanning firm boundaries). These understandings are preliminary.

In relation to business practice this proposed model lays grounds for companies economizing their co-creation efforts. We believe all transactions involve co-creation, but varying costs are demanded in relation to different co-creation efforts from both a long-term and a short-term perspective.

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Examining the Role of Alliance Management Capabilities in Technology Transfer: A Configurational Analysis from the Technology Transferor's Perspective

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Introduction

Technology transfer has evolved as an important means to acquire technological knowledge from external partners. Technology transfer is a strategic (technology) alliance that involves the movement of know-how, technological knowledge, or technology from one organization to another (Bozeman, 2000). According to Lichtenthaler and Lichtenthaler (2010), most technology transfers are primarily one-way transactions. They involve one transfer partner that is mainly the technology source (technology transferor), another transfer partner that is the technology recipient (technology transferee), and the flow of technology that occurs primarily in one direction. Typical examples for technology transferors include firms that exploit their own technology in outbound open innovation processes (Lichtenthaler, 2010) as well as universities and research centers that engage in industry-university collaborations to disseminate innovative technologies and support its application in industry (Lai, 2011). Within this study, we aim to explore how technology transferors' alliance management capabilities relate to technology transfer success. More specifically, we aim to determine configurations of management routines that help enhance technology transfer success. Knowledge of these factors may help research centers and universities increase efficiency and effectiveness of interorganizational collaboration with companies. In addition, the findings of this study may help improve the application of novel technology in practice.

Research Framework

Figure 1 outlines our research framework. As can be seen in Figure 1, we assume that alliance management capability positively relates to technology transfer success. Alliance management capability refers to a firm's capacity "to purposefully create, extend, or modify the firm's resource base, augmented to include the resources of its alliance partners" (Helfat et al., 2007, p. 66). Prior research agrees upon the fact that alliance management capability is a multidimensional construct relying on organizational routines that represent rule-based behavioral patterns for interdependent corporate actions (e.g., Schilke and Goerzen, 2010). Based on prior research, this study specifies alliance management capability to consist of four components, namely alliance proactiveness, alliance transformation, interorganizational coordination, and interorganizational learning. In what follows, we briefly explain each of these routines.

[Insert Figure 1 about here.]

Alliance proactiveness refers to a firm's "efforts to identify potentially valuable partnering opportunities" (Sarkar, Echambadi, and Harrison, 2001, p. 702). Proactive firms seize new opportunities by scanning the environment and taking preemptive action in response to the opportunity. *Alliance transformation* refers to the flexibility of transfer partners to adapt the transfer process in order to react on changed conditions (Reuer and Zollo, 2000).

One typical characteristic of technology transfers is that perfect fit and seamless interaction between both partners—although desired—oftentimes cannot be established from the very beginning. Consequently, adjustments are required to establish effective and efficient collaboration (Reuer and Zollo, 2000). *Interorganizational coordination* represents a further relevant facet of alliance management capability. Interorganizational coordination relates to the governance of individual alliances. Interorganizational coordination ensures that alliances are governed efficiently and that the legitimacy of transaction between the partners is enhanced. *Interorganizational learning* refers to the ability to acquire and utilize technological knowledge throughout the technology transfer process (Lane and Lubatkin, 1998). As the transfer of technological knowledge and technology is the primary objective of technology transfer, the capability to effectively transfer knowledge from the alliance partner plays a central role for success.

We expect alliance management capability will increase technology transfer success. Technology transfer success refers to the degree to which the transfer project is effective and efficient. The above notion is supported by interorganizational exchange theory (Frazier, 1983). In addition, the hypothesized relationship is backed up by prior research on alliance management. For example, Schilke and Goerzen (2010) show that firms' alliance management capability is an important predictor of alliance success.

Research Approach

This study includes a survey with key informants from multiple universities and research centers (i.e., technology transferors). Each department chair or project leader was contacted to inquire whether his/her institution previously participated in a technology transfer project. Data were collected in a web-based survey. To this end, the questionnaire was presented on a website. The link to the questionnaire was administered via e-mail. In addition to the questionnaire, respondents received a cover letter inviting them to participate in the survey. Furthermore, the cover letter informed respondents that there was no right or wrong answer and that all data were collected anonymously. In sum, 85 respondents participated in the survey.

A standardized questionnaire served as the main data collection instrument. To capture the four dimensions of alliance management capability, we used prior research from Schilke and Goerzen (2010). Furthermore, we used five items from Bucklin and Sengupta (1993) to capture technology transfer success. All construct measures were presented on five-point Likert-type rating scales anchored “fully agree” and “fully disagree”. The questionnaire was pre-tested in order to assess its clarity and consistency. Based on the results of the pre-test, ambiguous questions were clarified and wording was adapted where necessary.

We tested our hypotheses by applying structural equation modeling (SEM) and using the partial least square (PLS) approach. Data analysis started with the estimation of the measurement model. To assess the reliability and validity of our multi-item constructs, we used the SPSS 20.0 and the SmartPLS 2.0 software programs. After establishing the measurement model, we analyzed the structural model. For approximating the second-order construct alliance management capability the hierarchical component model was applied (Wetzels et al., 2009).

In addition to SEM, we employed fuzzy set qualitative comparative analysis (Ragin, 2008) to gain deeper insights into the relationship between alliance management capability and technology transfer success and to explore combinations of causal conditions that contribute to the outcome of interest, that is, technology transfer success. Fuzzy set QCA is a set-theoretic approach that builds upon the premise that relationships among different variables are best understood in terms of set membership. With fuzzy sets, however, membership in sets is not restricted to binary values of 1 and 0 but may instead be defined using membership scores ranging from ordinal up to continuous values (Rihoux and Ragin, 2007). Fuzzy set QCA allows researchers to specify their constructs, such as the degree to which certain management routines and practices are actually implemented in an organization (Fiss, 2007).

Results

Table 1 illustrates information on our construct measures. A complete list of items can be provided from the authors on request. As can be seen in Table 1, all values for coefficient alpha are greater than the threshold value of .7 (e.g., Nunnally, 1978). In addition, composite reliability (CR) and average variance extracted (AVE) exceed the standards of .6 and .5, respectively (Bagozzi, Yi, and Philipps, 1991). Following Fornell and Larcker (1981), we assessed discriminant validity by comparing the average variances extracted with the squared correlations for all pairs of factors. Here, all pairs of constructs met this criterion. In sum, the results reveal satisfactory levels of reliability and validity.

[Insert Table 1 about here.]

We used several criteria to evaluate our structural model, including the variance explained by the model in terms of R^2 for the dependent variable, the size, t-value, and significance level of the structural path coefficients. The t-statistics were estimated by applying a nonparametric bootstrapping procedure. As the results reveal, the R^2 -value was .44 for technology transfer success, which indicates that the independent variable explains a substantial percentage of the variance of the dependent variables. Pertaining to hypothesis testing, the data analysis reveals a significant positive effect from alliance management capability on technology transfer success ($\gamma = .66$, $p < .01$).

Table 2 presents the results from the fuzzy set analysis of technology transfer success using the notation for solution tables from Ragin and Fiss (2008). Fuzzy set QCA reports complex, parsimonious and intermediate solutions. In this study, we present the intermediate solution, which includes simplifying assumptions based on easy counterfactuals. As the findings of this analysis show, two configurations of alliance management capabilities lead to technology transfer success: (1) technology transferors should have alliance proactiveness, alliance transformation, and interorganizational learning, but not interorganizational coordination, (2) technology transferors should show no alliance proactiveness, but alliance transformation, interorganizational coordination, and interorganizational learning. In order to assess the importance of different configurations of causal conditions, Table 2 reports coverage values. Coverage scores refer to the percentage of cases that exhibit a given configuration and the outcome. As an inspection of Table 2 reveals, overall coverage of the combined models is 33 percent. In addition, raw coverage values for solution 2 is considerably greater than for the remaining solutions, indicating greater explanatory power in predicting technology transfer success.

[Insert Table 2 about here.]

Discussion

The purpose of this study was to shed light on the critical role of alliance management capabilities for technology transfer relationships between universities and companies. In this study, we took the perspective of the technology transferor and examined (1) how alliance management capability impacts technology transfer success, and (2) what configurations of management routines lead to technology transfer success. The findings of this study support the view that alliance management capability plays a key role to achieve successful technology transfer projects. In addition, our findings show that two configurations lead to successful technology transfer projects. The two solutions differ to the extent that alliance proactiveness and interorganizational coordination are present (or absent). However, both solutions reveal alliance transformation and interorganizational learning as relevant routines that affect technology transfer success. From a theoretical perspective, this article contributes to extant literature by developing and empirically testing a model which explores the relationship between managerial routines (and more specifically, configurations of managerial routines) with technology transfer success. From a managerial perspective, this study extends existing knowledge on how to design and conduct technology transfer activity. Technology transferors, that is, universities and research centers, which typically seek to disseminate innovative technology and supports its application in practice, should develop necessary management routines in order to increase technology transfer success. As the findings show, alliance transformation and interorganizational learning are important routines that lead to technology transfer success. Thus, in order to increase efficiency and effectiveness of technology transfer projects, technology transferors should develop strategies and management systems that deliberately foster development and practice of these organizational routines.

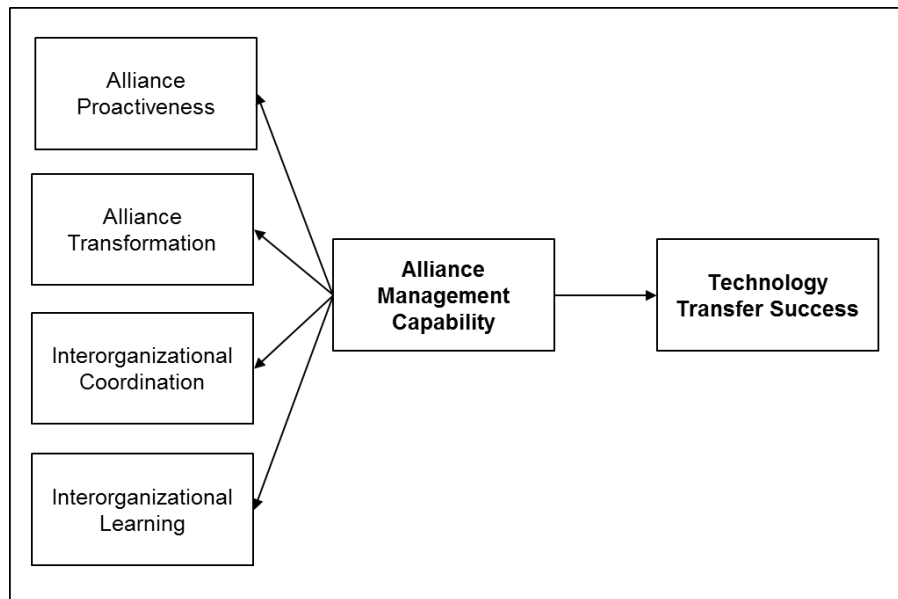
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Figures

Figure 1. Conceptual framework



Tables

Table 1. Information on construct measures

<i>Scale</i>	<i>No. of Items</i>	<i>Exemplary Item</i>	<i>CA</i>	<i>CR</i>	<i>AVE</i>
Alliance Proactiveness	3	We actively monitor our environment to identify transfer partnership opportunities.	.86	.91	.78
Alliance Transformation	3	We are willing to put aside contractual terms to improve the outcome of the transfer.	.79	.88	.70
Interorganizational Coordination	3	We have the capability to learn from our transfer partner.	.91	.94	.84
Interorganizational Learning	4	Our activities with our transfer partner are well coordinated.	.89	.92	.75
Technology Transfer Success	5	The transfer project can be regarded as successful.	.85	.89	.62

Notes: CA = Coefficient Alpha; CR = Composite Reliability; AVE = Average Variance Extracted.

Table 2. Intermediate solution of fuzzy set QCA

<i>Configuration</i>	<i>Solutions</i>	
	<i>1</i>	<i>2</i>
Alliance proactiveness	●	○
Alliance transformation	●	●
Interorganizational coordination	○	●
Interorganizational learning	●	●
Consistency	.96	.89
Raw coverage	.19	.30
Unique coverage	.03	.14
Overall solution consistency	.89	
Overall solution coverage	.33	

Notes: ● = presence of a condition; ○ = absence of a condition

“WHAT DO WE NEED TO TALK ABOUT?”

AGENDA SETTING, ISSUE MANAGEMENT AND ISSUE BASED TACTICS IN BUSINESS-TO-BUSINESS SALES NEGOTIATIONS

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Abstract

This paper focuses on the question which influence the nature of negotiation issues (kind, number, order) has in B-to-B sales negotiations and how exchange parties try to use these issues to their benefit. The analysis is based on thirty expert interviews conducted in selling and buying firms in the industrial and service project business. Through a grounded theory approach recurring issue patterns are identified. Second, we unveil five distinct issue based negotiation tactics used in a differentiated manner between sellers and buyers. Third, our analysis shows that buyer and seller role, industry type, and the type of purchasing process (privately placed orders vs. structured bidding processes) are important boundary conditions for issue management and agenda setting in B-to-B sales negotiation.

Keywords: Negotiation, Sales, Procurement, Project Business, Competitive Bidding, Grounded Theory.

1. Introduction

On business markets, most transactions are the result of a negotiation process between supplier and customer organizations (Eliashberg, Lilien & Kim, 1995). Thus, questions of how to prepare for and how to conduct such negotiations are of great importance to sales and purchasing managers alike. Negotiations determine whether a selling firm manages to close a deal (Wilken, Cornelißen, Backhaus, & Schmitz, 2010) and whether the buying organization finds the most suitable partner in terms of costs and benefits for a given problem. If an agreement can be reached, it defines what each party shall give and take, the corresponding economic impact, and how well the parties manage to integrate their various interests, i.e. reach win-win solutions.

The importance of negotiations in business-to-business (B-to-B) marketing has attracted a constant research interest. Today, we know quite a bit about the influences of who negotiates, (e.g. personality factors; Barry & Friedman, 1998; or teams; Patton & Balakrishnan, 2012), of how negotiations unfold (e.g. negotiation behavior, information processing; Wilken et al., 2010), and of where, i.e. under which circumstances, negotiations take place (e.g. power-dependence relations; McAlister, Bazerman & Fader, 1986; or communication media; Purdy, Nye, & Balakrishnan, 2000). However, the question of what is negotiated has received a lot less attention. In other words, we do not know a great deal about the tangible issues and their strategic and tactical use in B-to-B sales negotiation and about the agenda into which they assemble.

In a recent state-of-the art paper on negotiation research in the marketing discipline Herbst, Voeth and Meister (2011) call for “undertaking a more comprehensive examination of suc-

ful strategies and tactics”. This call for research is especially applicable to issue management and agenda setting. A negotiation issue can be conceived as an aspect of the discussion that needs to be solved in order to come to an agreement (Bendahan, Camponovo, Monzani & Pigneur, 2005). Issue management describes how parties treat the negotiation issues, e.g. which and how many issues they bring to the table, in which order and combination issues are introduced, and ultimately how issues are used strategically and tactically to come to an agreement or to arrive at higher economic profit. The negotiated issues and their order make up an agenda which is a means of structuring a discussion between individuals or groups (Patton & Balakrishnan, 2012).

Against this backdrop the current study aims at creating an understanding of the most important aspects of issue management and agenda setting in B-to-B sales negotiations. Specifically, it tries to answer the following research questions:

1. Which and how many issues are typically raised in B-to-B sales negotiations? Which distinct issue or agenda related patterns in the negotiation process can be identified?
2. How do negotiators (salespeople/purchasers) use issues and/or agendas in their negotiation tactics and strategies and to what end?
3. Which are relevant boundary conditions for issue management and agenda setting? Can differences be observed between different industries or roles (buyer, seller, different departments)?

The rest of the paper is structured as follows: After giving an overview about issue management and agenda setting in negotiation in the literature, we present our qualitative, exploration-oriented research methodology. The results section proceeds along the three research questions and is followed by a discussion with implications for research and practice.

2. Issue management and agenda setting in negotiation in the literature

Negotiation can be defined as “a process by which two or more parties attempt to resolve their opposing interests.” (Lewicki, Barry, & Saunders, 2010, p.6). In the B-to-B marketing realm, negotiations are a major element of the exchange process between organizational decision making units (Eliashberg et al., 1995). Because our interest is in negotiation issue management and agenda setting, it is useful to conceptualize negotiation as the whole process from first attempts to solve a customer problem to concluding a legally binding contract, not just as the final personal encounter before signing an agreement. Only with this wide perspective on negotiation can we illuminate the various important patterns, strategies and tactics involving negotiation issues.

Although the negotiation agenda has been mentioned as a significant structural characteristic of a negotiation as early as the 1950s (Schelling, 1956), conceptual and empirical research on this topic is still scarce. Rubin and Brown (1975) identify the number of issues as well as their ordering as important determinants of bargaining outcomes. They also raise the question of issue interdependence and ask whether issues should be negotiated simultaneously, in subsets or in a sequential fashion. Raiffa (1982) discusses how more compared to less issues can be used to cre-

ate more value for both parties because differences in interests, resources, and priorities can be leveraged. Balakrishnan, Patton, and Lewis (1993) compare simultaneous with sequential bargaining of negotiation issues and specify strategic considerations under which different agendas, i.e. varying issue orders, should be beneficial to negotiators under sequential bargaining (see also Fershtman, 1990).

The few empirical studies find that negotiating issues simultaneously compared to sequentially yields more efficient (win-win) outcomes in two (Froman & Cohen, 1970) and three (Thompson, Mannix & Bazerman, 1988) party negotiations. This result is replicated by Patton and Balakrishnan (2012) under the condition that a single seller either negotiates simultaneously with a team of buyers or sequentially with each member of the buying team. Naquin (2003) finds that more compared to less issues lead to less negotiator satisfaction.

One main reason for the relative lack of knowledge on the topic of issue management and agenda setting may reside within the experimental tradition in negotiation research: In nearly all experimental negotiation tasks the number of negotiable issues is fixed and issues are assumed independent from each other. This forecloses analysis of many issue management related aspects that are relevant in practice, in line with Eliashberg et al.'s (1995) conclusion on generalizations in business marketing negotiations: "A clear gulf exists between research and real-world problems. Research articles and case materials that reflect actual bargaining issues overlap to a disappointing degree. We need more researcher-practitioner interaction to allow researchers to better understand the important elements of the real world negotiations problems they are researching." (p. G56)

3. Method and Analysis

Because of the low degree of maturity of the research area we followed an exploratory, qualitative approach. A semi-structured interview guideline addressed the above mentioned research questions with regard to typical negotiation processes, not a single negotiation. We conducted 30 expert interviews lasting between 28 and 81 minutes (average duration 46 minutes). 24 interviews were conducted over the phone, 6 in person. We gained approval from all interviewees to audiotape the interviews. In order to gain a wide understanding of the subject under investigation we recruited our experts from firms of substantial size (turnover ranging from EUR 100 m to EUR 82.5 bn, average EUR 19.7 bn) that are active in the project business. In this business type (Backhaus & Mühlfeld, 2005), transactions concern tailor-made, complex offerings with substantial complexity, volume and risk. This type of transaction leaves ample room for issue management and agenda setting in sales negotiations. To potentially obtain some meaningful variance in the data we specifically looked at the industrial project business (mostly infrastructure, two digit standard industry classification (SIC) codes

15, 16, 34-38, 40) as well as the service project business (management consulting, two digit SIC code 87). Our experts had an average relevant professional experience of 12 years, ranging from 4 to 30 years. 24 of them held jobs on the selling side of their firm, while 6 were professional purchasers. Table 1 exhibits details of our interviewees and their companies.

Insert Table 1 around here

To analyze the empirical material all interviews were transcribed and subjected to open, axial and selective coding (Corbin & Strauss, 2008). We looked for common negotiation issues, their relevance and number, tried to carve out meaningful differences in negotiation process pattern depending on various boundary conditions (e.g. industrial vs. service projects, selling vs. buying role) as well as the use of issue and agenda based negotiation strategies. In line with the recommendations by Tuli, Kohli and Bharadwaj (2007) we focus our discussion on aspects and characteristics (1) that are not specific to a particular context (e.g. firm), (2) that were mentioned by a number of interviewees, and (3) that provide interesting and meaningful insights and go beyond the obvious.

4. Results

4.1 Recurring issues in B-to-B sales negotiation, their structure, and pattern

Sales negotiations specify what each party shall give and take in a potential exchange. Hence, both the core offering, often in the shape of requirement specifications and a delivery scope, and total price/cost were the negotiation issues most often cited by our experts, followed by flanking issues such as delivery time, additional services, warranties, guarantees and liabilities, payment terms, ancillary costs (e.g. travel expenses), task allocation/customer involvement, and success fees or penalties. Of course such an enumeration is not very exciting per se; but two additional points warrant interest.

First, with regard to issue structure, the experts stressed the interdependency between some of the issues; e.g. “only when all obligations and risks are known can we calculate a price”, one vice president (VP) sales said (interviewee Industrial 4). In management consulting, one interviewee (Services 9) stated that “without knowing the exact project objectives and deliverables, I can’t put up a suitable team (in terms of structure and numbers) and hence I can’t quote a price.” These statements are in stark contrast to the assumption on issue structure in nearly all negotiation lab studies that model issues as independent.

Second, and in direct consequence of the former, our investigation shows a recurring three-phase, issue subset pattern which differs between the industrial project business and service (consulting) projects. It is exhibited in Figure 1. Business partners normally go through these issue subsets sequentially; only when no agreement on price can be reached do they go back and discuss various issues from the subsets simultaneously.

Insert figure 1 around here

Why do we find such a combination of simultaneous and sequential negotiation when laboratory research tells us that simultaneous bargaining would be better in terms of agreement rates and joint gain (Patton & Balakrishnan, 2012)? Reasons include practical and tactical motives: On the practical side, the sheer number of issues (e.g. up to 5,000 technical specifications, interviewee industrial 9) and the various firm functions involved in negotiation make a separation into subsets expedient. Also, the technical core offering may take most of the time to discuss and cannot be changed easily at the end of negotiations. The dependence of price on technical and commercial terms has already been mentioned. On the tactical side, discussing technological issues first helps suppliers disguise their cost structure to a certain degree. This seems a worthwhile motive in times when purchasing departments attempt to gain transparency on supplier costs. Another sales manager (interviewee Industrial 8) points out that if price was discussed first he wouldn't have the possibility to argue for the differentiating technological features compared to competitors. In consulting projects, discussing and agreeing on the project scope first creates client commitment to the discussed solution and helps a supplier win the project. Both sales and purchasing managers add that price is normally the most conflict-laden issue: If discussed too early it might have negative repercussions on other issues. Fixing technological issues (industrial) or project deliverables (consulting services) first also makes sense for the buying organization: Only then do competing offers become easily comparable, and the purchasing department's skill in the commercial and price negotiations can be leveraged to a maximum.

4.2 Issue and agenda based negotiation tactics

While our research shows recurring patterns in terms of issue subsets negotiators still use certain issues to try and gain an advantage. In the present study we identified five issue based negotiation tactics.

First, in issue number tactics, negotiators may try to limit the number of issues (e.g. to five issues) discussed simultaneously. The limited number of issues makes negotiation less complex, facilitates a more knowledgeable discussion about these core issues, and ultimately leads to more satisfying results as some purchasers point out (interviewees Purchasing 3 & 6). However, the opposite may also be observed: If a purchasing department is willing to negotiate many issues it signals to the supplier that it does not only want to squeeze on price. More issues simultaneously in a limited amount of time can also be used to make a supplier agree on something s/he does not fully oversee, says the same purchasing manager (interviewee Purchasing 5). Suppliers use more rather than less issues, too: "If we include in our offer more nice-to-have elements, we can later concede on those and avoid conceding on other issues that are more central to us" explains one partner of a consulting firm (interviewee Services 5). Some purchasing departments have come to realize this tactic and nowadays suppress it from the beginning: "Our requests for proposal (RFP) are so detailed that we can prevent bidders from including issues which we would otherwise have to negotiate away." (interviewee Purchasing 2)

Second, issue order tactics concern the order in which issues are addressed. They become especially relevant in the final rounds of negotiation. Interestingly, this type of tactic is mostly employed by the purchasing side. There seems to be a consensus among all our experts that the customer sets the agenda, i.e. the order of issues to be discussed. It comes in many variations, e.g.

easy or difficult issues may be negotiated first, interdependent issues may be discussed together or be separated for tactical reasons, an agenda may be communicated or not. Discussing the most important issue first (often price) leaves room for going back to it again and again, when new arguments in favor of the purchasing side arise. When negotiation partners seem far apart may be another instant in which the most important or difficult issue would be negotiated first. Reasons for not communicating an agenda include a possible distributive advantage, e.g. because then the supplier can't plan his concessions. In contrast, the purchasing side may be better off communicating it beforehand in negotiations that are more about problem-solving than distributing resources.

Third, issue exaggeration tactics are mostly used by the supplier side and come in two variations. In case one, the supplier tries to increase the buyer's perception of the importance of an issue on which it can easily concede later on. Because of the information asymmetry between buyer and seller the buyer somewhat relies on the supplier's information to construct his own preference structure. In case two, the supplier exaggerates the available options on an important issue to the supplier and proposes an extreme option that leaves him ample room for concessions.

Fourth, last minute issues (or demands) are a tactic mostly employed by the purchasing side. Just before closing the deal, one last issue is raised by the purchaser, sometimes portrayed as having been forgotten. Without resolution of the issue or demand the deal can't be closed. This tactic is directed at receiving one last unilateral concession from the supplier. Because the supplier is normally already quite committed to the deal he often begrudgingly agrees to the demand. However, our sales side experts stress that this leaves an especially bad feeling from the negotiation which may have repercussions in future encounters.

Fifth and finally, the sales side sometimes uses what we call here stealth issue tactics. When a formal offer is made it not only includes all the core offering specifications, but may also contain a footnote on e.g. ancillary costs, the stealth issue. When presenting the offer in a personal meeting the stealth issue is not actively raised. If the purchasing side overlooks the stealth issue in the negotiation and a contract is sealed it nevertheless becomes part of the contract.

4.3 Boundary conditions for issue management and agenda setting

Our presentation of issue interdependence, issue pattern and issue based tactics reveal the first two important boundary conditions for issue management and agenda setting in B-to-B sales negotiations: industry and role (Geiger et al., 2012).

While both the industrial and the service project business displayed a three issue subset pattern the specific subsets and the type of issue interdependence differed. In the industrial project business separating the technological scope from the commercial scope (issue subsets

1 and 2) is mainly due to different people and departments involved in discussing the different issue subsets. Although a certain functional interdependence may exist between subsets 1 and

2, it is limited for many commercial issues. In contrast, in the services project business, project resources (issue subset 2) functionally depend on the outcome of project scoping (issue subset 1),

but is generally discussed by the same people, at least from the sales side.

Concerning role, this study shows that sellers and purchasers use partially different issue based negotiation tactics. This result seems to be mostly driven by role properties and conceptions. Both issue exaggeration tactics and stealth issue tactics rely on the selling side's information advantage vis-à-vis the buying side. Issue order tactics or agenda setting as a tactic by the purchasing side rely on the perception that the "customer is king" and can thus determine the course of action. This role conception is mirrored in the literature on sales behavior which calls for adaptive selling (e.g. McFarland, Challagalla, & Shervani, 2006), i.e. matching sales behavior to the buyer's personality and conduct. Last minute issues and demands also depend on the role property of buyer and seller. Since most modern business-to-business markets are buyer markets, a purchasing organization can more credibly threaten to take a deal to a competitor if the seller does not agree to that last minute demand. Of course this threat can be implicit by the buyer or even only imagined by the seller. But since at the time the last minute issue is discussed the seller considers himself so close to a deal, the economic and psychological pressure to agree to the demand is enormous (Lewicki et al. 2010).

A third important boundary condition which became apparent in the interviews is the type of purchasing process: Issue management and agenda setting differ in privately placed orders and structured bidding processes. In the latter, the issue number and order is more firmly in the hands of the buying organization, the degrees of freedom for suppliers are much more restricted. In private order placing a buying organization may state a problem openly to which a solution needs to be developed. This leaves ample room for suppliers to provide ideas and hence come up with a variety of issues to be negotiated. In contrast, structured bidding processes require the purchasing side to specify rather exactly what it wishes to buy. Those specifications are set as issues in the negotiation process. Some purchasing departments even exclude potential negotiation issues in a tender document, as one interviewee (Purchasing 2) stated. Moreover, both the purchasing side's increased effort into preparing a tender document and the tender document's specifications limit the bidding companies' room for issue exaggeration tactics. Tender documents also often state the buying company's terms and conditions as applying, limiting the room for stealth issue tactics. On the other hand, structured bidding processes can be used by the buyer to set a formal agenda and to use this agenda setting for gaining a tactical advantage, too.

5. Discussion and Future Research

The present study makes several important contributions. First, it shows that the issue structure in B-to-B sales negotiations follows a recurring three issue subset pattern and is hence more nuanced than generally assumed in laboratory research. Second, this study identifies five distinct issue based negotiation tactics addressing recent calls for research (Herbst et al., 2011). Third, our study detects three important boundary conditions for issue management and agenda setting in B-to-B sales negotiation. It is important to note that making these contributions was only possible by using an exploration oriented grounded theory approach.

The results of our study offer exciting avenues for future research on B-to-B sales negotiations. One such avenue may address questions pertaining to issue interdependence and their impact on

negotiation conduct and outcomes. The identified issue based tactics lend themselves to laboratory studies in which their effectiveness may be tested. Finally, specifying the exact effects of the identified boundary conditions on negotiation outcomes seems a worthwhile endeavor.

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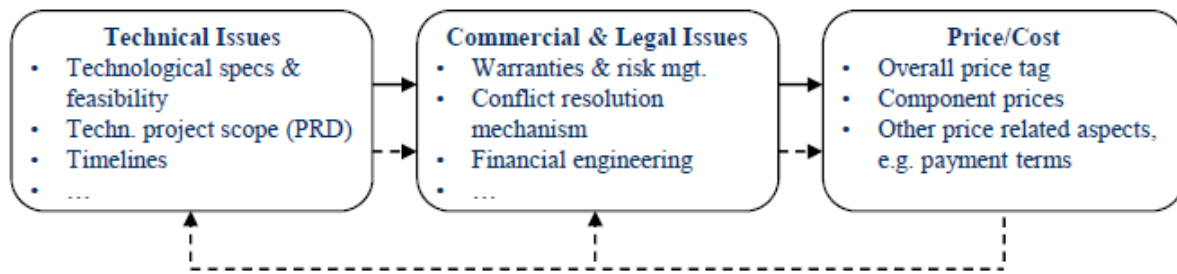
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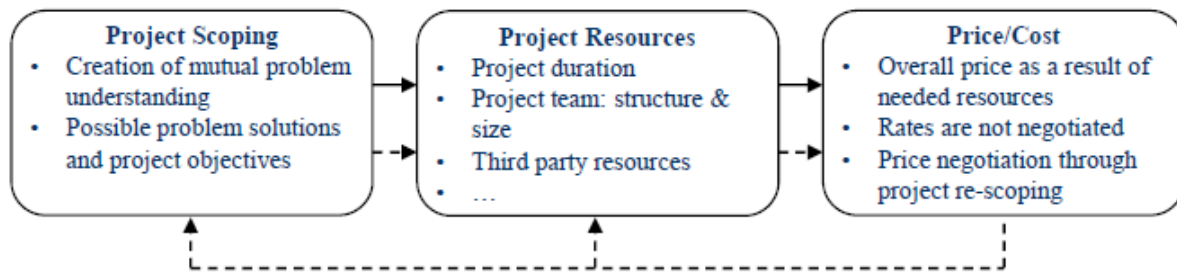
Interviewee	Industry	Turnover [bn. €]	Position	Professional experience [years]
Industrial 1	Building Technology	6.00	Portfolio Manager	7
Industrial 2	Plant Engineering: Gas, Steam, Solar Power	1.60	Project Manager	5
Industrial 3	Plant Engineering Services	0.15	Sales Manager	6
Industrial 4	Plant Engineering: Hydro Power	5.60	Vice President Sales	15
Industrial 5	(Weather) Measurement Engineering	0.10	Sales Director	10
Industrial 6	Construction: Project Development	23.28	Project Developer	6
Industrial 7	Electronics: Solar Power Plants	73.52	Head of Contract Management	10
Industrial 8	Automation and Drives	0.20	Sales Manager	6
Industrial 9	Rail Technology: Trains & Locomotives	15.80	Sales Director	15
Industrial 10	Electronics: Automation and Drives	51.40	Vice President Sales	17
Industrial 11	Rail Technology: Railways	0.13	Sales Director Europe	7
Industrial 12	Steel & Engineering: Slewing Bearings	49.09	Sales Director	30
Industrial 13	Steel & Engineering: Slewing Bearings	49.09	Sales Director	8
Industrial 14	Steel & Engineering: Rings	49.09	Sales Director	N.A.
Industrial 15	Steel & Engineering: Rings	49.09	Sales Manager	22
Services 1	Management Consulting	5.00	Associate Principal	8
Services 2	Management Consulting	0.70	Partner	12
Services 3	In-house Management Consulting	52.85	Director	10
Services 4	Management Consulting	5.00	Associate Principal	8
Services 5	Management Consulting	0.44	Partner	19
Services 6	Management Consulting	24.35	Partner	10
Services 7	Management Consulting	0.12	Partner	18
Services 8	Management Consulting	0.70	Principal	8
Services 9	Management Consulting	0.12	Partner	15
Purchasing 1	Building Technology	0.10	Project Manager Purchasing	6
Purchasing 2	Media and TV	3.60	Category Manager	8
Purchasing 3	Information Technology	82.50	Vice President Procurement	25
Purchasing 4	Information Technology	82.5	Procurement Director	25
Purchasing 5	Media and TV	3.6	Procurement Director	4

Table 1: Interviewee characteristics

Industrial project business



Service (consulting) project business



→ Regular course of action - -> Course of action if conflicts persist

Figure 1: Issue subsets in industrial and service project sales negotiations

HOW SUPPLIER BRANDS AFFECT RETAILERS' WILLINGNESS TO INVEST

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Abstract

This study investigates how brands affect retailers' willingness to cooperate and invest further with suppliers of those brands. There is limited literature on the impact of supplier brands in relationships with retailers. Following a literature review and in-depth interviews, a conceptual framework is tested by means of retailer survey, which shows how four supplier brand benefits affect retailer dependence on the brand, cooperation and willingness to invest further in the brand. Within the framework, the structural model shows a good fit to the data. Retailer dependence on the brand supplier partially mediates between the brand benefits (manufacturer support, financial benefits, brand equity and customer expectations) and retailer cooperation. In addition, brand strength moderates the retailer dependence-cooperation pathway, demonstrating that while high equity brands encourage retailer cooperation, that brand strength does not affect a retailer's willingness to invest.

Keywords: Supplier brands, retailers, dependence, cooperation, willingness to invest.

1. Introduction

This study examines the effects of supplier brands on retailer dependence, cooperation and willingness of retailers to invest in the brand itself. The task of managing supplier's brands with retailers has altered, prompted by changes in retailer practice (Kumar & Steenkamp, 2007) which includes retailer consolidation, an increased emphasis on private labels and category management. These changes have prompted suppliers to alter their corporate strategies in order to improve return on investment for their brands emphasising key account management to enhance the supplier retailer relationship. Furthermore, many suppliers spend much of their marketing support in the form of trade promotion with retailers. This research focuses on three research questions: First, how do supplier brands influence retailer dependence on the supplier's brand? Second, does retailer dependence on the suppliers' brand influence cooperation on matters concerning the brand and willingness to invest further in the brand? Third, does brand strength moderate the brand effects on retailer actions including cooperation and willingness to invest?

2. Literature review

Brands are a useful resource or market-based asset, which enable firms to build external relationships (Srivastava, Shervani & Fahey, 1998). Underlying this market-based assets perspective is the resource-based view (RBV) of the firm, (Srivastava, Fahey, & Christensen 2001). This perspective is useful for understanding how brands and other market-based assets create value for resellers within a channel, leading to competitive advantage. Market-based can also include aspects of business relationships such as dependence and cooperation. Dependence is critical in establishing strong distribution chain relationships, which and benefits both supplier and retailer by ensuring brand availability for end-customers (Basuroy, Mantrala, & Walters, 2001).

Cooperation between retailers and suppliers is also necessary for successful channel management. Cooperation is acting in a way to maximise joint value and involves actions taken by firms in interdependent relationships to achieve similar outcomes. Examples of supplier-retailer cooperation that involve supplier brands include category management and trade promotions (Kumar, 1996). For supermarket and general merchandise retailers, cooperation with suppliers benefits their store assortment and influences profitability (Ailawadi & Keller, 2004). Cooperation also allows suppliers to focus on the category more strategically with retailers and not just emphasise margins or pricing (Pearce, 1996).

Cooperation arises when there is influence and power between supply chain members. Thus, there is a mutual dependence between retailer and supplier. Dependence is defined as the extent to which business performance or goals are mediated by another firm (Ganesan, 1994). Thus no firm is entirely self-reliant and dependence increases for firms when the outcomes of such relationships are of value such as better volume and profit. Retailer dependence also increases where there are few alternatives to the supplier's brands. While dependence is often portrayed as a negative outcome of trade relationships, it is also the glue that helps bind relationships together. When channel members parties are dependent in business relationships, power differences exist.

There are two types of power, one being coercive and the other non-coercive. A non-coercive source of power is the supplier brand, which creates market demand and obliges retailers to carry the brand in the retail assortment often to counter competitors. Within distribution channels, non-coercive sources of power are more likely to encourage retailer cooperation compared with coercive power sources which have the opposite effect (Skinner, Gassenheimer & Kelley, 1992). Skinner et al.'s (1992) research also found that dependence positively influenced cooperation. Higher levels of dependence on a particular brand means that a retailer will make an effort to maintain the relationship with the supplier. As a non-coercive power source, brands help suppliers build retailer relationships through ensuring the end-customer purchases the brand through the retailer.

Thus suppliers of high brand equity lines have more power with retailers who depend on them to generate store traffic. While retailers benefit from closer relationships with suppliers, the opposite can also occur. For instance, suppliers of strong brands may cut distribution costs, which leads to less cooperative relationships (Frazier & Antia, 1995). To counter this channel power retailers have expanded their private label range and have added more niche or minor brands. This expansion reduces the retailer dependence on major brands.

Another aspect of supplier-retailer relationships is the willingness of buyers to invest in supplier offerings and is an important outcome of relationship quality. Supplier reputation affects a buyer's willingness to invest (Suh & Houston, 2010) and also dependence (Kim & Frazier 1997). In contrast, Moon and Sikoo (2004) showed reputation did not affect a buyer's willingness to invest. Hogarth-Scott and Dapiran (1999) found while power and dependence were integral to supply chain relationships, cooperation with retailers on joint activities such as category management helped build commitment.

However many of the studies on the effects of supplier's brands on relationships with retailers (e.g. Biong, 1993) do not address cooperation nor consider the influence of the retailer's customer (Webster, 2000). Webster (2000) highlights a mistaken assumption that brands are only about B2C relationships and that the full implementation of a marketing strategy involves B2B relationships with retailers as well the end-customer. Glynn, Motion and Brodie (2007) identify several benefits of supplier brands for retailers, which include the end-customer as well as other business considerations. These brand benefits include financial benefits, managerial benefits including brand support as well as consumer expectations that the brand would be available in store as well as the market demand for the brand.

3. Research design

The role of brands as a supplier resource for retailers was investigated using a multi-method research design. The design first consisted of exploratory, qualitative research, followed by a confirmatory, quantitative phase. In the first phase, the author interviewed eight retail buyers from the supermarket and liquor industries. Several participants commented that a good relationship was necessary with a certain soft drink supplier in order to perform well in the category (financial benefit). In contrast one person commented the stronger the brand, the greater the likelihood of it being used as a loss leader (brand equity). Another retailer observed that even if the relationship with the supplier was not good, the retailer would not disadvantage themselves as long as customers liked the suppliers' products (consumer expectations). Retailers also commented that they rely heavily on bigger brands (dependence) and were more likely to give suppliers of these brands more appointments and better promotional weeks (cooperation). Because suppliers had followed the retailer's suggestions, those brands were performing better and the retailer responded by distributing the brand to all of their outlets, which indicated a willingness to invest further in the brand.

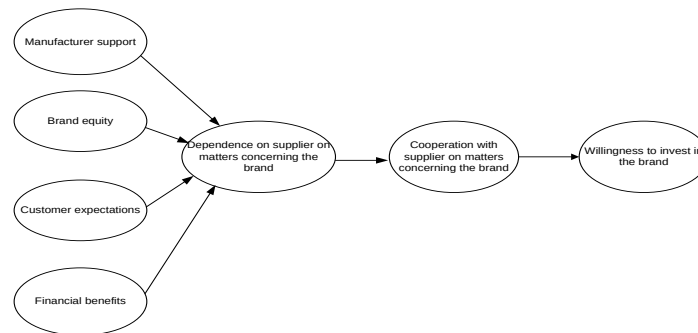
From these interviews, the conceptual model in Fig. 1 was developed and then tested. In this model, four supplier brand benefits influence retailer dependence with the brand (a mediating construct) which in turn influences cooperation towards the brand and then retailer willingness to invest in the brand. These antecedents were based on the literature and the qualitative interviews. The measurement model of these antecedents showed good fit: $\chi^2(59) = 262, p = 0.000, CFI = 0.99, NNFI = 0.99, RMSEA = 0.065$.

Existing scales measured retailer dependence on the supplier (Johnson, 1999) and cooperation on matters concerning the brand (Skinner et al., 1992) and willingness to invest (Kumar, Scheer & Steenkamp, 1995). For the willingness to invest items, retailers were asked if they would support the brand more in the future.

In the second phase, data was collected with a mail survey of supermarket retailers in New Zealand using the key informant methodology. These informants were the managers responsible for product ordering in eight selected categories for each store. A questionnaire was sent to 1404 category buyers in 357 supermarkets. Each buyer rated two brands, a major

and a minor brand from different categories out of eight (a total of sixteen brands). The major and minor brands were identified from each category using the BAV (Brand Asset Valuator) index (Agres & Dubitsky, 1996). Appropriate pre-testing with both retailers and experts in research design was undertaken to ensure that the research instrument was valid and reliable. Seven-point Likert scales recorded the retailers' responses on their dependence on and cooperation with suppliers on matters concerning the sixteen brands as well as their willingness to invest further in the brand. The final sample size was 820, representing a response rate of 30%.

Figure 1: The Effects of Supplier Brand Benefits on Relationship Outcomes



4. Findings

The findings in Table 1 show a good fit of the model to the data: $\chi^2(197) = 796$, $p = 0.000$, CFI = 0.99, NNFI = 0.99 and RMSEA = 0.059 for the full sample. Key fit indices are above the 0.95 threshold, the RMSEA is close to 0.05 and the normed chi-square was 4.0. Turning to the structural pathways, three of the four supplier brand benefits significantly influence dependence. Brand equity and consumer expectations had the greatest effect on dependence followed by financial benefits. However, the manufacturer support pathway to dependence was non-significant. Dependence was significantly related to cooperation, which in turn strongly influenced willingness to invest.

Table 1. Structural model results, full sample, major and minor brands

	Full Sample <i>n</i> = 820		Major brands <i>n</i> = 414		Minor brands <i>n</i> = 406	
Structural pathways	Std. estimate	<i>t</i> -value	Std. estimate	<i>t</i> -value	Std. estimate	<i>t</i> -value
Manufacturer support→dependence	.10	1.1	.06	0.4	0.13	1.33*
Brand equity→dependence	.32	6.8	0.28	4.8	0.36	5.1

Customer expectations → dependence	.30	4.5	0.20	2.7	0.25	3.3
Financial benefits → dependence	.24	2.7	0.21	1.9*	0.25	2.3
Dependence → cooperation	.69	11.2	.80**	8.0	0.65**	8.4
Cooperation → willingness to invest	.76	13.5	.66	9.1	0.84	9.2

**= significant difference at $p < 0.05$.

To further validate the model, alternative pathways were considered. The model was re-estimated with pathways from brand benefit antecedents directly to cooperation and willingness to invest as well as from dependence to willingness to invest. This re-estimation showed a slightly worse fit to the data: $\chi^2(188) = 851$, $p = 0.000$, CFI = 0.98, NNFI = 0.97 and RMSEA = 0.066. Mediation analysis confirmed that dependence partially mediates between the four brand benefits dimensions and cooperation. Cooperation also mediates between dependence and willingness to invest, so another alternative model, with a pathway from dependence to willingness to invest was estimated. The fit statistics, $\chi^2(197) = 824$, $p = 0.000$, CFI = 0.99, NNFI = 0.98 and RMSEA = 0.062, show the initial model is a better fit.

Next, the dataset was split to analyse the major and minor brands. The structural model shows a good fit to both datasets. For the major brands, the normed chi-square was 2.6 and for the minor brands the normed chi-square was 2.7. As with the full sample, the manufacturer support pathway to dependence is not significant for both samples. However for the major brands the financial benefits to dependence pathway is marginally significant. A multi-group analysis of brand strength effects showed no difference between the major versus minor brands for the brand benefit pathways to dependence, but there was a difference for the dependence to cooperation pathways with retailers being more likely to cooperate with suppliers of major brands. For this pathway the change in chisquare = 4.2 which exceeded the threshold of 3.84 $p < 0.05$.

The first research question is answered as retailer dependence on supplier brands is influenced by three dimensions namely brand equity, financial benefits and consumer expectations.

Next, the second research question is addressed as dependence on the supplier brand is positively related to cooperation with manufacturers on matters concerning the brand, which prompts a greater willingness further in the brand. The answers to the third question show that the model is valid for both major and minor brands, and retailers are more likely to cooperate with suppliers of major brands. However, there was no difference between the brand types for the cooperation to willingness to invest pathway.

5. Discussion and implications

The literature has not considered the impact of brands on relationship actions such as cooperation and willingness to invest. The implementation of many aspects of marketing strategy for brand suppliers does require cooperation with retailers. From the supplier point of view, willingness to invest further with the suppliers' brand not only indicates reciprocity in the business relationship but also a signal that the end-customers are also purchasing the

brand. This study further shows that the effects of the brand benefits on relationship action is mediated by the dependence on the supplier brand which is present in channel relationships. Not all brand benefits influenced retailer dependence, as supplier support found by Biong (1993) to be important was non-significant in this study. The customer-based benefits brand equity and customer expectations, have a greater impact on dependence than financial and manufacturer support which are more retailer focused. For the full sample, the largest standardised estimate however was from cooperation to willingness to invest. Thus an important role for supplier key account representatives is to encourage retailer cooperation which results a greater willingness to support the brand. This finding shows that brands are important non-coercive sources of power and can encourage retailer activity with suppliers.

This result also confirms Skinner et al.'s, (1992) findings on the effects of dependence on cooperation. Retailer cooperation with suppliers on brand matters is mediated by dependence. The research further shows that cooperation mediates between dependence and willingness to invest. This finding is in contrast with Kim and Frazier (1997) who show a direct link between dependence and willingness to invest. These results indicate that the disposition to cooperate with the brand supplier is a prerequisite for further brand investment. This research also confirms the conceptual framework generalises to both major and minor brands. With the minor brands, financial benefits affect retailer dependence indicating that suppliers of these brands need to provide monetary incentives to encourage retailer cooperation. The market demand for major brands gives suppliers an advantage, as dependence affects cooperation more compared to minor brands. However, this greater cooperation does not mean that retailers will invest further in major brands, so minor brands are not necessarily at a disadvantage when it comes to channel support. Further analysis of this data will consider the influence of the product category whether it is high value or low importance to the retailer.

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TOWARDS A CONCEPTUAL MODEL OF INDUSTRIAL CATEGORY SUPPLY MANAGEMENT

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Abstract

Based on a comprehensive review of literature and associated theories the article develops a conceptual model of industrial Category Supply Management. The model represents an integrated concept for investigating industrial category management strategies, their structural configuration and the effects on category performance. The findings show that a multi-facetted concept for segmenting supply strategies centered at the category level of purchasing strategy is highly appropriate but largely missing in literature. By referring to contingency theory and the configurational approach the article investigates requirements, drivers and implications of category strategy differentiation. Due to the majority of industrial purchasing organizations following hybrid approaches for organizing and managing purchasing, the article explicitly focusses on evolving supply management towards a concept termed Category Supply Management. In this context, research propositions for vertical and horizontal integration- and coordination requirements in category management will be investigated.

Keywords – Category Management, Supply Management, Category Strategies, Integration and Coordination of strategies

1. Introduction

Analyzing the theme of strategy within the domain of purchasing shows that research is predominantly focused on the functional level. The investigation of category level strategies of industrial purchasing organizations has so far been largely neglected by scholars (Nollet, Ponce and Campbell, 2005; Glock and Hochrein, 2012). Considering that the majority of industrial purchasing organizations follow hybrid approaches, such as category management in-between organizational centralization and decentralization, the lack of research on specific category strategies is surprising (Rozemejier and Wynstra 2005; Trent 2004;). The aim of the paper is to extend the current supply management notion by the category purchasing perspective. The idea to form category purchasing groups is based on the increasing need to adapt purchasing strategies and actions to specialized contextual factors on the supply market, and to cater to value generation of differentiated requirements of internal and external customers (Cousins et al., 2006; Heikkilä and Kaipia, 2009). While functional level purchasing strategy often pursues high-level strategic objectives, the category view provides a seemingly more appropriate level of detail to develop specific strategies and to achieve synergies for coherent supply items (Monczka and Markham, 2007).

The article presents the findings of an extensive review of literature on the topic of supply management strategies and structures, with a focus on the purchasing category level covering the pe-

riod from 1970 to 2012. The review enables a structured analysis of current research topics in purchasing category management, summarizes constituent characteristics of industrial category management, and uncovers gaps in current literature for future research. In a second step, based on the literature review and associated theories, the article aims at developing a conceptual model of Category Supply Management. The model provides two different types of conceptual insights: Firstly, the model pursues a category-specific analysis elucidating the link between contextual factors, purchasing category strategies, their structural configuration, and consequently category performance. Secondly, it provides a starting point for investigating requirements of horizontal linkages (coordination) between category strategies and vertical linkages (integration) with functional purchasing strategy.

The remainder of the paper consists of the following structure: The subsequent paragraph outlines the methodology applied in the literature review and presents the analytical framework. The second section discusses the results of the descriptive analysis of literature and presents constituent characteristics of category management. The third section critically reflects the findings of the review and discusses gaps in category management research. The fourth section, applies the previous findings for deriving a conceptual model of category supply management. The final paragraph critically reflects the findings of the review, elucidating limitations and providing propositions for future empirical category supply management research.

2. Literature review Methodology and Analytical Framework

2.1 Methodology

To gain a comprehensive overview of supply management literature at the intersection of functional- and category-level purchasing, a structured three-step methodology proposed by Levy und Ellis (2006), Glock and Hochrein (2012) und Newbert (2007) was applied. The process of structuring and analyzing existing secondary literature is an important tool to establish the groundwork for a subsequent empirical investigation (Cooper, 2010).

The first step of the literature review is initiated by the choice of literature sources. For that matter, existing literature reviews in the field of purchasing and supply management by Glock and Hochrein (2011), Quintens, Pauwels and Matthyssens (2006a), and Sachan and Datta (2005) were analysed to identify focus journals. A total of 32 relevant Journals were identified. To guarantee a sufficient selection of quality peer-reviewed journals a journal ranking of scientific business journals (VHB, 2008) for the area of logistics, operations management and production, and marketing management was consulted. This increased the list to a total of 52 pre-selected English language journals.

In the second step, the following three groups of keywords were defined which were derived from the aforementioned literature reviews in the field of purchasing and supply management and extended by keywords from a literature review by Dewsnap und Hart (2004) in the area of marketing category management: The first group contains 7 keywords from the area of purchasing strategy and supply management. The second group contains 9 keywords which are related to the concept of category management. The third group consists of 10 keywords of structural variables of supply management organizations. In total 26 keywords and 42 combinations were defined.

In the third step, the selection of relevant journal papers was conducted by searching for predefined keywords and combinations in the scientific search engine EBSCO Host, initially focusing on titles for years 1970-2012. Filtering out relevant search results rendered 442 papers across the three search categories. For these papers a manual analysis of abstracts was conducted which consolidated the number of relevant papers to 154. The content of these papers was read entirely which again lead to a reduction of 49 papers. By analyzing citations and references of the relevant publications, 11 additional papers were identified in a snowball approach leading to an intermediate sample size of 116 journal papers. Additionally, the search was extended to book publications, doctoral dissertations, practical journals and conference proceedings applying the same search strings and multi-level review process with the search engines Springer Link and Google Scholar leading to another 88 relevant publications, and a final sample size of 204 publications. Due to the low extent of scientific research in the area of industrial category management in purchasing, it was decided to take on the risk of loss of reliability and validity to gain an objective overview of the current state of research and practical industry trends in supply management strategies (Light and Pillemer,

1984). An overview of the selected journals can be found in Appendix A. The identified publications were categorized in a database according to bibliographic details, content group, research type, functional focus, addressed purchasing level, research theory and various content filters from the analytical framework which will be presented in the next paragraph in more detail.

2.2 Analytical framework for the content analysis

This section develops an analytical framework which will be used as a guide for the content analysis of the literature review. The relatively low extent of research on the topic of category management requires the development of a conceptual framework to provide a replicable pattern for the investigation of structural elements of category management and its interrelation with functional purchasing in a comprehensive supply management concept. The content analysis provides objective insights and a systematic review of the current state of research and sheds light into possible gaps in research. The analytical framework is based on a contingency-theoretic approach propagated by Child (1972) and Ruekert et al. (1985) which aims at investigating the linkage between the influence of contingency factors on corporate strategy, organizational structure and the implications on corporate and functional performance. Contingency theory which was developed during the 1950s claims that there are no ideal context-independent strategies and structures which can be applied across organizations (Burns and Stalker, 1961). Corporations are required to constantly adapt their organizational structures to gradually changing contextual factors to complement the strategic choices in order to maximize their performance (Chandler, 1962; Burns and Stalker, 1961; Woodward, 1965; Donaldson, 2001). Contextual factors can originate from factors within the organization or from outside. For an analysis of general characteristics of organizational structures of purchasing, based on research by Ruekert, Walkter and Roering (1985) in the field of marketing, Glock and Hochrein (2012, p. 3) derive the following four requirements of an analytical framework from a contingency-theoretic perspective:

a) An identification of (internal and external) contextual factors which possess a moderating ef-

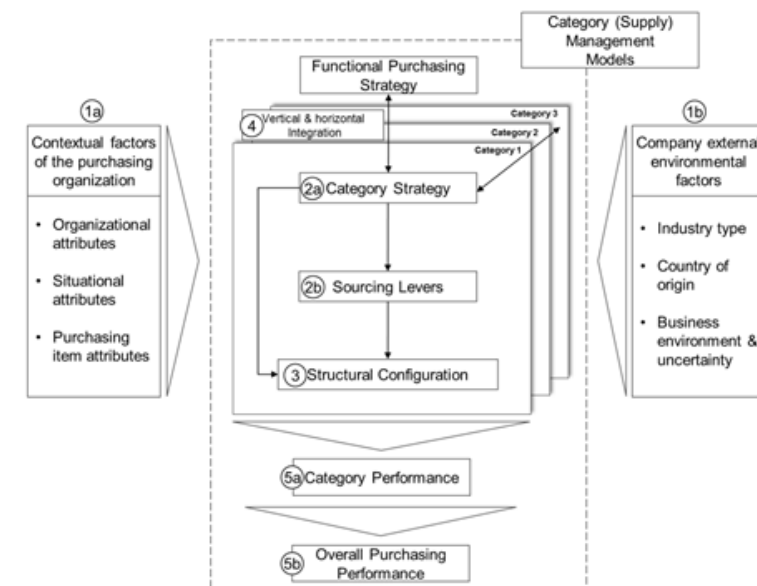
fect on the connection between structure and performance

b) An analysis of organizational characteristics defined by variables of structural configuration of the purchasing function

c) A comprehensive investigation of differentiated available organizational configurations for an effective and efficient realization of functional activities and purchasing goals

d) An analysis of implications of differentiated structural configurations on purchasing performance

These requirements will be applied for the analysis of the strategy-structure-performance linkage of category management in industrial purchasing. To investigate the connection between contextual determinants, structure and performance implications of a category- focused supply management concept, the system-structural view can also provide an explanation (Meyer, Tsui, and Hinings, 1993). The system-structural view investigates the effects of organizational structure on performance and offers a three-dimensional performance construct (Stanley, 1993). In this context, performance is described as an integration of organizational efficiency, -effectiveness and -adaptiveness within a certain business environment business environment (Ruekert et al., 1985).



The analytical framework for the content analysis is depicted in figure 1. The primary focus of the investigation is to gain insights into the management of strategies and the structural configuration of supply management within the category management context. For that matter, it is important to differentiate between distinctive levels of strategies in purchasing. Hess, (2010) and Schiele et al. (2011) define three levels of hierarchy which are relevant for supply management. At the top, functional purchasing strategy translates corporate business strategies into purchasing objectives and sets general guidelines for lower level purchasing hierarchies. Watts et al. (1992), Ellram and Carr (1994) and Baier et al. (2008) have illustrated that alignment of functional purchasing strategy with corporate business strategy represents a vital prerequisite for an effective realization of the latter. As a result, functional purchasing strate-

gy sets detailed guidelines for lower-level procurement strategies by translating business strategy into implementation-oriented plans in a top-down process (Nollet et al., 2005).

The second level of strategy in purchasing is defined by the purchasing category which bundles purchasing items with homogeneous characteristics (Englyst, 2008; Heikkilä and Kaipia, 2009). Differences in purchasing item characteristics and various contextual factors lead to the development of category-specific purchasing strategies. From a bottom-up perspective, different layers of strategies in purchasing can provide valuable input for minting higher-level functional and corporate strategy (Baier et al., 2008).

The analytical framework consists of 6 elements which constitute thematic sections for the content analysis of the literature review. The first element situated at the center of the analytical framework investigates the existence of differentiated purchasing strategies at the category level and their horizontal linkages with other category strategies and vertical linkages through the alignment with superordinate functional purchasing strategy. Moreover, category-external organizational variables for the horizontal coordination between categories, and the vertical integration of category strategies and actions with functional purchasing will be reviewed. These variables create nodes for coordinating and integrating category strategies within the supply management concept. Referring to the Chandler's (1962) empirically proven finding that different strategies as contextual factors require an adaption of organizational structure, the second element of the analytical framework pursues an analysis of organizational variables within the purchasing category (Akin et al., 2010). Besides organizational characteristics, structural variables which are influenced by category strategies include skills and competencies of purchasing personnel (Monczka and Markham, 2007).

To realize purchasing strategies for specific category purchasing situations, a range of specialized tactics, measures and tools is required which have been termed 'sourcing levers' (Schiele et al., 2007) or 'supply management strategies' (Nollet et al., 2005; Cox and Lamming, 1997) in purchasing literature. The analysis of existing research on purchasing levers which are influenced by category strategies, the category's structural configuration and other contingency factors outside of the purchasing category represents the third element of the analytical framework.

The fourth element of the analytical framework consists of contextual factors from within the (purchasing) organization but which are outside of the purchasing category and environmental contextual factors from outside the organization. An initial review of research on the topic of general purchasing organization structure shows that these factors include organizational attributes (e.g. corporate/purchasing strategy, company structure etc.), purchasing item attributes (e.g. product type etc.), and situational attributes (risk, buying phase etc.) as identified by Lewin and Donthu (2005) and Glock and Hochrein (2012). Contextual factors from outside the organization like the business environment or industry type also influence functional and category level strategies, in addition to exerting an indirect impact on the structural configuration and sourcing levers of categories. Referring to the contingency approach, an alignment of supply management, category strategies, structures and sourcing levers is necessary to achieve high performance levels.

The fifth element of the analytical framework reviews the state of literature dealing with category performance outcomes influenced by the category configuration (strategy, structure and sourc-

ing levers).

Besides the general analysis of literature on structural variables with explicit and implicit reference to the category level, a more specific investigation of the institutionalization of category management as an organizational model will be conducted in element six. The aim of this element of the analytical framework is investigate the current state of research on organizational models of category management and their integration into a broader supply management concept.

2.3 Descriptive findings of the literature review

During the literature screening process described in the methodology section, a total of 204 publications – of which 121 are journal papers - were identified as relevant for the content analysis. Assessing the distribution of the 121 papers (of which 116 are peer-reviewed) by functional area of the journals, illustrates that 57% of papers belong to the field of Operations, Logistics and Supply (Chain) Management', followed by the field of 'Marketing & Retail Management' with 27%. 'General Management' and 'International Business' journals have a very limited exposure to supply management- and category strategies with a respective share of 13% and 2%. No relevant papers and publications could be identified in Finance and Controlling' journals and only one publication in the field of law. The results largely confirm previous reviews of supply management literature (Glock and Hochrein, 2012; Quintens et al., 2006; Pagano, 2009; Sachan and Datta; 2005). Classifying all publications by type of hierarchical purchasing focus (i.e. functional focus, functional focus with category aspects, category focus, or category focus with functional aspects) shows a clear inclination of research towards a 'functional purchasing focus' or a 'functional focus with category aspects', representing 61% of supply management publications. Research with a purchasing 'category focus' (24%) and 'category focus with functional aspects' (15%) has received only very limited attention with a share of 39%.

Analyzing the development of publications from 1970 to 2012, illustrates that research on supply management and strategy topics in purchasing has significantly increased over time. It becomes evident that category purchasing has only gained significant traction since 2004, whereas research on functional supply management topics has been dominant from the late

1980s to 2007. Since 2012, category aspects in supply management have substantially overtaken research on functional purchasing strategies as a leading topic, with the limitation that the majority of publications are practical and not subject to the peer-review procedure. The distribution of journals per year and purchasing focus is presented in Appendix B.

Moreover, publications were categorized by methodological approaches, differentiating between quantitative and qualitative empirical approaches, and conceptual research. The findings of the analysis show that research on supply management strategies has a strong inclination towards quantitative empirical research (42 publications), followed by qualitative approaches (34) mainly focused on case study research, and conceptual research discussion methods and fundamental models (28). In comparison, supply management research with a focus on the category level has so far been largely minted by qualitative approaches, whilst research on the functional level has

predominantly utilized large-scale quantitative methods. Assessing the development of the application of methods in category focused purchasing research over time, shows an increasing shift from qualitative case study research to quantitative research since 2007. This indicates that research on category purchasing is moving away from initial exploratory investigations to more professional large scale empirical surveys. The usage of established theories for explaining supply management topics on the purchasing and category level is illustrated in Figure 2.

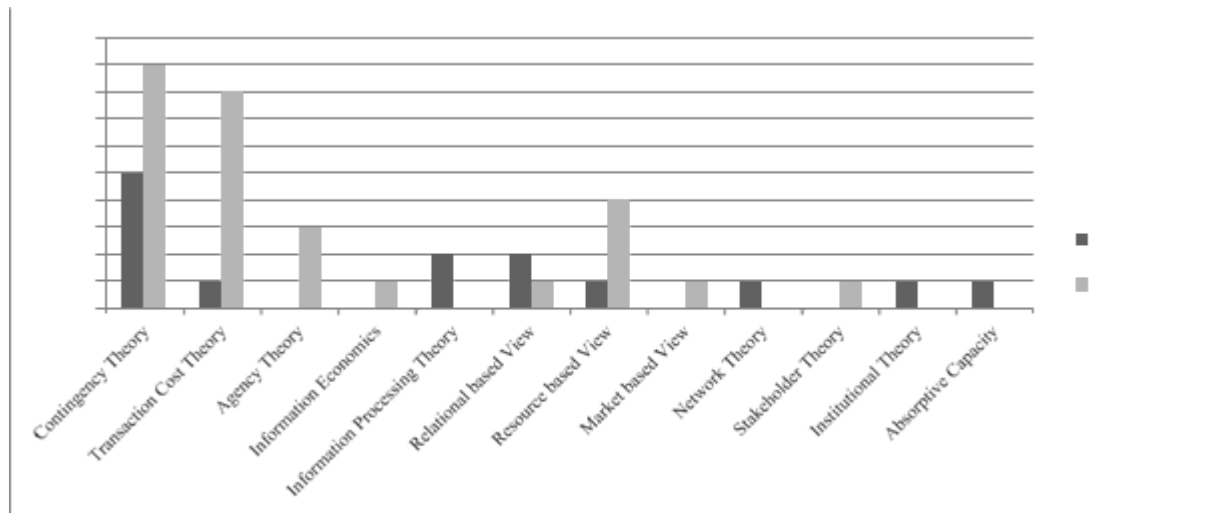


Figure 2: Comparison of theory usage in functional- and category level purchasing research

Only 39% of reviewed category-level publications utilize one or more theories focusing on contingency theory (5), information processing theory (2) and the relational-based view (2). The comparison of the application of theories in functional and category purchasing research shows that functional research possesses higher research maturity with 41% of publications utilizing grounded theory, compared to 35% on the category level. Although, supply management- and strategy research on the category level has attracted a broader range of theories like institutional-theory-, stakeholder-, and information processing theory, it lacks the application of established theories such as agency theory and information economics.

Assessing the quantitative distribution of research on the elements of the analytical framework shows that topics of overall purchasing strategies, organizational aspects and processes of supply management, as well as steering and management of supply are the overall leading topics. More than 20% of supply management research on the category level analyzes individual or multiple sourcing levers compared to only 11% at the functional research level. Similar differences can be seen for the topic of supply management performance impact. The topic of supply management competencies has so far not been addressed at all by the category level. The other topic elements of the analytical framework show an equal share in functional- and category supply management research. This implies that the purchasing category level possesses a closer connection to supplier and customer nodes for which the development and implementation of specific strategies can have a direct performance impact.

3. Content analysis on the development of industrial category management research and a conceptualization of Advanced Category Management in purchasing

Considering the novelty of the category-topic in purchasing research, analyzing the development of category management is crucial for understanding its role for strategy making and for the integration of different hierarchical layers in modern supply management organizations. Taking a chronological perspective, the following section analyses the development of industrial purchasing category management identifying constituent characteristics of stages in its historical evolution, as well as summarizing hotspots and gaps in purchasing category research.

3.1 The origins of category management in industrial purchasing: Commodity management and volume bundling (1970 – 1983)

Research on the topic of strategy in purchasing started during the middle of the 1970s with seminal works by Farmer (1976), Davis et al. (1974), and Rink (1976) as well as Corey (1978a/1978b). Nollet et al. (2005) describe the evolution of strategic thinking in purchasing from 1970s to 1980s as a change from a purely passive to a supportive role. The earliest publications regarded supply strategy as a collection of long-term guidelines exerting influence on internal purchasing structures, actions and decisions with the aim to realize competitive advantages in response to the market environment (Farmer, 1974; Rink, 1976). These works constituted the first steps towards highlighting the strategic importance of purchasing and an abandonment of the purely passive role and operational thinking. Whilst the majority of initial contributions focus on a singular functional purchasing strategy, Corey (1978b) pursue the first step towards propagating the requirement of varying context-specific strategies, by conceptualizing three generic strategies for purchasing. Davis et al. (1974) were the first to address the category level in their empirical research on the factors of influence during the selection of international suppliers. They find that characteristics of the purchased group of materials influence the choice of suppliers and the strategic decision of (de)centralizing procurement. Using the term ‘commodity management’, they develop an approach for bundling direct purchasing volumes of homogeneous raw materials to gain negotiation power in industrial purchasing. The loosely defined ‘commodity management’ approach was characterized by a lack of hierarchical category structure and a pure focus on cost savings. Pooling of commodities is undertaken (often globally) by centralized lead buyers without a direct involvement of suppliers or downstream supply chain partners.

3.2 The interim phase of category management in industrial purchasing: Proactive category portfolio strategies (1983 – 1995)

Since the middle of the 1980s the self-conception of the purchasing function as a significant contributor to corporate strategy emerged. This included Burt’s (1984) call for a more proactive management of purchasing, enabling the contribution to corporate economic goals, and a growing executive recognition of the purchasing function (Doyle, 1990). At the category level – but still as a part of a superordinate logistics function – the new proactive conception of purchas-

ing was propagated by Cavinato (1991) who suggested the introduction of cross-functional ‘commodity teams’ for monitoring and managing specialized groups of products taking a total cost of ownership perspective. Incorporating findings from Skinner (1969) and Hayes and Wheelwright (1984) from the field of production, Watts et al. (1992) derived a concept for connecting functional purchasing strategy with corporate strategy and horizontally with other functional strategies. At the same time a change from a singular functional strategy to the plural of differentiated context-specific strategies gained increased traction (Nollet et al., 2005). As one of the earliest proponents, Spekman (1985) developed a categorization of interrelated levels of purchasing strategies, differentiating between performance-related strategies, procurement systems-related strategies, and competitive procurement strategies. Dobler et al. (1990) come to the conclusion that developing specialized commodity plans represents the basis of strategic management in purchasing. Progressing ideas by Davis et al. (1974) in a practically oriented publication, Kraljic (1983) propagated the shift of purchasing to supply management, developing a portfolio for generically segmenting purchased items into four distinctive categories to derive comprehensive strategic actions for each category. Kraljic’s (1983) purchasing category portfolio represents a landmark for research of purchasing category level strategies and has developed into one of the most widely accepted tools in purchasing practice (Gelderman and van Weele, 2003). Since then, a broad stream of research has conceptually and empirically advanced Kraljic’s (1983) ideas with more than 40 scientific publications to-date on supply strategy portfolio models, representing about 60% of all English-language purchasing publications in the field of purchasing category level research identified in this review. Although purchasing portfolio models are widely applied in practice, they are criticized for not providing sufficient guidance on category configuration, integration mechanisms and purchasing levers for implementing category strategies (Gelderman and van Weele, 2005; 2003). Svahn and Westerlund (2009) illustrate that differentiated structural configurations and purchasing practices are used within the same purchasing strategies which gives an indication that the prescriptive nature of purchasing portfolios might be too superficial.

3.3 Value orientation of category management in industrial purchasing: Category management as a part of the strategic sourcing concept (1995-2003)

By the middle of the 1990s the notion of a proactive procurement transformed into a value oriented supply management approach (Hadelar and Evans 1994; Nollet et al. 2005). Research began to stress the possibilities of extracting sustainable and economic advantages by focusing supply management on developing and managing strategic external and internal contractual relationships (Cox, 1996; Cox and Lamming 1997). Harland et al. (1999) expanded the previously internally limited scale of purchasing strategy towards a value-driven cross-organizational concept by stating that “the concept of supply strategy integrates various existing bodies of knowledge and concepts, to form a holistic, strategic perspective of management of operations, stretching across inter-organizational boundaries” (Harland et al. 1999, p. 662). The value driven approach also included the advent of the term ‘strategic sourcing’ which describes an integrated process methodology for configuring and managing supplier networks which are aligned to internal cross-functional performance targets (Narasimhan and Das, 1999).

Main research streams in strategic sourcing are divided into frameworks for supporting make or

buy decisions (Walker, 1988; Freeman and Cavinato 1990; Venkatesan, 1992; Welch and Nayak, 1992; Handfield et al., 2000;) and procurement process models for developing value creating strategies for the supplier-buyer interface (Anderson and Katz 1998; Narasimhan and Das, 1999; Sislian and Satir, 2000; Talluri and Narasimhan, 2004; Kocabasoglu and Suresh, 2006). Belonging to the latter stream of strategic sourcing research, Anderson and Katz (1998) introduce a total cost of ownership-oriented procurement process model for developing supplier strategies by taking the complete product life-cycle for purchasing categories into account. By building on Cavinato's (1991) 'commodity team' concept and incorporating Kraljic's (1985) purchasing portfolio, they propose a comprehensive 6-step 'strategic sourcing' model, ranging from planning, assessing and developing periodic purchasing category strategies to the implementation of measures to reduce total costs of ownership for each category. Although, the purchasing category level has been mentioned in connection with various further strategic sourcing publications (Klein, 2004; Bullen et al., 2010), research so far has neither conducted an adequate empirical investigation nor has it used grounded theories for linking strategic sourcing with the category level. Supporting the value driven approach Cousins (2002) propagates the need for the development of specific purchasing strategies for supplier, markets, purchased items, organizational configurations, processes and competencies through the usage of the balanced scorecard. Corsten (1995), Arnold (1999) and Arnold & Eßig (2000) provide umbrella concepts for systemizing strategy components which can be combined to a fully-fledged functional purchasing strategy – with potential for their application on the category level. Nevertheless, the concepts neither address the category level explicitly nor a distinction is made between differentiated market strategies.

The value driven approach was also characterized by a higher level of focus, with researchers investigating the content of specific supply strategy topics. These include functional-level purchasing (strategy) topics in the field of general outsourcing strategies (Brandes, 1994), supplier relationship management (Olsen and Ellram, 1997; Narasimhan and Carter, 1998), global sourcing (Giunipero and Monczka, 1997), general purchasing best practices (Thomson, 1996), as well as an operationalization of strategic purchasing (Carr and Smeltzer, 1997). The literature review shows that until today, the majority of publications on singular strategic topics are inclined toward the functional level, often neglecting the category view. The value-orientation of functional supply management strategies was increasingly influenced by downstream aspects of the value chain. Empirical research by Smith-David et al. (2002) and Shin et al. (2000) uncovered positive performance outcomes for matching supply management strategy with product strategy. The authors argued that differentiated product attributes and demand uncertainty as contextual factors require an adaption of supply management strategies. Progressing the trend of the development of more content-specific

publications on the functional level, the beginning of the 21st century also marked an upsurge of supply management research with reference to various content modifications of Kraljic's (1983) category strategy portfolio like innovation (Croom, 2001), e-procurement (Leonard and Spring, 2002), and supplier relationship management (Wagner and Johnson, 2004).

Contrary to the interim phase of category management evolution, category management within the strategic sourcing concept analyzes the entire range of purchased items (direct and indirect purchases) and pursues a segmentation of items into category hierarchies. Whilst 'commodity management' focuses on the creation of cost savings by bundling purchasing items, value driven

category management in strategic sourcing takes total cost of ownership perspective in periodic category optimization projects, with a stronger involvement of suppliers.

3.4 Advanced category management in industrial purchasing: A multidimensional supply management concept (2003-2012)

By the beginning of the 2000s, purchasing category research extended its focus outside of Kraljic's generic portfolio becoming aware of its relatively narrow scope as tool for identifying synergetic strategies for broad sets of categories (Gelderman and van Weele, 2005). Potentially influenced by the success of customer-driven retail category management units, industrial companies and research started exploring ways of upgrading category management into a permanent organizational dimension of supply management. The latest and more advanced form of category management research can be divided into three branches.

The first branch pursues a process-oriented evolution of existing strategic sourcing concepts. Strategic sourcing had so far provided process models for developing and implementing periodic optimization cycles of key groups of purchasing items through the usage of cross-functional project teams or consultants (Anderson and Katz, 1998; Talluri and Narasimhan, 2004). Klein (2004), Rendon (2006), O'Brien (2012) and Garza de Leon (2012) endorse the integration of category management into a permanent strategic sourcing process concept. The aim of the creation of the linkage is to identify performance enablers during periodic strategic sourcing assessments which should be continuously optimized during the category management process. Similar to previous strategic sourcing models, O'Brien (2012) includes the usage of Olsen and Ellram's (1997) purchasing portfolio as a tool for generically segmenting groups of purchasing categories for which differentiated strategies and implementation plans will developed during the category management process. Whilst the authors advance strategic sourcing to a central supply management institution, their research remains rather conceptual or is based on anecdotal experience. A sound empirical and theory based investigation of the integration of category management as a permanent part of strategic sourcing is still missing.

The second branch of research analyzes a range of organizational elements of category management in purchasing. Progressing ideas of Faes et al. (2000) on differentiated coordination requirements for achieving purchasing synergies in multinational enterprises, Trautmann et al. (2009a/b) conduct an empirical analysis of integration requirements within hybrid global purchasing organizations, applying information processing theory to differentiated category characteristics. They arrive at the conclusion that differentiated information processing requirements of purchasing categories determine organizational structures, and that global purchasing organizations need to adapt their organization to purchase categories to extract highest synergies. Applying contingency theory and the information processing perspective, Hartmann et al. (2008) analyze the importance of control and steering mechanisms to integrate differentiated hybrid category management units within global supply management organizations. Extending the strategy view outside of category portfolio strategies, Akin et al. (2011) empirically derive organizational attributes (centralization, formalization, and cross-functionality) from generic category strategies of innovation and cost focus. As a foundation for developing and implementing value-oriented category strategies, the establishment of cross-functional teams in category management has

been discussed intensively (Smart and Dudas, 2007; Englyst et al., 2008; Van Weele, 2010; Saloranta and Kaipa, 2012). More recently, research has started analyzing how purchasing categories are formed and investigated the resulting implications for supply management. Contrary to the traditional commodity management or pooling approaches of solely bundling homogeneous purchasing items categories, Monczka and Markham (2007) and Heikkilä and Kaipa (2009) propose the creation of forward looking and downstream oriented strategies for categories with complementary items. Managing a group of complementary purchasing items is regarded as a chance for creating category purchasing strategies with an improved alignment to product strategies, being in line with previous research by Smith-David et al. (2002) and Shin et al. (2002) on the functional level. More specifically, category management is considered being a central coordination and steering mechanism between categories, within cross-functional category teams, the superordinate purchasing function and other corporate functions (Trent and Monczka, 2003; Heikkilä and Kaipa, 2009, Kaipa and Laiho, 2009; Förstl and Pohl, 2011). Nevertheless, the topics of category formation, integration and coordination in industrial category management have largely been discussed conceptually, and are also lacking a sound empirical investigation.

The third branch of recent category management research extends the strategy view outside of category portfolio strategies and tactics. Akin et al. (2010a/b) empirically develop typologies of generic category-level strategies, building on competitive purchasing priorities established by Krause et al. (2001). Based on the developed category strategies acting as contextual factors, they identify purchasing tools and practices on the category level which are aligned to respective generic strategies. Taking the perspective of the resource-based view, Stolle (2008) and Stolle and Moser (2009) develop a model for measuring the influence of organizational enablers (aspirations, people management, structures) on differentiated category purchasing strategies. According to Stolle (2008), so-called ‘category value creation strategies’ are defined as “all planning, decision, and implementation activities of a purchasing function or individual purchasing professionals in the area of category management or supplier management, driven by a long-term perspective towards corporate objectives” (Stolle, 2008, p.86). Karjalainen and Salmi (2012) pursue a quantitative investigation of supply strategies and tools utilized on the purchasing category level in a comparison between U.S. and Western European companies. Although these studies are directed at the category level of industrial purchasing, no distinction is made whether companies are using category management (or purchasing categories) as an organizational type of purchasing, or if other types of organizational structures are applied. Similar to previous discussions arguing about the difference between functional supply strategy and implementation strategies (Nollet et al. 2005), literature does not provide a clear distinction between general category strategy and implementation-oriented category strategies. To clarify the difference, Schiele et al. (2011) introduce the term ‘sourcing levers’ for describing a set of specific tactical measures and practices which are used to convert general category strategies – for example generic strategies developed by Akin et al. (2011) or more specific modular sourcing concepts as defined by Arnold and Eßig (2000) - into specific activities. Sourcing category levers are realized by applying purchasing tools and technologies, as well as through the operative execution of core purchasing processes by category purchasing teams (Stolle, 2008; Monczka and Markham, 2007).

3.5 A definition of constituent factors of the most advanced form of industrial Category Management

The chronological review of literature outlined the development of category management in the supply management context. To clarify the most advanced understanding of the category concept in comparison to previous types, this paragraph provides a summary and definition of constituent factors of industrial category management in purchasing. Until today, the usage of the term category management by researchers and practitioners is ambiguous, and its distinction from adjacent organizational concepts like commodity pooling, commodity management in strategic sourcing, and portfolio categories is used interchangeably in industrial purchasing research. Appendix C illustrates the distribution of different types of category management terminology. Following, figure 3 illustrates and compares constituent factors of different forms of category management in industrial purchasing.

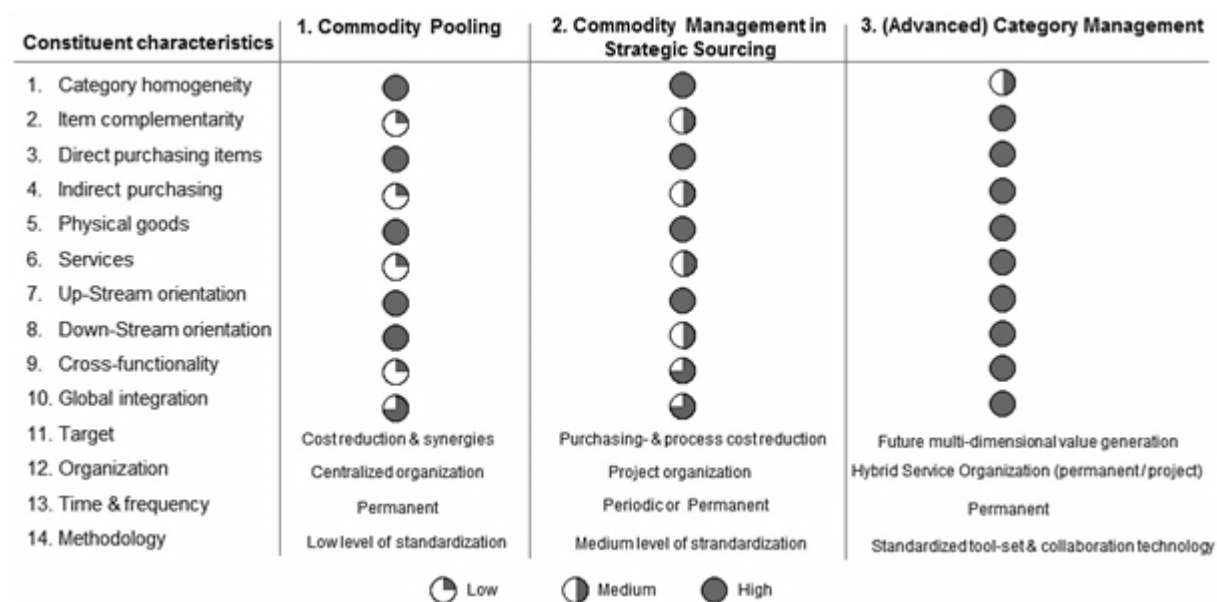


Figure 3: Constituent characteristics of different types of industrial category purchasing

The most advanced form of industrial category management can be defined as a permanent organizational approach for configuring and coordinating differentiated sourcing strategies, activities and practices for groups of material or services. Contrary to the traditional understanding of commodity pooling, advanced category management is based on supply items with comparable or complementary characteristics with the aim to extract future oriented value for the procuring company's internal and external customers. Compared to category management within the strategic sourcing context, category management is regarded as a permanent form of supply management organization utilizing professionalized tools and technologies to optimize categories and to collaborate with up- and downstream value chain partners.

4. Gaps in research and propositions for future category management research in industrial purchasing

The content analysis of the literature review has outlined the development and definition of category management as well as provided insights into major topics of category-level supply management research. Scholarly literature offers only very limited conceptual and empirical explanations for the topics of organizational configuration, coordination & integration, performance implications of strategies and structures of purchasing categories, as well as the investigation of contextual factors influencing category management structures in industrial purchasing. The following paragraphs explain these research gaps in detail and suggest propositions for future research.

4.1 First Gap: Contextual factors influencing industrial category management structures

The literature review shows that influence of contextual factors affecting industrial category management strategy, configuration and structures has hardly been investigated.

By conducting a meta-analysis of journal studies concerning structures of buying centers, Lewin and Donthu (2005) illustrate that purchasing research is mired by strongly diverging results and interpretations of contingency relationships between contextual factors and purchasing structures. The theoretical underpinning of this research gap is ‘contingency theory’, based on Burns and Stalker (1961) as well as its extension by a multi-causal and more dynamic view of contextual factors in the ‘configurational approach’ (Meyer et al. 1993). The central point of these theories is the claim that there are no universally and context-independent strategies and structures. Performance is essentially determined by contextual factors. Companies are required to adapt organizational strategies and structures to gradually changing contextual factors to maximize performance (Sousa and Voss, 2008). Until today, purchasing research has focused on the investigation of contextual factors influencing organization and strategies and structures of purchasing on the functional level (Glock and Hochrein, 2001). The quantitative analysis of the reviewed literature shows that although with 18% of total publications contingency theory is the leading theoretical foundation in category management research, it is limited by the lack of quantitative research and its focus on selected topics. These selected topics include isolated purchasing item characteristics (Davis et al. 1974; Trautmann et al., 2007; Gonzales-Benito, 2010) and management systems (Hartmann et al. 2008; Först and Pohl, 2011).

Neglect of the explicit investigation of the purchasing category level leads to an opportunity and a need to empirically examine the influence of contingency relationships emerging from the interplay between various internal organizational levels of purchasing and the external environment of the categories’ value chain on industrial category management. As depicted in the analytical model, internal contextual factors of the purchasing organization potentially influencing category management include superordinate organizational attributes such as corporate and functional level strategies and structures, differing purchasing item characteristics (purchasing volume, complexity, type) and attributes of the respective purchasing situation (e.g. buying

power, time pressures, perceived risk) (Glock and Hochrein, 2012). External contextual factors from the company's environment include the industry type, country of origin, and the business climate and uncertainty (Qunintens et al., 2005). Based on previously identified contextual variables outside of the category, it would be interesting to empirically study their influence on central elements of category management including category strategies, sourcing levers, organizational attributes, competencies, and tools. Taking research by Akin et al. (2011) to the next level, the influence of a broader set of generic category strategies on the organizational structure could be investigated for industrial companies organizing purchasing around categories.

Research proposition: What is the influence of supply market-based and purchasing internal contextual factors on purchasing category strategies, on category sourcing levers and on variables of structural configuration at the category level?

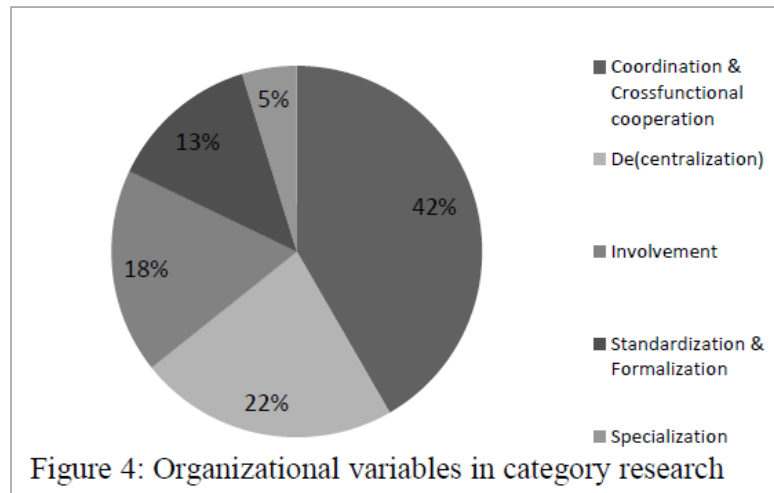
4.2 Second gap: Strategies and sourcing levers in industrial category management

The chronological literature review illustrated the limited extent of empirical research on industrial category strategies. First attempts have been made to develop purchasing strategies for the category level outside of portfolio models (Akin et al., 2010; Stolle and Moser, 2009; Karjalainen and Salmi, 2011). Nevertheless, no empirically tested model could be identified which integrates functional purchasing strategy, generic category strategies and tactical measures and practices which are used to convert general industrial category strategies into specific activities. With regard to tactical measures and practices, purchasing literature offers an abundance of research of individual measures focusing on the functional level. Discussions in purchasing research are characterized by a lack of differentiation between generic purchasing strategy and implementation oriented sub-strategies (Nollet et al., 2005). For example, Birou et al. (1997) analyze the usage of purchasing strategies at different stages of the product life cycle without differentiating between more generic strategies (e.g. cost reduction, global sourcing or just-in-time purchasing) and implementation oriented purchasing tools and practices (e.g. make or buy analysis or benchmarking). The 'sourcing lever concept' introduced by Stevens (1989) which has been complemented by Schiele et al. (2007), derives seven transaction-oriented and relational strategies, and empirically evaluates their cost-saving potential. The aim is to provide a set of tactical measures which can be used individually or jointly to implement a generic category strategy. However, the development and deduction of the particular set of strategies has not been documented in detail and rather represents a list of common measures of strategic industrial purchasing optimization in the consulting practice. A thorough and empirically-led conceptualization of purchasing levers is required which could be extended by and identification of further levers in dimensions like organization, competencies and technological measures. With respect to the aforementioned contingency relationship, it would be interesting to consider an alignment of sourcing levers to category strategies and various other situational factors. Finally, it would be interesting to analyze the implications on category performance of a simultaneous application of sourcing levers.

Research proposition: What generic typologies of strategies and sourcing levers outside of the Kraljic (1983) portfolio exist at the category level and how can they be conceptualized?

4.3 Third gap: Structural configuration of industrial category management

Attributes of organizational structure of industrial category management determine decision making hierarchies, allocation of responsibilities and resources, as well as available execution process and tools for the realization of category strategies and sourcing levers. Research on the structural configuration of industrial category management can be divided into five areas which all exhibit significant research limitations:



Firstly, a broad set of organizational variables which represent differentiated characteristics of industrial purchasing at the category level have been researched. Figure 4 depicts the distribution of organizational variables. Cross-functional cooperation (42%), the effects of centralization and decentralization (22%) and involvement in purchasing (18%) represent the leading topics. Specialization and standardization have only been researched to a very limited extent. The majority of articles containing research on cross-functional cooperation are limited to exploring synergies in hybrid purchasing organizations in the context of international sourcing (i.a. Hartmann et al., 2008; Odgen et al., 2005; Rozemeijer, 2000; Arnold, 1999; Matthyssens & Faes, 1997; Giunipero und Monczka, 1997). Research does not provide suffic for organizational variables coordinating purchasing horizontally with other categories and functions, and vertically with functional purchasing and lower level category hierarchies. Similar to the latter variable, research on the organizational variable of involvement is lacking an in-depth investigation of the role and positioning of category management in the purchasing organization and corporate decision making.

Secondly, with 65% of publications, research on organizational concepts related to the category level mainly addresses hierarchical organizational structures, leading to a neglect of the process perspective (23%). Research on organizational concepts analyzes the usage of organizational design configurations like centralization, decentralization and hybrid hierarchical arrangements (Englyst, 2008; Rozemeijer & Wynstra, 2005; Giunipero and Monczka, 1997). Nevertheless, publications are lacking an investigation of specific vertical and horizontal control mechanisms, the description of decision hierarchies and the quantity and positioning of responsibilities in in-

dustrial category management. Only two publications in English language literature (O'Brien, 2012; Heikkilä and Kaipia, 2009) and two publications in German language literature (Boutellier and Zagler, 2000; Rüdric et al. 2004) could be identified which provide a holistic investigation of industrial category management as an organizational supply management concept.

Thirdly, the formation of purchasing categories has been largely minted by a focus on purchasing portfolios, such as the Kraljic (1983) matrix or its modifications (e.g. Olsen and Ellram, 1997). Only one empirical analysis could be identified on the formation and segmentation of purchasing categories and sub-categories (Heikkilä and Kaipia, 2009).

Fourthly, the institutionalization of purchasing practices, tools and techniques represents a further structural dimension of category management configuration. An almost equal share of publications in category level research with reference to practices, tools and techniques can be identified for information-sharing (i.a. Trent & Monczka, 1998), electronic purchasing (i.a. Odgen et al., 2005) and financial analysis (i.a. Ellram et al., 2002). Akin et al. (2010) pursue a first attempt to investigate the linkage between the application of purchasing practices from the three categories mentioned above and category strategies as contextual factors in a cross- industry study. It would be interesting to extend this analysis by investigating a broader set of practices, tools and techniques for industrial companies within the specific context of the category management organization in purchasing.

Fifthly, general competencies of category management and characteristics of category managers also determine the conduct of purchasing strategies and practices significantly. Supply management research offers a broad set of analyses on purchasing qualifications, human resource management (HRM) and the responsibilities of functional purchasing management (Giunipero et al., 2006; Johnson and Leenders, 2006). On the purchasing category level the topic of competencies is confined to conceptual descriptions of broad category competencies (Stolle, 2008; Monczka and Markham, 2007; Cavinato, 1991). The empirical study of motivational aspects in global category management organizations conducted by Englyst et al. (2008) represents the only attempt to analyze HRM competencies on the category level.

Connected to the first gap in industrial category management research, it would be interesting to analyze the influence of contextual factors on category configuration. Detailed typologies of organizational elements, the formation of categories and required category management competencies, and tools and instruments which are aligned to specific industrial category strategies could be investigated. In addition, the detailed analysis and clustering of indicators of category configuration can be used for deriving higher-level category sourcing levers.

Research proposition: How do purchasing category managers have to configure their organizational structure, decision hierarchies, purchasing practices and tools as well as management competencies at the category level to achieve high levels of fit with category strategies?

4.4 Fourth gap: Vertical and horizontal integration of industrial category management Handfield et al. (2008, p. 101) define Supply Management as “[...] a hybrid governance structure, where supply managers work closely with business stakeholders to scan the supply market, collect market intelligence, identify opportunities to integrate suppliers with internal requirements, deliver value-added initiatives to create value, and ensure on-going collaboration with

key supplier partners". The definition shows that governance and integration across functional and corporate boundaries are two key elements differentiating supply management from purchasing. As the majority of industrial companies are using hybrid organizational concepts and purchasing strategies being increasingly developed for purchasing categories, it is necessary to assess if vertical and horizontal integration and coordination requirements have been anticipated in category governance (Hess, 2008). The underlying theoretic foundation for achieving integration and coordination is research on supply management integration and coordination requirements. It is divided into models of general supply management development, models of hierarchical purchasing strategy integration, process oriented strategy development and research on concrete organizational integration mechanisms.

In the field of general development models of supply management, various researchers like Freeman and Cavinato (1990), Paulraj et al. (2005), and Nollet et al. (2005) develop multi-stage approaches assessing the characteristics of supply management maturity and the applied management approaches. Supply management represents the highest phase of purchasing development being minted by a strong involvement of functional strategies and processes with the corporate level. However, these often conceptually developed supply management models do not suggest concrete context-specific governance mechanisms for coordination and integration (Carr et al. 1997). The focus of these models is predominantly on vertical integration between purchasing and other functions, as well as involvement of purchasing into corporate strategy, lacking an anticipation of the category level.

Models investigating hierarchical purchasing integration analyze dependencies between different purchasing hierarchies in decision making, strategy development, and implementation. Watts et al. (1992) and Farmer (1978), develop conceptual frameworks for linking purchasing to corporate competitive strategy and to functional level strategies and practices. Das and Narasimhan (2000) and Gonzales-Benito (2007) extend previous production-focused research by empirically developing a framework for the strategic integration of purchasing. According to him, purchasing integration is determined by an alignment between corporate strategy and purchasing's strategic objectives, as well as by the fit between purchasing's strategic objectives and capabilities. Further research derives integration requirements between functional purchasing and other functions like sales (Seth et al., 2009) and in a broader supply chain context (Stevens, 1989). It is evident that hierarchical purchasing model research does not adequately anticipate the purchasing category level and is rather focused on the functional level node.

Process oriented approaches identify a range of successive steps from supply strategy generation to its implementation. O'Brien (2012), Nollet et al. (2005), van Weele (2005), Virolainen (1998) Anderson and Katz (1997), and various other authors named in the chronological review, develop process-oriented models defining steps from the formulation to the implementation of strategies. They stress the need for a vertical two-directional alignment of corporate and functional purchasing strategy as well as a functional integration between supply strategy and other up- and downstream functions in the value chain. The chronological literature review previously elucidated that only a minority of process concepts anticipate the purchasing category level. Although O'Brien (2012), van Weele (2005) and Anderson and Katz (1997) analyze the purchasing category level they do not evaluate integration and

coordination of supply management, nor do they point out category linkages between differentiated purchasing categories.

The last stream of research investigates concrete organizational integration mechanisms for supply management decision making and strategy implementation. Qualitative and quantitative empirical studies conducted by Zheng et al. (2007), Carter and Narasimhan (2005) and Odgen et al. (2005) identify cross-functional teams, collaboration with internal and external up- and downstream supply chain partners, as well as information sharing with customers as important organizational assets for supply management integration success. Although these studies empirically identify a range of interesting integration variables, their dominant focus is the functional purchasing level. Rozemejier (2000) and Rozemejier and Wynstra (2005) analyze the role of coordination mechanisms in hybrid purchasing organizations. They arrive at the conclusion that adapting coordination mechanisms, such as purchasing committees, to varying purchasing category requirements is crucial for achieving synergies between purchasing categories. Saloranta and Kaipa (2012) analyze how industrial category management influences the purchasing organization and allocation of purchasing resources, finding that category management significantly fuels cross-functional integration but only has a minor influence on resource allocation. Driven by the aim to create synergies in decentralized local purchasing organizations of multinational enterprises, Matthyssens and Faes (1997) and Faes et al. (2000) conduct empirical studies analysing integration and coordination requirements and mechanisms. Similar to findings by Rozemejier and Wynstra (2005) they find that coordination requirements differ by characteristics of purchased items. Giunipero and Monczka (1997) and Trautmann et al. (2007; 2009) extend previous research by an explicit investigation of coordination requirements between purchasing units at the category level.

Summarizing integration and coordination requirements identified in purchasing research, the following gaps can be identified on the category level: Firstly, category management research in industrial purchasing lacks a general analysis of governance measures for consolidating and orchestrating all internal strategic and operative actions of purchasing – internally within purchasing categories, horizontally between different categories and vertically between previously outlined hierarchical purchasing levels. Secondly, a gap is evident regarding coordination and integration mechanisms with the aim to optimize supply processes and –quality with internal functional up- and downstream value chain partners. Thirdly, associated with the latter gap in research is close up-stream integration and steering of suppliers on the category level. Fourthly, connected to the success of the category management practice in the area of retail trade, industrial purchasing research has yet to deliver an answer for synchronizing purchasing categories with product categories of sales and marketing. The category level presents an interesting unit of analysis because differentiated external and internal characteristics of the purchasing category require a multi- faceted analysis and a context specific configuration of governance structures.

Research proposition: How can vertical integration / fit between functional purchasing strategy and category strategy, and horizontal integration / fit between differentiated purchasing category strategies as well as between category strategies and objectives of other corporate sub-function

be realized?

4.5 Fifth gap: Influence of category management on purchasing performance. Supply management research has investigated and proven a significant contribution of the purchasing function on corporate business performance (Police and Fleury, 2010; Van Weele, 2010; Gonzalez-Benito, 2007; Schiele, 2007; Chen et al., 2004; Ellram et al., 2002; Narasimhan and Das, 2001; Carr and Smeltzer, 1999). Research regarding the linkage of the category level to purchasing performance is still in its infancy. The category level analysis of literature shows that the 31 identified supply performance related publications can be divided into two dominant areas. The first area which represents the bulk of category related performance publications (63%) investigates performance measurement as a measure for directing and controlling purchasing actions. In this context, Förstl and Pohl (2011) conduct a qualitative empirical analysis investigating adaption requirements of performance measurement systems to purchasing category practices to support an effective realization of differentiated category strategies. It would be interesting to analyze the interrelationship between generic category strategies and the application of performance measurement systems in an in-depth quantitative empirical study. The second area which represents 37% of performance-related category publications analyses the contingency relationship between strategies and structural configurations of category management with performance. Contingency theory (Child, 1970) combined with prior purchasing research on the functional purchasing level has illustrated that organizational design (Narasimhan and Das, 2001; Stanley, 1993), purchasing strategies (David et al., 2002), purchasing practices (Gonzales-Benito, 2007) and competencies (Ellram et al., 2002) represent elements of structural purchasing configuration influencing purchasing and corporate performance. Only three publications could be identified which analyze the impact of category strategies on category or purchasing performance (Akin et al., 2010; Baier et al., 2008; Stolle, 2008). Publications either analyze the impact of individual or multiple sourcing levers, HRM competencies or organizational attributes of purchasing configuration on category or purchasing performance. Although the purchasing category level is mentioned as a unit of analysis in several publications, no research could be identified which explicitly pursues an investigation of the strategy-structure-performance linkage in industrial companies with a category management organization in purchasing. To evolve research further, an integrated study of the contingencies between category strategies, sourcing levers, variables of category configuration and their impact on category and purchasing performance under varying situational factors is required. Further, the assessment, measurement and operationalization of category level performance represents an unresolved question. Although 86% of identified publications in this area analyze the linkage between category purchasing characteristics and category performance, differentiated schemes of operationalization variables exist. They include very basic (Englyst et al., 2008) and more sophisticated (Akin et al., 2010) evaluations of purchasing target achievements, as well as single-variable performance assessments (Schiele et al. 2007), and multi-dimensional variables of 'perceived' category performance (Stolle, 2008). Category performance operationalization should undergo a thorough conceptual and empirical testing to guarantee high levels of research validity and reliability.

Research proposition: What are the effects of the vertical and horizontal integration / fit of industrial purchasing category strategies with the aforementioned purchasing interfaces, and of the alignment of differentiated category strategies with implementation-oriented sourcing levers and

variables of structural category configuration on category purchasing performance?

5. Development of a conceptual model of Category Supply Management

5.1 Preliminary considerations

The extensive review of literature identified six major research gaps and showed that current scientific discourse in supply management neither provides satisfying answers for configuring, integration and managing industrial purchasing categories, nor has purchasing research adequately analyzed grounded theories to derive recommendations for category management in purchasing. The literature review supports previous assessments by Heikkilä and Kaipa (2009) and Glock and Hochrein (2012) that although category management is a widely accepted practice in industrial purchasing, research has not dedicated adequate attention to investigating this concept. The evolution of supply management towards an integrated concept of category supply management shall be supported by the development of a conceptual model. It will enable future research to empirically analyze the strategy-structure-performance linkage of industrial category management. The structure-conduct-performance (SCP) paradigm from industrial organization theory (Tirole, 1988), contingency theory (Burns and Stalker, 1961) and its extension by the configurational approach (Meyer, 1993) as well as organizational economics theories (Barney and Ouchi, 1986), represent the theoretic groundwork of the model. The analytical model, presented at the beginning of the paper, will be advanced by operations- and supply management related concepts of production competence (Vickery, 1991) purchasing competence (Gonzales-Benito, 2007), and the contingency framework of purchasing performance (Stanley, 1993).

5.2 Research foundations of the strategy-structure-performance linkage

The first theoretic foundation of the conceptual model is industrial organization theory which was initially developed by Mason (1939) and Bain (1956). It examines how elements of structure determine the conduct of business and the resulting performance effects (Ramsay, 2001). Structure as a variable includes characteristics like market concentration, industry cost structures, the degree of product differentiation and levels of vertical integration in industries (Tirole, 1988; Cabral, 2000). Similar to the previously explained situational factors within contingency theory (Child, 1970), structural elements influence the conduct of business in companies. Conduct defines how companies configure their business activities (Cabral, 2000). Finally, performance defines effectiveness and general competitiveness in a comparison of different industries (Tirole, 1988). In contrast to contingency theory and the configurational approach which constitute the second theoretic foundation of the conceptual model, industrial organization theory focuses on macroeconomic structures of entire markets as contextual factors, whilst contingency theory takes the individual firm view (Foss, 1996). A commonality of the theories is the thinking that ideal profiles of practices exist which are determined by situational factors. A fit between ideal profiles will result in positive performance implications (Ruekert et al., 1985). In supply management research the application of the industrial organization theory is scarce. During the

review, four publications have incorporated industrial organization theory as a theoretic foundation but are lacking an anticipation of the purchasing category level (Aschenbaum et al., 2012; Baier et al. 2008; Kamann, 2007; Ramsay, 2001). Figure 5 illustrates the structure-conduct-performance paradigm which is of particular value for analyzing the influence of market-based contextual factors on supply management's configuration and the resulting impact on purchasing performance.

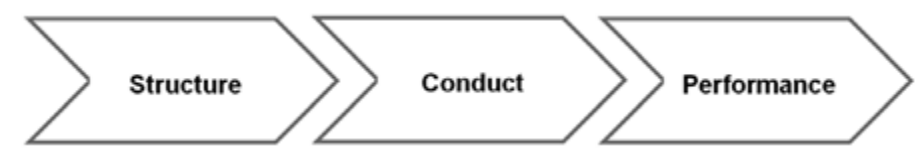


Figure 5: The structure-conduct-performance model of industrial organization theory

From a contingency perspective, supply management research has begun to move from the justification of the value of specific purchasing practices to the understanding of the contextual conditions under which they are effective (Sousa and Voss, 2008). Research in the field of operations and supply management has embraced the idea of developing and testing conceptual models for the linkage between strategy, structure and performance utilizing contingency theory (Birou et al., 1997). Starting in the area of operations management, Cleveland et al. (1989) and Vickery (1991) develop a model of 'production competence' investigating the fit between production strategies and manufacturing performance on a functional level. They incorporate findings from Skinner (1969), Hayes and Wheelwright (1984), Fine and Hax (1985) and Anderson et al. (1989), concluding that alignment of functional production strategy with corporate business strategy represents the prerequisite for an effective realization of the latter. Manufacturing performance is regarded not as a quantitative performance measure but rather as a capability to realize business performance through the manufacturing function. Previous research has proven this mutual interference empirically (e.g. Schmenner and Vastag, 2006; Dröge et al., 1994). The theory of production competence however bypasses structural elements of functional configuration, such as sourcing levers, organizational variables, practices and tools, competencies, and strategic measures for strategy implementation which are situated between production strategy and - performance.

In an empirical study, Das and Narasimhan (2000) are the first to apply production competence theory to test the performance effects of aligning functional purchasing configuration with production and business goals. Purchasing configuration is operationalized by five constructs of purchasing practices, consisting of a mixture between sourcing levers, tools and organizational attributes (Das and Narasimhan, 2000). Gonzales-Benito (2007) adapts the conceptual model of production competence to the purchasing function. He introduces and empirically analyzes the concept of 'purchasing competence' as a function of 'purchasing efficacy' and 'strategic alignment' of functional purchasing strategy with corporate strategy, being in line with the aforementioned alignment perspective of Nollet et al. (2005) and Watts et al. (1992). Purchasing efficacy is represented by the alignment of functional purchasing goals with purchasing capabilities. Although purchasing structure, practices and sourcing levers determine success of implementing strategic purchasing objectives, they are excluded from the empirical investigation. Purchasing capabilities are operationalized as performance measures in associated areas of purchasing objec-

tives which consequently influence corporate business performance (Gonzales-Benito, 2007). More recently, Baier et al. (2008) have used the underlying ideas of purchasing efficacy and strategic alignment to empirically test the contingency relationship between generic purchasing strategies, associated ideal purchasing practices and the effects on business unit financial performance. Similar to research by Das and Narasimhan (2000) they derive ten constructs of common functional purchasing practices in the areas of 'culture and capabilities', 'structure and systems', and 'strategy and execution' from literature. Baier et al. (2008) empirically identify several generic functional strategies and analyze performance effects of a deviation from ideal profiles of purchasing practices that are respectively aligned to different types of purchasing strategy.

Das and Narasimhan (2000), Gonzales-Benito (2007) and Baier et al. (2008) utilize elements of contingency theory and the configurational approach for researching purchasing competence and efficacy. Business- and functional purchasing strategy respectively constitute contextual factors which require an alignment of purchasing strategy and purchasing practices to achieve high purchasing performance. In particular, the configurational approach is based on the idea that companies possess similar patterns of organizational configuration (Meyer et al., 1993; Ketchen et al., 1993). It has been used to cluster companies or organizational units into differentiated strategy groups, allowing a deduction of multiple dimensions of purchasing configuration and evaluating their effect on purchasing performance (Baier et al., 2008; Meyer et al., 1993). From the perspective of industrial organization theory, the purchasing competence / efficacy models do not anticipate the influence of market based contextual factors on purchasing strategy and are limited to the functional purchasing level.

Moreover, based on seminal research by Zey-Ferrel (1981) and Rueckert et al. (1985), the system-structural view investigates the impact of organizational design on business performance. Similar to industrial organizational theory, the system-structural view anticipates the influence market forces on organizational structures. Following the system- structural view, Stanley (1993) develops a conceptual framework for the purchasing function which links internal and external environmental factors of purchasing, with organizational structure and practices, and with the resulting effects on purchasing performance. Purchasing performance is operationalized through three dimensions which include efficiency, effectiveness and adaptiveness of purchasing (Stanley, 1993). Although the model is creating a connection between the environment-structure-performance, it is again limited to the functional level, does not include strategy as a variable and is lacking an empirical validation.

From the perspective of organizational economics theory, the aforementioned models do not provide satisfactory possibilities for explaining and investigating vertical and horizontal integration requirements in category management. Existing purchasing competence / efficacy models could be extended by an analysis of transaction costs arising from different levels of integration and coordination requirements between individual categories, between categories and functional purchasing management and between categories and other associated corporate departments. Following Williamson's (1991) different forms of transaction governance (market, hybrid, hierarchy), appropriate types of category-context specific governance structures could be identified that minimize transaction costs. Similarly, agency theory could be applied to study effects of hidden action and hidden information in category management (Arrow, 1985).

5.3 Conceptual model of Category Supply Management

The previous section outlined possible research theories and presented existing models on the strategy-structure-performance linkage which could be adapted to the category management context. The logic of the functional purchasing ‘competence/efficacy’ model and of the ‘contingency framework of purchasing performance’ can be applied for developing a strategy-structure-performance model in industrial category management. Figure 6 illustrates the proposed conceptual model of ‘category supply management’.

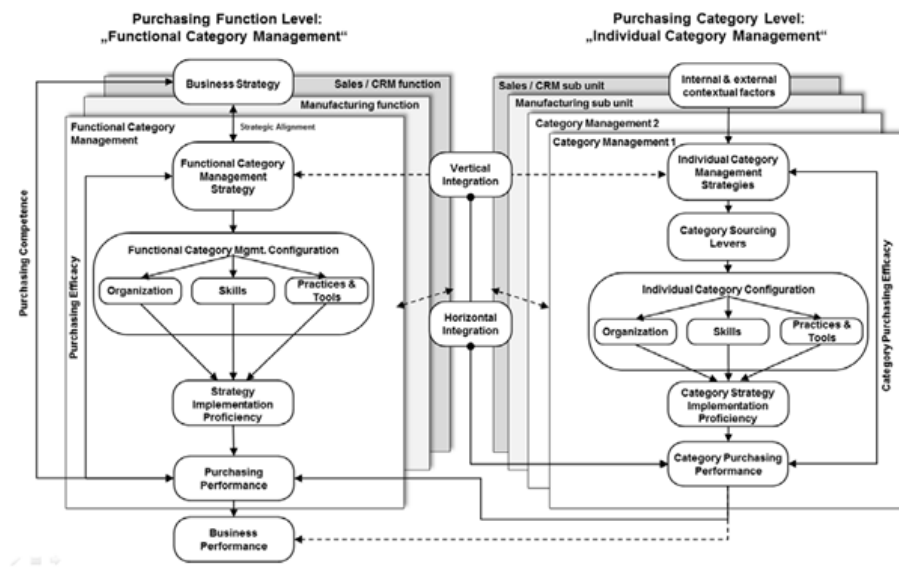


Figure 6: Conceptual model of Category Supply Management

The left part of the model represents an adaption of existing functional-level purchasing competence models (Gonzales-Benito, 2007) representing the linkage between business strategy, functional category management strategy, functional category management structure, and the effects on strategy implementation proficiency, as well as functional and business performance impact. Functional category management includes the CPO and acts as the primary hub towards corporate management and functional management (Rüdrieh et al., 2004). Further, it serves as an integrator, coordinator and controller of differentiated lower-level categories. In the background of the model, other exemplary functional areas such as production and sales & marketing are depicted for which the strategy-structure-performance linkage has proven to be applicable (Schmenner and Vastag, 2006; Dröge et al., 1994).

The right side of the conceptual framework extends the purchasing competence and efficacy view to the level of an individual purchasing category. Similar to the alignment of functional purchasing with business strategy (Watts et al., 1992), the model introduces an alignment linkage between functional purchasing strategy and category strategy. To realize the implementation of corporate strategy, it is broken down into functional purchasing objectives and consequently into differentiated strategies for groups of purchased items. The process chain of delegating

management authority towards the category level can induce agency costs and potentially lead to negative purchasing performance (Hartmann et al., 2008; Rozemejier, 2000). Previous research has shown that groups of purchased categories share common or complementary characteristics in terms of purchasing complexity, importance for the procuring organization, logistical challenges, supply market requirements, risk profiles and internal cross-functional coordination requirements (Trautmann et al., 2009; Geldermann and van Weele, 2002; Kraljic, 1983; Bensaou, 1999). From the perspective of contingency- and industrial organization theory, these differentiated characteristics represent internal or external contextual factors of the category management organization which determine individual category strategies and management practices (Monczka and Markham, 2007; Rozemejier and Wynstra, 2005, Dubois & Pedersen, 2002). Similar to previous functional level research, category strategy will be operationalized by a set of competitive category purchasing priorities (Akin et al., 2010; Baier et al., 2008; Krause et al., 2001)

Existing purchasing competence/efficacy models do not anticipate the relationship of functional purchasing with other functional departments. For category supply management it is essential to align competitive priorities of individual purchasing category strategies vertically with overall purchasing strategy to reduce agency costs (Cousins, 2005). Functional purchasing strategy also represents a contextual factor for lower level category management strategies. Alignment can be achieved through an involvement of the purchasing category manager into strategic functional purchasing decisions (Rüdrieh et al., 2004). Involvement can also enable an improved horizontal integration and reconciliation between differentiated category strategies (Hess, 2010). Horizontal integration includes cross-functional coordination of strategies and practices between the purchasing category level and other functional sub- units (Hess, 2008; Boutellier and Zagler, 2000). The horizontal linkage between category management and functional sub-units enables an analysis of contingency relationships between differentiated product- and category purchasing strategies. As a result, previous functional-level research by David et al. (2002) and Shin et al. (2000) on the performance impact of conformity between product strategies and purchasing management will be translated to the purchasing category level.

Following the deduction of the ideal category strategy, from competitive priorities in reconciliation with vertical and horizontal stakeholders and other contextual factors, category management is required to compile a range of tactical measures and practices to promote the realization of the category strategy (Akin et al., 2011; Davis et al. 1974). Therefore, the category supply management framework extends the traditional 'purchasing competence / efficacy' model by the previously explained sourcing lever concept (Schiele et al., 2007). Drawing on contingency theory, generic category-level strategies determine the selection of sourcing levers which possess an ideal level of contingency fit (Child; 1972; Woodward, 1965). As presented in the literature review, functional- and category management research provides only scarce guidance on the application of a limited number of sourcing levers for specific purchasing strategies.

One process level further below, sourcing levers can be operationalized through a range of previously discussed variables of category configuration. They include variables of organizational configuration (e.g. centralization, cross-functionality, formalization), variables of educational and management competencies (e.g. managerial and buyers' competencies), as well as purchasing tools and practices (e.g. quantitative analysis techniques, electronic purchasing tools, information integration arrangements). Similar to what has been found on the functional level, multi-

ple category strategies will result in differentiated optimal sourcing levers and structural configurations (Akin et al., 2010; Monczka and Markham, 2007; Gonzales-Benito, 2007). Non-conformity with ideal category configurations are expected to have a negative influence on the ability to implement category strategy and a negative influence on category- and purchasing performance.

6. Limitations, conclusion and outlook

6.1 Limitations

Even though the results of the article were accompanied by a replicable explanation of methodological steps during the literature review process, certain limitations of this method should be noted. Firstly, the review was confined to two major literature databases containing English and German language publications from various business domains. Potentially, relevant category supply management literature from non-business related domains and other languages was overlooked. Secondly, the analytical framework and the conceptual model are focused on a hierarchical depiction of linkages in supply management. This might lead to a disregard of the process view which has predominantly been used in strategic sourcing research (Anderson and Katz, 1998). Connected to the hierarchical approach, is the idea that the chain of contextual influence follows a top-down approach. However, this article does not specifically anticipate that strategies and structures of category supply management could also exert influence on the higher level.

6.2 Conclusion and Outlook

The article has illustrated the evolution and provided a definition of constituent characteristics of a value-oriented form of advanced category management in industrial purchasing. The analysis of available literature shows that the dominant focus of supply management research is still the functional purchasing level. Category management so far has not been well conceptualized in supply management and does not provide empirically grounded answers for configuring, aligning and managing industrial purchasing categories, nor has purchasing research adequately analyzed grounded theories to derive recommendations for category management in purchasing. More specifically, six gaps and associated research propositions have been identified which should be tackled by future category management research. As a first step towards closing this research gap, the paper develops a comprehensive conceptual model of category supply management by evolving existing models on the strategy-structure- performance linkage. The model extends the purchasing competence model vertically by anticipating the category level. Further, horizontal integration and coordination requirements of category managements are included in the model. From a theoretic perspective, the article utilizes industrial organization theory, contingency theory, the system-structural-view to provide a process-oriented blueprint for analyzing the relationship between contextual factors, strategies, purchasing configuration and the effects on category management performance. Transaction cost- and agency theory are used as foundations for creating linkage between various stakeholders of the supply management organization.

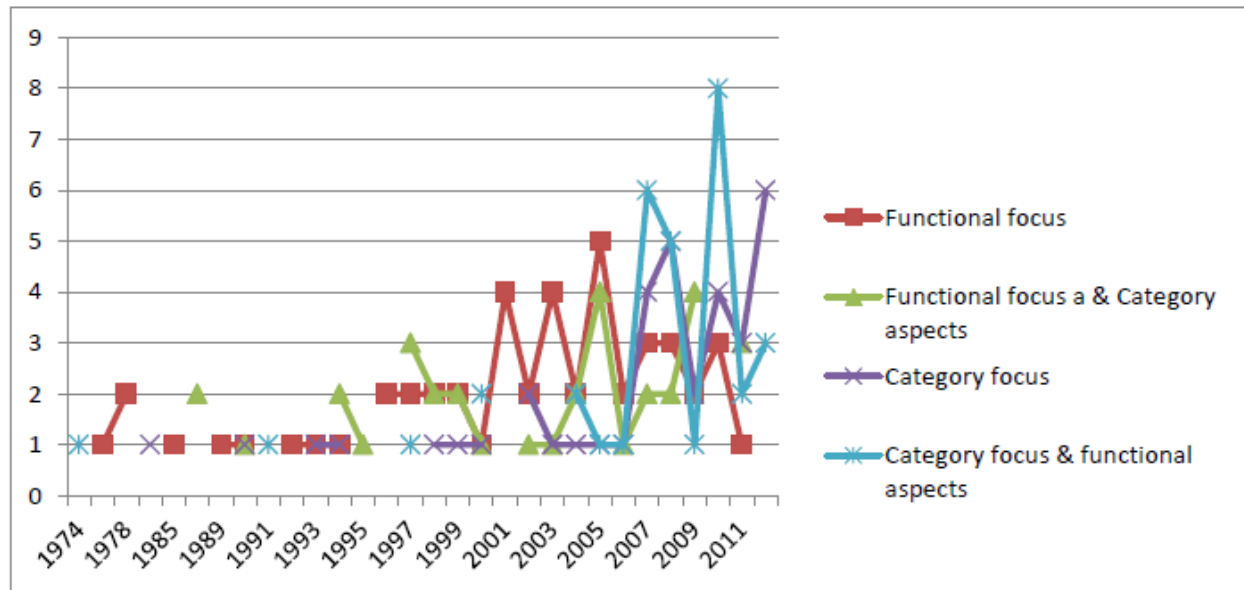
The next steps should be the development of research hypotheses as well as an operationalization of associated constructs in the category supply management model. Finally, the model's linkages need to undergo thorough quantitative empirical testing.

Appendix A

Journal Title	Area	Ranking
European Journal of Marketing	Marketing & Retail Management	2 C
European Journal of Purchasing and Supply Management	Operations, Logistics & Supply (Chain) Management	6 C
Harvard Business Review	General Management	2 D
Industrial Marketing Management	Marketing & Retail Management	7 C
International Business Review	International Business	1 B
International Journal of Logistics Management	Operations, Logistics & Supply (Chain) Management	1 D
International Journal of Operations and Production Management	Operations, Logistics & Supply (Chain) Management	5 C
International Journal of Physical Distribution & Logistics Management	Operations, Logistics & Supply (Chain) Management	6 B
International Journal of Production Economics	Operations, Logistics & Supply (Chain) Management	2 B
International Journal of Production Research	Operations, Logistics & Supply (Chain) Management	1 B
International Journal of Purchasing and Materials Management	Operations, Logistics & Supply (Chain) Management	2 B
International Journal of Retail & Distribution Management	Marketing & Retail Management	1 D
Journal of Brand Management	Marketing & Retail Management	1 D
Journal of Business and Industrial Marketing	Marketing & Retail Management	3 D
Journal of Business Logistics	Operations, Logistics & Supply (Chain) Management	3 B
Journal of International Business Studies	International Business	1 A
Journal of Marketing	Marketing & Retail Management	3 A+
Journal of Marketing Research	Marketing & Retail Management	1 A+
Journal of Operations Management	Operations, Logistics & Supply (Chain) Management	5 B
Journal of Purchasing & Supply Management	Operations, Logistics & Supply (Chain) Management	15 C
Journal of Purchasing and Materials Management	Operations, Logistics & Supply (Chain) Management	3 B
Journal of Retailing	Marketing & Retail Management	3 A
Journal of Supply Chain Management	Operations, Logistics & Supply (Chain) Management	10 B
Long Range Planning	General Management	5 B
Management Science	General Management	2 A+
Omega	Operations, Logistics & Supply (Chain) Management	1 B
Production and Operations Management	Operations, Logistics & Supply (Chain) Management	1 A
Sloan Management Review	General Management	1 D
Supply Chain Management Review	Operations, Logistics & Supply (Chain) Management	2 D
Supply Chain Management: An International Journal	Operations, Logistics & Supply (Chain) Management	2 C
Management International Review	International Business	0 C
Journal of World Business	International Business	0 B
Journal of Business	International Business	0 B
Journal of International Business	International Business	0 C
International Journal of Research in Marketing	Marketing & Retail Management	0 A
International Marketing Review	Marketing & Retail Management	0 C
Journal of the Academy of Marketing	Marketing & Retail Management	0 A
Journal of Strategic Marketing	Marketing & Retail Management	0 C
Journal of Management Studies	General Management	0 B
Journal of Management	General Management	0 B
Organization Science	General Management	0 A
Academy of Management Journal	General Management	0 A+
Strategic Management Journal	General Management	0 A
British Journal of Management	General Management	0 B
Academy of Management Perspectives	General Management	0 C
Manufacturing & Service Operations Management	Operations, Logistics & Supply (Chain) Management	0 B
Journal of Consumer Research	Marketing & Retail Management	0 A+
Marketing Science	Marketing & Retail Management	0 A+
Journal of Applied Psychology	Marketing & Retail Management	0 A
Journal of International Marketing	Marketing & Retail Management	0 B
Journal of Service Research	Marketing & Retail Management	0 A
Journal of Product Innovation Management	Marketing & Retail Management	0 A

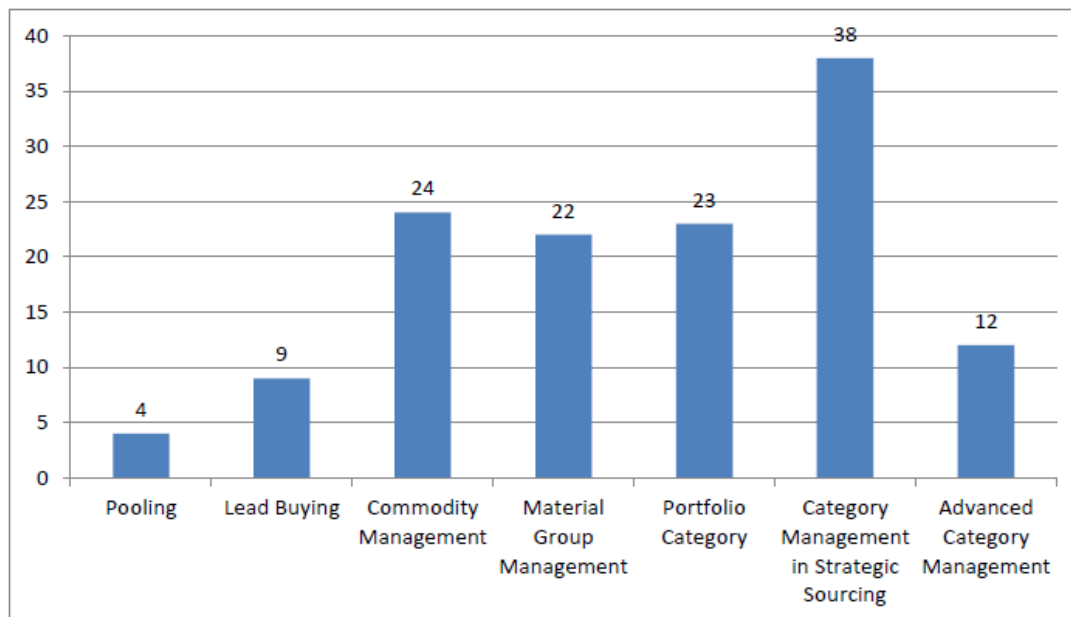
Appendix A: List of 52 preselected journals and identified journal articles

Appendix B

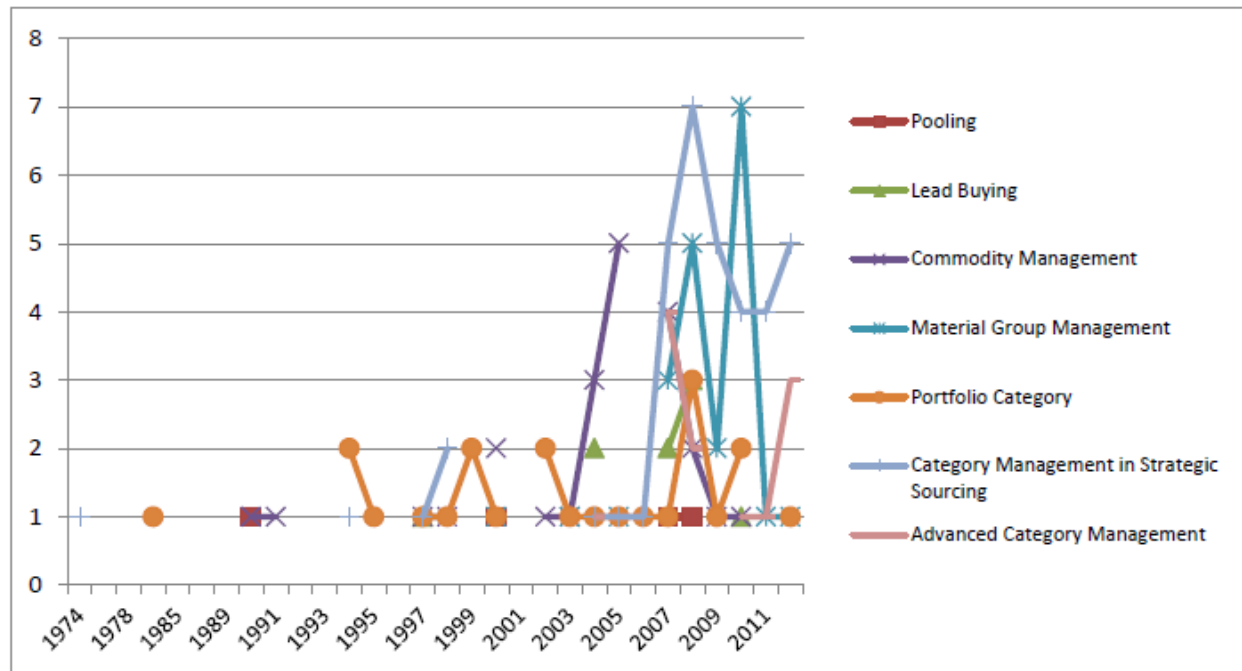


Appendix B: Distribution of Supply Management Publications by hierarchical focus

Appendix C



Appendix C1: Terminology used for describing category management in industrial purchasing research



Appendix C2: Chronological development of terminology used for describing category management in industrial purchasing research

Appendix D

Summary of characteristics in supply management literature related to category-level aspects from 1974-2012

[illegible]

Dubois & Pedersen	2002	X							X					
Gelderman & Van Weele	2002	X		X									X	
Ellram et al.	2002	X	X	X					X	X	X			

Author	Year	Journal paper	Organization	Sourcing Levers, Practices, Tools	Competences	Project-based	Permanent	Steering	Integration / Co-ordination	Cross-functional decision making	Performance Measurement	Singular (costs)	Multiple (value orientation)	Up-stream	Down-stream
Gelderman & Van Weele	2003	X												X	
Essig & Wagner	2003	X	X						X	X				X	X
Pooler et al.	2004		X	X		X		X		X	X	X		X	
Klein	2004	X	X	X			X	X	X		X		X		
Trent	2004	X	X					X	X		X		X	X	X
Wagner & Johnson	2004	X	X	X				X			X		X	X	
Caniëls & Gelderman	2005	X													
Rendon	2005	X		X		X								X	
Carter et al.	2005							X			X		X		
Rozemeijer & Wynstra	2005		X						X	X					
Odgen et al.	2005	X	X	X		X	X	X		X	X		X		
van Weele	2005		X	X		X	X				X	X	X	X	X
Arnold & Kasulke	2006		X					X							
Gelderman & Semeijn	2006	X	X				X	X	X	X					
Lehnert & Hüffner	2006			X											
Garcia Sanz	2007			X				X					X		
Moser	2007		X	X				X		X			X	X	X
Kerkhoff & Michalak	2007		X	X		X	X	X						X	X
Monczka & Markham	2007	X	X		X		X	X	X	X	X		X	X	X
Caniëls & Gelderman	2007	X													
Schiele	2007	X	X	X		X	X	X	X	X	X		X	X	X
Trautmann et al	2007		X					X	X						
Semmler & Mahler	2007		X	X			X		X	X			X	X	X
Smart & Dudas	2007	X		X				X		X					
Reinelt & Bühlmeier	2007		X	X			X	X	X	X	X		X	X	X
Schuh et al.	2008					X		X							
Schumacher	2008		X	X		X		X		X			X	X	X

Gabath	2008		X	X					X	X			X	X	X
Hess	2008		X	X			X	X	X	X	X		X	X	X
Stolle	2008		X	X			X	X	X	X	X		X	X	X
Siepermann & Vockeroth	2008			X				X			X		X	X	X
Author	Year	Journal paper	Organizati on	Sourcing Levers, Practices, Tools	Comp- etences	Project -based	Permanent	Steering	Integration / Co- ordi- nation	Cross- functional decision making	Performance Measurement	Singular (costs)	Multiple (value orientati on)	Up- stream	Down stream
Bogaschewsky & Kohler	2008		X					X							
Englyst et al.	2008	X	X		X		X	X			X				
Hirschsteiner	2008	X	X	X											
Hartmann et al	2008	X	X						X						
Pandit & Marmanis	2008			X							X	X			
Large	2009		X	X				X	X	X			X	X	
Bogaschewsky & Glock	2009		X												
Heikkilä und Kaipia	2009		X	X			X	X	X						
Kaipia und Laiho	2009		X	X			X		X		X			X	X
Trautmann et al	2009	X	X					X	X	X					
Laiho et al.	2009		X					X	X						
Svahn & Westerlund	2009	X	X	X											
Hess	2010		X	X			X	X	X	X	X		X	X	X
Seeger & Seeger	2010		X	X			X	X		X	X		X	X	X
Appelfeller & Buchholz	2010			X			X		X				X		
Göpfert & Grünert	2010														
Mohr	2010		X	X			X	X						X	X
Monczka et al.	2010		X	X				X	X		X		X	X	X
De Nardo et al.	2010			X											
Akin Ates et al.	2010			X											
Reinelt	2010		X				X		X	X	X		X		
Büsch	2011		X	X			X	X					X	X	
Schiele et al.	2011	X	X	X		X	X								
Förstl & Pohl	2011	X		X					X		X		X		
Akin Ates et al.	2011		X	X					X	X					
Karjalainen et al	2011			X							X		X		
Glock & Hochrein	2011	X	X				X			X					
Hildebrandt	2011		X			X	X		X	X			X	X	X

Feisel et al.	2011	X	X	X					X	X			X	X	X
Bräkling & Oidtmann	2012		X	X			X	X	X		X		X	X	X
O'Brien	2012		X	X		X		X		X	X			X	X
Author	Year	Journal paper	Organization	Sourcing Levers, Practices, Tools	Competences	Project-based	Permanent	Steering	Integration / Co-ordination	Cross-functional decision making	Performance Measurement	Singular (costs)	Multiple (value orientation)	Up-stream	Downstream
Saloranta & Kaipa	2012		X	X			X	X	X	X					
Partida	2012	X		X			X			X			X	X	X
Karjalainen & Salmi	2012	X		X			X								
Luzzini et al.	2012	X		X											
Patrucco et al.	2012			X					X						
Garza de Leon	2012			X		X	X	X					X	X	X

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THE USE OF INTER-COGNITIVE REPRESENTATIONS

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EXTENDED ABSTRACT

This study considers inter-cognitive representations in the form of organisational artefacts, such as manifestations of agreements between business actors, legally binding contracts, industry standards and business regulations that are created and shared through business interactions. We use the term inter-cognitive representations to describe objectified artefacts, such as manifestations of agreements between business actors, legally binding contracts, industry standards and business regulations that are created and shared through dyadic and network interactions and, thereby, they differ from atomistic cognitive representations (Tripsas & Gavetti, 2000; Gavetti & Rivkin, 2007; Salvato, 2009) or managers' subjective cognitive views (Ford *et al.*, 2003; Henneberg *et al.*, 2006; Geiger & Finch, 2010; Leek & Mason, 2010). In this context, we focus on a) business interactions among interdependent actors and b) shared rules that govern business interactions and transcend any individual actor.

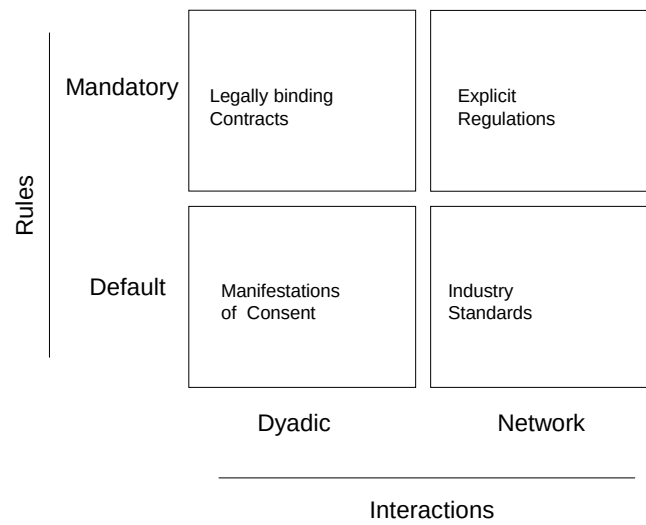
The article is based on the following argument: Business interactions do not occur in a vacuum; interactions are based on shared understanding of the rules that guide actors' behaviour and are affected by these. For example, shared understanding of the rules refers to a mutually perceived understanding of available exchange interfaces, trade practices and norms, or shared appreciations and values but also explicit regulations and laws that govern business interactions. Consider the relevance of *good faith* as a reasonable commercial standard of fair dealings. The threshold requirement of *good faith* is that each party must negotiate and perform the contract honestly. In case of a misrepresentation where the counterpart has been induced to enter into a contract as a result of a false statement of fact, the shared understanding of the interacting parties is that misrepresentation can set aside (rescind) that contract. Hence, each actors' interpretation supposes a 'shared understanding' or what Heidegger (1966) described as *prejudice*. In this study, we argue that inter-cognitive representations inscribe this shared understanding and thus prove an objectified basis for further interactions. Previous research provides valuable insights about how individuals make sense of a network (Johanson & Mattsson, 1992; Weick, 1993, 1995; Ford *et al.*, 2003; Henneberg *et al.*, 2006, 2010); however, existing research does not explain how shared understanding is manifested and used by business actors. There is a lack of theoretical discussion regarding the development of shared understandings in business networks which has prevented researchers from investigating the amalgamation of atomistic perceptions into inter-cognitive representations, which is a pre-condition to getting to grips with strategic decision making (i.e. *networking*; see Ford *et al.*, 2003) in business networks.

Our study demonstrates that inter-cognitive representations are created through recurrent interactions and, thereby, they differ from atomistic cognitive representations (Tripsas & Gavetti, 2000) or atomistic network pictures (Henneberg *et al.*, 2006).

As such, inter-cognitive representations are the outcome of the ‘theory of mind’, i.e. the knowledge individual actors have about other actors knowledge, which is based on interactions between these actors. For this reason, the efficacy of inter-cognitive representations will depend on their degree of prominence or salience. As prominent bearings of what is expected from individual actors, inter-cognitive representations can be found in almost every part of organizational life. A vivid example constitutes shared industry standards or explicit regulations within certain industries. Organizations such as the American National Standards Institute (ANSI), the British Standards Institute (BSI), Deutsches Institut fuer Normung (DIN), or the International Organization for Standardization (ISO) develop inter-cognitive representations of many kinds. For example, ISO 9000 comprises internationally agreed standards of managing a corporation to gain the confidence of customers and networks.

This paper will provide a theoretical foundation of issues pertaining to inter-cognitive representations and will propose a conceptual framework for their analysis. Furthermore, we will outline, by using examples, how the use of inter-cognitive representations affects business relationships through phenomena such as decision bias and framing. The relevant theoretical inputs from the two perspectives of ‘shared understanding of rules’ and ‘interaction among interdependent actors’ will be used as conceptual dimensions in our attempt to move towards a framework of inter-cognitive representations (please see Figure 1). Rules and interactions are inter-related but they can operate at different levels. Rules constitute a system of conventions that are shared among actors (Lewis, 1967; Young, 1993). While some of the rules are strict and mandatory for all interacting parties, other rules may be yielding or default (Ayres & Gertner, 1989; Riley, 2000). On the other hand, interactions refer to substantive processes by which counterparts relate to each other. Undoubtedly, a lot of business interactions are at dyadic level; whilst each dyadic relationship of an individual actor will be connected with other relationships, this will form a structure of network interactions that gives access to and affects a wide array of more or less distant resources (Håkansson and Waluszewski 2002; Håkansson *et al.*, 2007, 2009). Finally, the paper provides four applicable theoretical propositions for further analysis. These propositions provide alternative hypotheses that deserve further research and empirical testing.

Figure 1: Inter-Cognitive Representations



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DO GOOD AND CONVINCE OTHERS TO DO GOOD: THE IMPACT OF ETHICAL BEHAVIOR ON NEGOTIATION PERFORMANCE

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1. Relevance and research questions

Owing to the often significant investment, customized product solutions, and high risks involved in many business-to-business transactions, buyer-seller interactions play a key role in industrial markets (Håkansson, 1988; Gemünden, 1997; Håkansson & Ford, 2006). In this context, business negotiations, defined as single interaction episodes, seem to be particularly relevant as the majority of exchange conditions – the price, date of delivery, and guaranteed warranties – are negotiated between the partners in the value chain (Anderson & Narus, 2004; Fang 2006). As – by definition – the negotiation parties usually try to assert their own interests, buyer-seller negotiations have a significant influence on companies' profitability (e.g. Graham, 1986).

However, along with the upcoming interest in issues related to corporate social responsibility (CSR), and sustainability management, it is observable that the conditions and rules of many business processes have changed (Kleine & von Hauff, 2009). An augmenting number of companies shows wide-ranging responsibilities towards society but also their entire stakeholders (Daub & Ergenzinger, 2005). This development is also reflected in buyer-seller interactions where besides economic goals (e.g. price or quality expectations) increasingly ethical aspects (e.g. fairness and reliability standards) are taken into account (Herbst & Voeth, 2008).

Although, at a first glance, a commitment to ethical behavior does not go along with the profitability idea of industrial companies, various studies have indicated that the pursuit of ethical standards has a positive impact on companies' profits. For instance, Somers (2001) has proven that companies that are committed to ethical behavior are more concerned about profitability. Furthermore, Verschoor (1998) states that ethical behavior has become an important management aspect to increase profitability. However, it must also be stated that these studies remain rather vague in that they only postulate an overall positive impact of ethical behavior on a company's financial performance without explaining under which conditions, to what extent and in which interaction processes the company benefits from behaving ethically. More specifically, no study has yet analyzed the influence of ethical behavior on the performance of business negotiations. This seems all the more interesting as more than 50% of the largest companies in the world have already committed themselves to ethical behavior, mostly written down in so-called codes of conduct (Kapteijn, 2004).

Against this background, the main purpose of this paper is to analyze whether and under what conditions ethical behavior influences the performance of buyer-seller negotiations in order to more profoundly investigate its impact on companies' profitability. In this context, we specifically investigate whether ethical behavior has an impact on the individual and/or joint outcome of the buyer and seller if (1) both stick to ethical guidelines (2) only the seller company is committed itself ethically, and if (3) only the buyer company adheres to ethical behavior. We consequently investigate the following research questions:

RQ1: Does ethical behavior have an impact on the individual and/or joint outcome of business negotiations if both the buyer and the seller are committed to this?

RQ2: Does ethical behavior have an impact on the individual and/or joint outcome of business negotiations if only the seller is committed to this?

RQ3: Does ethical behavior have an impact on the individual and/or joint outcome of business negotiations if only the buyer is committed to this?

In the analysis below, we report on a large scale 2x2-design negotiation experiment and describe our results. We subsequently conclude this paper with a discussion, which contains implications for both business-to-business research and marketers.

2. Analysis

2.1. Methodology and procedure

In order to analyze the impact of ethical behavior on the outcome of business negotiations, we conducted a negotiation experiment recurring on student groups. The study subjects were 144 master's students enrolled in a negotiation management course. Participation was mandatory for all students and accounted for ten percent of their overall course grade. The students were graded according to their negotiated outcome.

The students were assigned – in teams of two – either to the role of the manufacturer or to the role of the supplier in a market of pesticide products. Thus, the negotiation experiment counted 36 buyer teams and 36 seller teams in total. In order to imagine themselves in their respective role, the teams received both a basic case and role-specific information. The groups had to negotiate and come to contractual agreements on six negotiation aspects: price, quantity, time of delivery, investment in the production plant, communication campaign, and maintenance service. Thereby, the following negotiation objects had an integrative character: investment in the production plant and communication campaign. Depending on how the parties agreed on these two objects, the joint outcomes have changed.

In order to test our research propositions, we manipulated in total 54 teams as we handed out guidelines of ethical behavior, which the teams were to consider during their negotiation. More specifically, in the first negotiation experiment, both negotiation parties obtained guidelines for ethical behavior (Case 1). In the second experiment, only the seller received additional information on how to behave ethically during the negotiation (Case 2). We manipulated only the buyer, whereas the seller did not obtain any ethical information in the third experiment (Case 3). In the control group (Case 4), neither the buyers nor the sellers received ethical guidelines. See Figure 1 for the 2x2 dimensional design.

Negotiations experiment		Buyer	
		ethical guidelines	no ethical guidelines
Seller	ethical guidelines	(1)	(2)
	no ethical guidelines	(3)	(4)

Figure 1: Negotiations experiment in 2x2 dimensional design

2.2. Research findings

In order to investigate whether and under what conditions ethical behavior has an impact on the negotiation performance, we calculated the individual outcome of such behavior for both the buyer and the seller as well as the joint outcome. To explore whether these differences are significant, we applied the t-test for two independent samples. We used the .05 level of significance.

In regard to the averaged joint outcomes of our four experimental conditions the results show that the joint outcomes of Case 1 to 3 are significantly higher ($p=.01$) compared to the control group (Case 4). Regarding the individual outcomes of the seller and the buyer, it becomes obvious that they are significantly higher when only the counterparty has negotiated ethically (Case 2 and 3) or both parties have received ethical information (Case 1).

For an overview of the results see Table 1.

Overall, the results reveal – similar to the findings of the existing studies – that ethical behavior has a positive influence on buyer-seller interactions in general as the joint outcome is higher for the case that both parties have received ethical information. However, in addition, the individual outcome of a negotiation party can even decrease as soon as ethical aspects are taken into account.

	Negotiation experiment	Sample (n=72 teams)	Mean Rank	Sig.
Joint outcome	Case 1	9	96,90	.01
	Case 2	9	87,67	
	Case 3	9	73,08	
	Case 4	9	52,35	
Individual outcome Seller	Case 1	9	81,19	.00
	Case 2	9	64,94	
	Case 3	9	79,49	
	Case 4	9	48,38	
Individual outcome Buyer	Case 1	9	92,92	.04
	Case 2	9	85,88	
	Case 3	9	51,29	
	Case 4	9	38,92	

Table 1: t-test for independent samples

3. Discussion

In recent years, CSR and ethical behavior have attracted growing interest in the business world. Against this background, it does not come as a surprise that several studies have already investigated the impact of ethical behavior on companies' profit. Although these studies have proven its overall positive influence on a company's financial performance, they remain rather vague in that they do not explain under which conditions, to what extent and in which interaction processes the company benefit from behaving ethically. Therefore, this study investigated the impact of ethical behavior on business negotiation outcomes as they crucially impact a company's profitability. In order to guarantee a more profound comprehension of the impact of ethical behavior on a company's profitability, we examined both the joint and the individual outcomes of buyers and sellers in a large-scale 2x2-design negotiation experiment.

First, similar to the existing studies, our results show that – independent of which negotiation party behaves ethically (the buyer, the seller or both) – the joint outcome and thus the total profit of a buyer-seller interaction process was always higher than in the control group. However, regarding the individual outcomes, our results reveal that ethical behavior can even decrease the individual outcome and thus harm a negotiation party, if the counter party has not committed itself to ethical guidelines. More specifically, compared to the control group the case in which only the seller (buyer) negotiated ethically shows a decrease in this individual outcome.

Given these results, our study yields valuable insights into industrial buyer-seller interactions. Evidently, ethical behavior is a crucial topic in today's business world and should be implemented in a company's management guidelines. However, in times of increasing cost pressures and efficiency constraints, it also seems necessary to take a closer look at firms' individual interaction processes with its suppliers and customers and to analyze the impact of ethical behavior on these processes. This is apparent in our study, as, unlike prior studies, it shows that ethical behavior can harm a company if the counterparty does not uphold ethical standards. These processes become especially important if the company's profit depends strongly on the respective business negotiation. In this case, industrial marketers should take care that – if they commit themselves to ethical behavior – their counterparty is also willing to stick to ethical guidelines, for instance, by agreeing to a code of conduct. This is due to the fact that, as our study reveals, not only the overall profitability of the buyer-seller interaction (joint outcome), but also the respective individual outcomes of the parties have increased. At the same time, this win-win situation fosters the creation of long and strong business relationships.

Nevertheless, our study also has some limitations. First of all, we referred to a student sample. Although this is a current and approved measurement instrument in negotiation research, it might be interesting to examine the influence of ethical behavior on performance in real buyer-seller negotiations. Furthermore, we only observed one negotiation period, which could have strengthened the effects of ethical behavior, as the guidelines were omnipresent. Thus, it is possible that commitment to ethical guidelines weakens over the time. Therefore, further research should analyze the influence of ethical guidelines over several periods.

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SUSTAINED COMPETITIVENESS AND SUCCESS IN BUSINESS MARKETS THROUGH HOLISTIC VALUE CREATION: A NEW CHALLENGING PERSPECTIVE

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Abstract

Business market management faces more difficulties in sustained competitiveness and success due to hyper competition, increasingly complex global environment and greater customers' demand in the new economy. To continued superior performance, firms need to develop an integrated strategy through holistic value creation as the fundamental marketing frontiers have been changed. Intensive literature reviews suggest new paradigm of business markets require new integrated approach focusing on value creation through three critical perspectives: network marketing, innovation marketing and relationship marketing. While good networking emphasizes the proper collaboration with business partners or involving customers to increase organization marketing capabilities in value creation and offerings, sound innovation pays attention to develop unique marketing capabilities in terms of building differentiate value better than competitors to satisfy target customers and attract new potential markets. Relationship marketing, in contrast places an emphasis on enhancing dynamic marketing capabilities to continued creating and offering superior value to satisfy target customers and gain better outcomes in the long-run. Moreover, achieving these integrative perspectives, proper information technology (IT) and knowledge management (KM) needs implemented aligning with appropriate cooperation and collaboration among relevant stakeholders. As evidence reveals, theses divers are increasingly critical to sustained business success in the high turbulent and competition.

This paper addresses such unexplored issues by using several theories and also assimilating literature from outside the marketing discipline. An empirical study is employed through a single case method in order to present a practical agenda for business marketing firms and involving organizations. To enhance its contributions and applications, a proposed model of holistic value creation to sustained competitiveness and success in business markets is also explored with managerial implications. Finally, future research directions are outlined and recommended.

Keywords: Holistic value creation, new paradigm of business markets, sustained competitiveness, continued business success, case study

KNOWLEDGE TRANSFER IN MNCs: ABSORPTIVE CAPACITY AND DISSEMINATIVE CAPACITY

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1. Introduction

Currently multi-national corporations are facing a difficult situation. Under the heavy pressure of cost reduction due to fierce price competition, some MNCs have been challenged to globally standardise every kind of operations, while others have entrusted local operations to each subsidiary (Craig and Douglas, 1996). There is still controversy between the global standardisation supporters and the local adaptation supporters (Douglas and Wind, 1987, Lemak and Arunthanes, 1997, Katsikeas et al., 2006).

When thinking about MNCs who have operated globally for a long period of time, one thing to consider is ‘embeddedness’ of each subsidiary, because such a subsidiary has been embedded in its local market and has established relationships with its customers and suppliers over time (Andersson et al., 2001b). In such cases, to apply a global standardisation strategy might not be a good idea.

The other key issue is how the headquarters are able to capture such subsidiaries’ embeddedness, and inversely how the subsidiaries are able to communicate the latest situation of their embeddedness to the headquarters (Kutschker and Schurig, 2002). When thinking about this bilateral communication between the headquarters and subsidiaries, paying attention to ‘knowledge transfer’ is important. In this paper, by focusing on particularly the intra-organisation knowledge transfer, literature review will be discussed and a future plan for the case study for a Japanese subsidiary of an America-based global computer company will be introduced.

1. Literature review

2-1. Knowledge transfer in MNCs

Knowledge transfer in a firm or between firms has been researched from perspective of not only Multinational Corporations (MNCs) but also every type of firm in general. Conceptually, Nonaka (1994) puts an emphasis on that, while new knowledge is developed by individuals, organisations play a critical role in articulating and amplifying that knowledge. Nonaka (1994)’s ‘dynamic theory of organisational knowledge creation’ is based on his observation that organisational knowledge is created through a continuous dialogue between tacit and explicit knowledge. Referring to Nonaka’s theory, Grant (1996) discusses that knowledge is central to several distinct research traditions, notably organisational learning, the management of technology, and managerial cognition. Beyond the traditional views in such research areas, Grant (1996) advocates the ‘knowledge-based view’ as an outgrowth of the resource-based view. In the knowledge-based view, Grant (1996) insists that the primary role of the firm is integrating the specialist knowledge resident in individuals into goods and services, and that

the primary task of management is establishing the coordination necessary for this knowledge integration.

Szulanski (1996) focuses on the 'internal stickiness' of a firm, which hinders an efficient knowledge transfer in a firm, and establishes a model to explain the internal stickiness, which is tested empirically. Similarly, Simonin (1999) pays attention to the role of knowledge ambiguity pertaining to the process of knowledge transfer in international strategic alliances. He concludes that tacitness emerges as the most significant determinant of knowledge transferability.

Knowledge transfer is also researched exclusively from the perspective of MNC, and this research area has been developed by taking in the antecedents' research results in the field of knowledge management, organisational studies, international business, strategic management, and business-to-business marketing, among others. According to Easterby-Smith, Lyles, and Tsang (2008), there are two research trends; one is focusing on knowledge flows within a MNC (Intra-organisational knowledge transfer), and the other between a MNC and other firms (Inter-organisational knowledge transfer). In the research area of inter-organisational knowledge transfer, the concept of 'embeddedness' is important, which explains that economic transactions between two actors are embedded in a social and cultural context with mutual adaptation of the partners' perspective, interests and resourcing occurring over time (Andersson et al., 2001b, Granovetter, 1985). This concept has been used to discuss MNC's behaviours on the boundary between a subsidiary and its external environment. Andersson, Forsgren, and Pedersen (2001b) clarify empirically a positive relationship between a subsidiary's performance and the degree of technology embeddedness of the subsidiary's business network (external environment). Similarly, Andersson, Forsgren, and Holm (2001a) show empirically that the more deeply a subsidiary is embedded into its local market, the more easily it can assimilate new knowledge therefore the more it can innovate.

In the research area regarding intra-organisational knowledge transfer, much research has been done mainly from the perspective of a subsidiary rather than perspective of the headquarters. Gupta and Govindarajan (1994) focus on intra-organisational knowledge transfer, insisting that the MNC can be viewed as a network of knowledge flows, and conceptualise subsidiary strategic roles in terms of different patterns of knowledge transactions between a focal subsidiary and the rest of the corporation. Later in another article, Gupta and Govindarajan (2000) try to demonstrate empirically what determinants motivate the intra-organisational knowledge inflows from and outflows to foreign subsidiaries in a MNC, by conceptualising a model of knowledge flows (into or out of a subsidiary) through application of the communication theory. One of their conclusions is that direct inter-subsidiary interactions are becoming increasingly important in comparison with the interactions between subsidiaries and the headquarters. On the other hand, Andersson and Holm (2002)'s empirical research focuses on the intra-organisational knowledge transfer, while paying attention to subsidiaries' embeddedness in their local market. They propose a concept of the 'organic path' of the internal knowledge flow, which is an autonomous interaction between subsidiaries, independent of the headquarters' top-down information flows to subsidiaries, and that the strength of the organic path from a specific subsidiary to other subsidiaries depends on the degree of that subsidiary's embeddedness in the local market. Li (2005)'s empirical study pays attention to how knowledge transfer in subsidiaries is influenced by trust and shared vision, and found that trust is a more influential factor in inter-organisational relationships, whereas shared vision is more influential in intra-organisational relationships.

There are also researchers who try to research both inter-organisational and intra-organisational knowledge transfer at the same time. One of fundamental theories to support this idea is Ghoshal and Bartlet (1990)'s 'inter-organisational theory'.

They define an 'inter-organisational network' as an external network consisting of all other organisations such as customers, suppliers, and regulators among others, with which the different units of the MNC must interact. Influenced by this theory, Yamin and Otto (2004) demonstrate that there is strong complementarity between internal and external tacit knowledge flows, and that such external and internal knowledge flows stimulate innovation in MNCs. Similarly, based on Ghoshal and Bartlet (1990)'s inter-organisational theory and the concept of embeddedness (Andersson et al., 2001a), Kutschker and Schurig (2002) insist that a subsidiary of a MNC functions as a knowledge-broker between the external environment and the other units of the MNC, offering a 'pipeline' for the knowledge flow, and ensure that foreign subsidiaries can act as technological 'change agent' through the pipeline effect.

2-2. *Absorptive capacity and disseminative capacity*

When thinking about knowledge transfer in a firm or between firms, one of the key concepts is 'absorptive capacity' which is defined as an ability of a firm to recognise the value of new, external knowledge, assimilate it, and apply it to commercial ends (Cohen and Levinthal, 1990). This concept has been accepted widely by the researchers who study inter-organisational or intra-organisational knowledge transfer in MNCs. According to Michailova and Mustaffa (2011)'s critical literature review regarding the knowledge flows in MNCs, the construct of absorptive capacity has the largest portion of the research which focuses on the characteristics of actors. Szulanski (1996)'s empirical research focusing on the determinants of stickiness of knowledge in a firm shows the results that one of the most important origins of the stickiness is the lack of absorptive capacity of the recipient. Similarly Gupta and Govindrajana (2000) demonstrate that knowledge inflows into a subsidiary are positively associated with the absorptive capacity of the subsidiary. Minbaeva *et al.*, (2003) find overall support for the argument that the absorptive capacity of a subsidiary facilitates transfer of knowledge from other parts of the MNC. Moreover, they find that employees' ability and motivation constitute the firm's absorptive capacity. Focusing on the inter-organisational knowledge transfer of a subsidiary in a local market, Andersson *et al.*, (2001a) show a positive relationship between an organisation's network embeddedness and its absorptive capacity, and confirm that the more a subsidiary has deep and extensive relationships with suppliers and customers in its business environment, the higher its ability to assimilate complex knowledge is. Thus, the absorptive capacity, mainly for a subsidiary of a MNC, has been studied from various angles as one of key constructs of knowledge transfer in MNCs.

On the other hand, some researchers insist that, when thinking about knowledge transfer in a firm, to research only the absorptive capacity is limited, but that an ability of sending knowledge by a sender should be also considered. For example, Minbaeva and Michailova (2004) insist, "Efficient knowledge sharing demands a collaborative effort, implying that it is not only dependent on the recipients' absorptive capacity but also very much on the knowledge sender's attributes and behaviour" (p. 666), and then they name the behaviour of knowledge senders as 'disseminative capacity'. Parent, Roy, and St-Jacques (2007) advocate the dynamic knowledge transfer capacity (DKTC) model, which explains a mechanism for social systems to transfer knowledge. The DKTC model consists of four capabilities such as generative, disseminative, absorptive, and adaptive/responsive capabilities of knowledge.

Among them, the disseminative capability is defined as ‘the ability to contextualise, format, adapt, translate and diffuse knowledge through a social network and to build commitment from stakeholders (p. 87)’.

Mu, Tang, and MacLachlan (2010) define the disseminative capacity as ‘the ability of network members (knowledge holders) to efficiently and effectively codify, articulate, communicate and teach knowledge to other network members (p. 33)’. According to Minbaeva and Michailova (2004), although the importance of disseminative capacity in relation to knowledge transfer has been illustrated in numerous conceptual studies, substantial empirical support is largely absent.

A few researchers, however, have studied disseminative capacity empirically. Minbaeva and Michailova (2004) discuss how the two suggested constructs of the disseminative capacity, willingness and ability, influence the degree of knowledge transfer. The results show that, while the senders’ ability to transfer knowledge had a strong positive effect on the degree of knowledge transfer, the effect of the senders’ willingness was not significant. This result means that knowledge transfer might fail because, although organisations want to engage in knowledge transfer, they do not know how to. Minbaeva (2007) devises a model of knowledge transfer which consists of four constructs; the characteristics of knowledge, characteristics of knowledge receivers (absorptive capacity), characteristics of knowledge senders (disseminative capacity), and characteristics of the relationship between senders and receivers. Her statistical analysis results show that, although the success of knowledge transfer is exclusively a function of the characteristics of the knowledge, both absorptive and disseminative capacities have a significant correlation with the success of knowledge transfer. Mu, Tang, and MacLachlan (2010) pay attention to both the disseminative capacity and absorptive capacity in intra-organisational networks, and from their empirical research they conclude that a full understanding of the knowledge transfer process should take into account the disseminative capabilities of knowledge holders and the absorptive capabilities of knowledge recipients simultaneously.

2-3. *Research gap*

In some MNCs, as a global standardisation progresses, the headquarters become powerful in terms of the knowledge management, and the knowledge flows tend to be unilateral (Theodosiou and Leonidou, 2003, Whitelock and Pimblett, 1997). On the other hand, it has been made clear that subsidiaries tend to be more autonomous because they stock much knowledge by assimilating from the local market in which they are embedded (Andersson and Holm, 2002, Yamin and Otto, 2004, O'Donnell, 2000). Under such a situation, if a subsidiary does not have enough ability to disseminate its own knowledge to the headquarters, then the knowledge outflows stagnates at the subsidiary. Therefore, the disseminative capacity for subsidiaries matters. But limited empirical research into disseminative capacity has been undertaken so far (Minbaeva and Michailova, 2004).

Here is a research gap. So in this research, intra-organisational knowledge transfer between the headquarters and subsidiaries will be researched paying attention to not only absorptive capacity but also disseminative capacity of subsidiaries.

2. Outline of case study and research questions

In the future research, a few of partner programmes in a Japanese subsidiary of Global Computer Company (GCC), which is a global company manufacturing and selling computer hardware and software products, will be scrutinised through the case study method. Technology Services (TS) is one of business units of GCC, which is in charge of after-sales services for all the GCC's products from servers, storage products, to personal computers and printers. Soon after GCC merged with another global computer manufacturer in 2002, TS started to deploy its strategy to promote selling of the CarePack, which is a packaged maintenance service, to customers and partners in all the subsidiaries all over the world. As a tactic to support such a strategy, the GCC Support Partner (GCCSP) programme was launched, aiming to encourage GCC's partners to resell the CarePack to their end-users.

In line with this global strategy, TS-Japan promoted the GCCSP programme in the Japanese market under collaboration with Sales and other business units of GCC-Japan. This worldwide programme, however, was not easily accepted by the partners in Japan, because, while GCC's worldwide strategy was to expand the sales of CarePack, those partners' strategy was to expand the sales of GCC's products by binding their own brand's maintenance services. Such apparent resistance from the partners forced TS-Japan to modify the programme locally, and eventually brought a huge negative impact onto GCC-Japan.

On the other hand, GCC-Japan has had its own partner programme that was established to promote resale of GCC's UNIX servers from scratch by GCC-Japan. This business model is called Japan OEM (J-OEM), in which not only GCC-Japan but also various business units of GCC in the world are involved. Under this partner programme, partners are able to capture the design information of GCC's new products much earlier than any customers or receive very high-level technical support from GCC's laboratory engineers. Although this programme forces the partners to pay a large amount of licence fee, the partners' satisfaction level has been high.

Thus, while a global partner programme does not work well in a subsidiary in Japan, a local partner programme which was established from scratch in Japan works well. There are various reasons behind such a stark contrast, but in this research, the intra-organisational knowledge transfer will be focused on.

Regarding the purpose of the future research, at first from the perspective of the headquarters, it is required to capture the degree of the GCC headquarters' ability to cascade its strategy to each of its subsidiaries (disseminative capacity) and the ability to absorb each subsidiary's position and degree of embeddedness in each local market (absorptive capacity). Secondly, from the perspective of the subsidiary, it is required to confirm the degree of the subsidiary (GCC-Japan)'s ability to absorb the GCC headquarters' strategy (absorptive capacity) and to disseminate to the headquarters the position that GCC-Japan is located in the local market (disseminative capacity). Thus, it is necessary to verify both inflows and outflows of knowledge between the headquarters and subsidiaries. Therefore, the research question should be, "How knowledge is transferred within a MNC (GCC), especially between the headquarters and a subsidiary in Japan (GCC-Japan)?"

Yin (2009) suggests that, the more a research question seeks to explain some present circumstance ("how" or "why" type questions), the more the case study method will be relevant. As shown above, the research question for this research is a "how" type question, so the case study method is relevant. According to Yin (2009), a case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially

when the boundaries between the phenomenon and context are not clearly evident. This research will deal with the contemporary phenomenon (intra-organisational knowledge transfer) within the real-life context; therefore, the case study method will be used in the future research. At the conference, preliminary results of the case study will be presented.

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The importance of information in international market selection: a case study from the power industry

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Abstract

International market selection is the primary concern in a firm's internationalization process. This article aims to identify the perceived importance of environmental dimensions in international market selection in the power industry based on comprehensive export environment information framework of Wood and Robertson (2000). The ranking method was used for analyzing the data. The results indicate that information related to market potential is the most important dimension. Legal, politics, infrastructure, economics are respectively ranked as the most influential ones and culture is the least. Findings also show that international market selection is a sequential decision making process whereby markets are screened through some stages.

Keywords: Export, Marketing information, International market selection, power industry

1. Introduction

Once a firm decides to expand internationally, the first step is selecting a right market. Facing with so many countries to evaluate, an exporter can be overwhelmed with the diversity and complexity of alternative market opportunities (Wood and Robertson, 2000; Cavusgil *et al.*, 2004). A mistake by a firm in choosing the right market can have long-term complications on its resources. Many researchers believe that international market selection (IMS) is the main concern in a firm's internationalization process (Douglas, *et al.* 1982; Kumar *et al.*, 1994; Alon, 2004). Nonetheless, an international market selection model which is flexible and comprehensive to accommodate the diversity across industries is still rare (Wood and Robertson, 2000; Papadopoulos *et al.*, 2002; Cavusgil *et al.*, 2004; Sakarya *et al.*, 2007; Sheng and Mullen, 2011).

The power industry is an infrastructural business-to-government (B2G) and business-to-business (B2B) industry and exporters sell their products and services to governments and other firms. Most firms should invest in target markets to win the projects. Hence, selecting target market(s) is a key decision that determines success or failure of a company.

When a firm makes a decision to select a market to establish and/or to expand its business activities, this decision is influenced by various factors. This paper sets out to present the findings from a study which examined the perceived importance of environmental dimensions in evaluating and selecting international markets in the power industry based on comprehensive export environment information framework of Wood and Robertson (2000). Politics, market potential, economics, culture, infrastructure and legal are the six environmental dimensions examined according to Iranian exporters' opinions. Since IMS determinants and significance of these factors may differ across countries; accordingly, the other aim of this paper is to investigate how different international business decision makers evaluate markets information.

The main question is “What information is the most important to exporters in the power industry in international market selection?”

2. Literature review

According to Papadopoulos and Denis (1988) “IMS is a process that follows by the decision to initiate or extend internationalization and terminates when it is decided whether to act upon the results of the selection process” (Papadopoulos and Martín Martín, 2011; P: 136). Most of internationalization theories imply that firms expand into overseas markets at an incremental pace and their export target selections are based on non-systematic criteria as psychic distance and experiential learning (Johanson and Vahlne, 1977; Kogut and Singh, 1988; Fina and Rugman, 1996; Dow, 2000), cultural distance (Carlson, 1975) and geographic distance (Sethi, 1971). Systematic IMS is a major determining factor of export performance (Brouthers *et al.*, 2009) especially in the early stages of the internationalization process (Martín Martín and Papadopoulos, 2007). Scholars have stressed the importance and the need for systematically evaluating and selecting international markets (Douglas and Craig, 1989; Kumar *et al.*, 1994; Brouthers and Nakos 2005; Rahman, 2003, 2006).

Some approaches to systematic international market selection define the process of evaluating the foreign markets as composed of stages like preliminary screening, in-depth screening and final selection (Cavusgil 1985; Root, 1994; Kumar *et al.*, 1994; Cateora, 1995; Johnson, 1997; Koch, 2001). Screening is a preliminary stage in the assessment of global opportunities. It is a process for identifying potential markets for subsequent in-depth analysis (Douglas & Craig, 1983; Root, 1994; Russow and Okoroafo, 1996). Macro-level indicators, such as economic statistics, political environment, socio-cultural factors and geographic features are identified as important dimensions in initial screening stage. The subsequent in-depth stage specifies the use of industry specific information on market factors and competition. Market size, growth rate, factors of production and economic development constitute proposed screening criteria (Russow and Okoroafo, 1996). The final selection stage identifies the market which best matches the firm’s objectives and available resources (Johnson, 1997).

International marketing researchers identified two primary approaches in market screening: Market grouping methods which use macro-economic criteria and cluster countries on the basis of similar commercial, economic, political and cultural dimensions and market estimation methods which aim at differentiating markets and involve some forms of ranking on the basis of their potential (Papadopoulos and Denis, 1988; Cavusgil *et al.*, 2004; Sakarya *et al.*, 2007). The similarities help exporters compare countries and evaluate possible synergies (Liander *et al.* 1967; Sethi, 1971; Huszagh *et al.*, 1985; Cavusgil *et al.*, 2004).

Scholars have criticized grouping approaches for relying exclusively on macro-economic indicators rather than on specific product market indicators (Douglas, 1971; Cavusgil & Nevin, 1981; Douglas & Craig, 1983; Sakarya *et al.*, 2007).

Secondary data-based methods suffers from a lack of comparability of data across countries, the unreliability of secondary data issued by some countries and the difficulty in determining which indicators are relevant to the product (Papadopoulos & Denis, 1988; Sakarya *et al.*, 2007).

Over the past decade, empirical studies by scholars have generated various decision frameworks with different criteria which have developed IMS literature. For instance, Wood and Robertson (2000) identify market potential, legal, politics, infrastructure, economics and

culture as the influential environmental dimensions for evaluation of markets. Papadopoulos *et al.* (2002) suggest an international market selection model using market potential as the plus and trade barriers as the minus of evaluating countries. Rahman (2003) propose a two stage model which firstly indicates the market size by macro and micro economic indicators and firm's international capabilities. The second stage is structural attractiveness which is evaluated through such factors as costs, compatibilities, government policies and firm's own policies.

Whitelock and Jobber (2004) identify country environment, psychic distance, market-based factors, competition, information and market knowledge as the criteria for decision to enter a non-domestic market for the first time. Sakarya *et al.*, (2007) introduce long-term market potential, cultural distance, competitive strength of the related industry and customer receptiveness as additional criteria to conventional IMS models in order to assess emerging markets. Sheng and Mullen (2011) develop a hybrid model for export opportunity analysis and emphasize on geographic distance, market size, economic intensity and regional trade agreements (RTAs) as the most important determinants.

3. Research model

Wood and Robertson (2000) suggest an export environment information framework that indicates the importance of information in evaluating foreign markets. They begin a survey by addressing several questions as what information is important to established exporters when analyzing foreign markets: Does the perceived importance of foreign market information change as market changes? Do exporters active in different industries value information differently? And Do exporters who use different means of export transactions value information differently?

In order to examine the issues mentioned in questions, they arranged personal interviews which led to find 200 indicators of foreign environment and modify 200 indicators to 60 specific decision variables, 17 subsidiary export dimensions and six primary environmental dimensions as illustrated in Table I.

A sample of 137 US exporting companies was used to test the perceived importance of variables by the researches. The results led to a ranking that rated market potential, legal, politics, infrastructure, economics and culture respectively as the most important dimensions. Market information and legal information were rated first and second respectively for all selected markets and industries. The ranking remained the same for exporters using different export transactions. The importance of other dimensions was ranked differently by exporters in different industries and by exporters using different export transactions.

This survey applies Wood and Robertson's export environment information framework to the Iranian power industry in order to evaluate the importance of information for exporters in their market selection. Testing Wood and Robertson's model which was examined on US exporters before, in a different country with different economic characteristics and business environment would be of considerable interest and allow us to identify similarities and differences in exporters' views.

Table I. Information framework of the export environment

Primary environmental dimensions	Subsidiary export dimensions	Specific decision variables (written description used in survey)
Politics	Stability	(1) Political strenght of leadership in the foreign country
		(2) Degree of freedom of the political opposition in the foreign country
		(3) The degree of local labor unrest and the foreign government's ability to deal with the current and future labor unrest
		(4) Degree of foreign country's domestic instability (e.g. rebellion, political kidnapings, riots, guerrilla wars)
	Diplomatic relations	(5) Degree of normal diplomatic relations between USA/exporter country and the foreign country and vice versa
		(6) Extent of restrictions on free and open trade with the foreign country due to political frictions
	Internal Politics	(7) Extent of foreign governmet's use of incentives to encourage private business
		(8) The ability of the foreign government to enforce its diplomatic policies with respect to trade
		(9) Actual size of the private sector in relation to the government sector in the foreign country
Market Potential	General demand	(10) Potential foreign buyers' ability to pay for your product
		(11) Average annual sales of your type of product or servise in the foreign country
		(12) Future trends and growth rate of the foreign market in which your product orservice would be sold
		(13) Opportunities for you to offset cyclical swings in the US market/exporter market demand for your product by entering a foreign market
	Adaption costs	(14) Parts and technical services support needed and available for your product in the foreign country
		(15) Need to change your product specification due to differences in foreign buyers' tastes and preferaces or technical requiremensts
		(16) degree of taste marketing and promotion required to assure adequate sales of your product in the foreign market
		(17) Credit and financing normally extended to buyers in the foreign country (i.e. industry standards for financing sales to a foreign market)
	Competition	(18) Types and number of competitive products on the market in the foreign country
		(19) Competitors' market share, coverage, and growth rate in the foreign market
		(20) Advantages and weakness of competitors in the foreign market (e.g. the uniqueness of competitor's product and facilities for distribution)
		(21) Price levels on coppetitive product compared to your CIF price (Costs, insurance, and freight) in the foreign market

Table I. Information framework of the export environment

Primary environmental dimensions	Subsidiary export dimensions	Specific decision variables (written description used in survey)
Economics	Development and performance	(22) Gross National Product and per capita income in the foreign country
		(23) Availability of US dollar reserves in the foreign country
		(24) Education and employment levels in the local foreign population
		(25) Inflation rate over the past five years in the foreign country
		(26) Trends in the foreign country's balance of trade (surpluses versus deficits)
Culture	Production strength	(27) The degree of use of modern, efficient methods in the creation of products and services in the foreign country (relative skill level of labor force)
	Consumption	(28) Wealth of the foreign country in natural resources and the extent of their development
		(29) The diversity and range of all product produced in the foreign country versus those imported
		(30) Per capita ownership of consumer goods in the foreign country (e.g. cars, radio, TVs, etc.)
		(31) Per capita food consumption in the foreign country
		(32) Per capita energy consumption in the foreign country (e.g. oil, gas, coal)
		(33) Per capita industrial goods consumption (e.g. steel, cement, glass) in the foreign country
	Cultural unity	(34) Number of different cultural grouping, such as ethnic, religious, racial, and language groups found in the foreign country
		(35) Extent of harmony or friction between different cultural groups in the foreign country
		(36) Differences in lifestyles and customs of various groups in the foreign country
		(37) Extent of adoption of American/exporter country's way of life in the foreign country
Infrastructure	Distribution	(38) Percent of the business community who speak english
		(39) Preferences and prohibition in the foreign country with respect to numbers, colors, shapes, size, and symbols on products and in promotion of
		(40) Differences between US/exporter country and foreign views on the use of your product
		(41) Costs and efficiency of transportation to the foreign country from the USA/exporter country (airlines, shipping lines, etc.)
		(42) Costs and efficiency of transportation within the foreign country (roads, highways, railroads, trucking, etc.)
		(43) Costs and efficiency of physical handling and warehousing in the foreign country (in the port of entry and throughout the foreign country)
		(44) Extent of development of wholesale/retail system in the foreign country

Table I. Information framework of the export environment

Primary environmental dimensions	Subsidiary export dimensions	Specific decision variables (written description used in survey)
Legal	Communications	(45) Costs and efficiency of communications to the foreign country from USA/exporter country (e-mail, telex, telephone, post office/other mail) (46) Costs and efficiency of communications within the foreign country (i.e. commercial broadcast media, print media, promotional agencies) (47) Costs and efficiency of trade fairs and industrial exhibitions in the foreign country
	Geography	(48) Total land area of foreign country and description (i.e. mountain range, rivers, natural harbors, land-locked) (49) Climatic characteristics in the foreign country (50) Natural disaster potential in the foreign country (earthquakes, volcanoes, floods, windstorms)
	Tariffs/taxes	(51) Exact tariffs, import duties, and taxes assessed by the foreign country on your products (52) Tariffs concessions allowed by foreign country (i.e. drawbacks, preferential tariffs) (53) Common markets or regional trading blocks to which the foreign country belongs
	Non-tariff	(54) Product standards imposed by foreign country (e.g. local assembly laws; product packaging and labeling requirement; local safety and environmental regulations) (55) Required documentation, import procedures, and quotas imposed by the foreign government (56) Extent and nature of the foreign government's participation in trade (e.g. foreign government procurement policies)
	Other legal	(57) Visa requirements in the foreign country (restriction on travel imposed by foreign government) (58) Foreign government's laws affecting relationships with agent's distributors (e.g. severance pay, compensation) (59) Laws regulating and restraining advertising and promotion in the foreign country (60) Patent, copyright, and trademark protection in the foreign country

Source: Wood, Van R. and Robertson, Kim R. (2000), "Evaluating international markets: the importance of information by industry, by country of destination, and by type of export transaction", *International Marketing Review*, Vol. 17, No. 1, pp. 34-55.

4. Research methodology

As the research objective is to identify the importance of environmental information in selecting international markets considered by the power industry exporters, the statistical population was defined as the Iranian power equipment and services exporters.

36 exporter companies were identified in Iran's power industry working in the fields of generation, transmission and distribution of electricity, by using databases of Iran Electrical Industry Syndicate and Trade Promotion Organization of Iran. All Iranian exporters active in the power sector were used in the survey.

To gather data about Iranian exporters, a questionnaire including specific decision variables in Wood and Robertson's export environment information framework is used. Answers to questions based on five-point Likert scale are ranged from – (1) this information is unimportant to me in making a decision to export to a foreign market, to (5) this information is extremely important to me in making a decision to export to a foreign market. The questionnaires were officially sent to companies' managers by Iranian Electrical Industry Syndicate with a cover letter explaining aim of survey. Out of 36 sent questionnaires, 32 Completed ones were received. The reliability of the scale according to Cronbach's coefficient alpha was 0.9257. The ranking method was used for analyzing the data.

5. Research results

To answer the main research question, subjects were asked to rate each of the specific decision variables (Table I) in terms of "How important would this type of information be to you in making a decision in order to select an export market?" Questionnaire also included some questions about the position of respondents, export experience, products and services and export records.

Data quality was assessed through an evaluation of respondents' positions within their firms and years of exporting experience. Results indicated that 71 percent of the respondents were managing directors or vice presidents and the others were export managers or international marketing managers. Regarding the experience, 56 percent of respondents had more than five years of exporting experience.

Table II illustrates the level of importance for each of the six environmental dimensions ranked by the respondents. This table depicts that market potential is the most important dimension which is equal to 4.04 and it is followed by legal dimension stands at 3.81. Respectively politics rate equals to 3.69, infrastructure rate equals to 3.44, economics rate equals to 3.29 and culture rate equals to 2.85.

Table II. Average importance rating assigned to six environmental dimensions

Environmental dimensions	Mean importance rating	Standard deviation	Rank order of importance
Market Potential	4.04	0.45	1
Legal	3.81	0.50	2
Politics	3.69	0.56	3
Infrastructure	3.44	0.69	4
Economics	3.29	0.47	5
Culture	2.85	0.46	6

Note: n = 32

Compared with the subsidiary export dimensions, Competition, diplomatic relations, tariffs and general demand have the most influence on markets evaluation. 17 subsidiary export dimensions are also ranked in table III.

Table III. Average importance rating assigned to subsidiary export dimensions

Export subsidiary dimensions	Mean importance rating	Standard deviation	Rank order of importance
Competition	4.39	0.50	1
Diplomatic Relations	4.2	0.84	2
Tariffs	4.15	0.63	3
General demand	3.96	0.55	4
Non-tariff	3.92	0.58	5
Adoption cost	3.78	0.54	6
Distribution	3.73	0.76	7
Internal Policies	3.65	0.62	8
Communications	3.4	0.97	9
Development & performance	3.4	0.44	10
Production strength	3.38	0.66	11
Other legal	3.38	0.67	12
Cultural differences	3.24	0.53	13
Stability	3.23	0.73	14
Geography	3.19	0.78	15
Consumption	3.09	0.59	16
Cultural unity	2.45	0.68	17

Note: n = 32

6. Conclusion and discussion

Different researchers have recommended different decision frameworks for international market selection. However, few attempts have been made so far to empirically test those frameworks (Rahman, 2006). In this research variables of the six primary environmental dimensions of Wood and Robertson's framework are tested on the power industry. Findings show that exporters use a wide range of variables in markets evaluation and the industry characteristics have an important role in such an evaluation. The results of our study are consistent with Wood and Robertson's findings and the general ranking order of the dimensions are the same. In fact, our findings stress the generalizability of Wood and Robertson's model.

The results of the survey show that market potential, including market demand, competition and adoption cost of products and services is the most important dimension. This dimension is followed by legal dimension such as tariffs, taxes, product standards, visa requirements, and investment laws as the second most important dimension. Politics entailing stability, diplomatic relations and internal policies of host country are ranked third by respondents. Respectively, information related to market infrastructure such as geography, communication, distribution facilities and economics dimension encompassing GDP, inflation, consumption and general welfare constitute the fourth and fifth dimensions. Culture is ranked as the least important dimension.

Evaluating the research results indicates that international market selection is a rational sequential decision making by which markets are screened and evaluated thorough some stages. They could be defined as a set of questions as Wood and Robertson considered.

As it was mentioned earlier, market potential is the most important dimension in evaluating markets. At first, the markets with high product/service demand are screened for further evaluation by this question “is there any market for export of power equipment and services?” and it means that market potential comes first to exporters' minds when evaluating the foreign markets. Market potential in the power industry is evaluated by the electricity capacity of countries, energy development plans, GDP, growth rate and revenues.

The second stage is evaluation of market accessibility. The question is “can we penetrate into market?” Legal factors are determinants of this stage. Trade barriers are the most important deterrent to exports (Papadopoulos et al., 2002). Governments use tariffs and non-tariff barriers to protect their preferred countries' industries (Rahman, 2006). Strict host country policies regarding trade and investment and other constraints such as visa requirements restrain foreign firms' activities and cause them to undervalue investments.

The third question that is raised is “will the market remain open to us?” The stability of a market which depends on politics dimension answers this question. Political stability is a significant dimension in the power industry due to high fixed cost and investment-intensive nature of this sector. This dimension becomes more important when making a decision to enter into a new market. Since many infrastructural projects are established by credit lines provided by governments, therefore; strong relationship between the exporter and the government of host country is very important.

If answers to the preceding questions were positive on a given market, the next question would be “can we get our product/service into the market?” in this stage infrastructure and facilities of foreign country are surveyed. Afterward, Long-term potential of market which can be defined by economics are examined. The question is “Can we remain in the market?”

Culture got the lowest rate in our survey. This is due to the nature of the power industry as an infrastructural industry. Wood and Robertson (2000, p: 49) states “the fact that culture dimension was rated as the least important may come as a surprise to incipient to novice exporters, who are told, perpetually, that to be successful in international business, you must know the culture of the foreign market”. Although culture has the lowest influence, the role of this dimension is not negligible. In fact, culture gains importance in meetings and negotiations. Large cultural distance between two countries will increase transaction costs due to real and perceived misunderstanding and misinterpretations (Dow and Karunaratna, 2006). Linguistic distance is significantly more important for imports of consumer goods as compared with industrial goods (Hutchinson, 2005). Our study indicates that culture is less important in the power industry in comparison to consumer product industries.

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BUYER–SELLER RELATIONSHIP IN BUSINESS-TO-BUSINESS CONTEXT: QUANTITATIVE APPROACH

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ABSTRACT

The forms of collaboration buyers sellers relationship hold the promise of reduced costs, increased efficiencies, rapid market and environmental responses, and the most coveted of all benefits competitive advantage. In most business-to-business (B2B) exchanges, seek for building and sustaining long-term relationships serves as a key target for successful business activities. Companies focus strongly on the development of closer ties with other organizations in search of competitive advantage and improved market positioning. Limited empirical attention has been paid to the role of relational bonds on enhancing quality. This paper presents a process view of how relational Bonds: temporal, social, and structural affect the subsequent development of the relationship.

A practical implication is that managers should pay more attention to the role of Relational Bonds in development of the relationship processes. The results of this study suggest that relational bond have a significant impact on increase quality relationship.

Keyword: Relationship Marketing, Relational Bond, quality relationship

Introduction

Business relationships have become an important research topic in business marketing (Ford & Mouzas, 2010; Henneberg, Naudé, & Mouzas, 2010; Palmatier, Dant, Grewal, & Evans, 2006). Other contributions followed whose inter-organizational theory for example: industrial networks (Mattson on 1985). In particular, well-performing business relationships are seen as important sources of competitive advantage for companies (Chang & Gotcher, 2007; Madhok & Tallman, 1998; Palmatier, Dant, & Grewal, 2007)and achieve superior results (Jap, 1999; Panayides, 2002; Ulaga, 2003). Building long-term relationships with customers is therefore the essence of business-to-business marketing (Hutt & Speh, 2004). Establishing and maintaining long-term business-to business relationships require a supplier to establish a high level of customer loyalty, a core marketing goal (Berry & Parasuraman, 1991). These relations make more easy a faster access to the new technologies and allow to acquire a capacity to supply a wide range of goods and services, to reach knowledge beyond the borders of the company, To share risks and to reach the complementary skills (Johansson and Mattson, on 1987; Powell, on 1987). With the tendency to the homogenization of products and services, the relation established by the company with each of his consumers seems determining for the customer satisfaction and the long-term development of the relations (Dampérat on 2004). As valuable source which could lead to the competitive advantage, these relations must be managed and supported. For that purpose, the managers have to distinguish the various types of relation to adapt their management to the type of exchange who appears at them and to develop relevant mechanisms which are connected to them.

However, in spite of the increasing interest of the researchers, it seems that the relations buyers' sellers record an important rate of failures. In the practice, it seems that the organization, the management, the implementation of these relations or the mobilization of the elements of support for these relations is complex. There has been a suggestion in the literature that relational bonds are a key aspect of the relationship management (Arantola, 2002). However, there has not been extensive exploration of the empirical effect of relationship bonds on enhancing quality through commitment, trust and satisfaction. It is posited that increased bonds would strengthen relationships. This study investigates how relational bonds impact on relationship development and quality. The object of this reflection articulates around two questions: how temporal, social, and structural Bonds affect the subsequent development of the relationship buyers' sellers in the Moroccan context and which the determining factors of their business success. The rest of the paper is organized as follows. The next section presents the theoretical background to the study. There, I review previous conceptualizations of relationship approaches as new theoretical perspective, and New approaches to strategic competitive advantage of the firm. Following this, I present the conceptual framework and develop hypotheses for the study. Next, I present the research methodology and hypotheses tests. I then discuss the results and outline their theoretical and managerial implications.

1. Literature Review :

Relational approaches: Towards new theoretical perspectives

The notion of relationship is now being hotly debated in the marketing literature. Relational theories that have developed marketing postulate that the establishment and maintenance of relationships between different actors in an exchange, provides an opportunity for companies to gain competitive advantage and a source of achievement of profitability on the long term. The interest of such an approach has been demonstrated in several specific areas of discipline such as industrial marketing, marketing services or relationships between buyers and suppliers. Some proposals are made which, however, with a more flexible redefinition of the concept of relationship, can summon a few significant contributions of relational theories to draw lessons adapted to inter-organizational relations. Relationship marketing can have different meanings according to the authors or researchers who are interested. Berry (1983) defines relationship marketing as "attracting, maintaining and, in a multiservice context, development of client relationships." This definition, even if confined to the area of services, focusing on customer relationships. Morgan and Hunt (1994) thought that relationship quality is the key point of successful relationship marketing strategy. The business relationships appear as a valuable resource essential for the economics performance (Castro et al., 2005). It means the need to develop the understanding of the nature and dynamics of relationships between organizations. This is one of the conceptual and operational challenges facing marketing professionals (Laing & Lian, 2005).

1.1 New approaches to strategic competitive advantage of the firm : Relational bond sources of differentiation for firms:

The analysis of the relevant literature has led us to support that building lasting relationships with companies can lead to the acquisition of a future competitive advantage. In this sense, we say that many bonds have been identified in the literature as being crucial for the development of trade relations.

Bonds are the psychological, emotional, economic, or physical attachments in a relationship that are fostered by association and interaction and bind parties together in a relational exchange (McCall, 1970). This definition and view has then been incorporated into the industrial marketing approach e.g. by Wilson and Mummalaneni (1986). “When the cost-benefit analysis yield favorable results and people move toward greater involvement with each other, certain ties or bonds develop linking them together strongly”. (Wilson & Mummalaneni 1986) This focus on bonds as aspects of relationships has then been widely accepted in different management approaches, These relations refer to the bond established between two or more companies and have several dimensions: While previous researchers (Han, 1992; Wilson, 1995) conceptualized two types of bonds—structural and social, For example, in industrial marketing literature the authors cite several types of Bonds: temporal, structural, social Parasuraman (1991) (Castro.al, 2005).

– **Temporal bonds:**

Certain authors, by speaking about long-term orientation (Dwyer and al ., on 1987; Kaufmann and Stern, on 1988; Noordewier and al ., on 1990; Parkhe, on 1993; Ganesan, on 1994; Ryu and al ., on 2007), of long-lasting(sustainable) links (Hill, on 1990) or of continuity of the relation (Heide and John, on 1990), tried to define the characteristics of the relational exchange. The characteristic raised by Noordewier and al. (1990) is «expectation of continuity of the relation» Which means the probability of a future interaction between a customer and a supplier. The long-term orientation proposed by Ganesan (1994) goes beyond the only probability to get the desire and the need of the buyer to knot a long-term relation. It includes the element of the future interaction moved forward by Noordewier and al. (1990) but also express the desire of the partners to maintain a long-term relation (Ganesan, on 1994; Lee and Dawes, on 2005). The process of relationship change and development was highlighted by Ford (1980. 1990) who suggests that business relationships can be found in different stages and mav evolve from one stage to another. Those stages would be the pre-relationship Mage: the early-stage: the development stage: the long-term stage: and the final stage. According to Ford, these stages can be described with reference to experience, uncertainly, distance and commitment. Followed by (Dwyer, Schurr and Oh on 1987) who developed conceptually the first relational model, which will become in time the reference of the relational models.

Based on the relation buyer sellers, three researchers propose five stages in the relation: awareness, exploration, expansion, commitment and dissolution. This dimension explains the good progress of the relation, the development of this last one makes reference to the experience, the uncertainty, the distance and the commitment (Castro and al. 2005). Time bonds see e.g. Johanson & Mattsson (1987), Kock (1995).

– **Social bonds:**

Social bonds refer to life insurers’ actions to strengthen personal contacts with customers and to understand their needs in order to offer customized services, thus enhancing the customer retention rate. That arise among individuals in the two companies are important for mutual trust and confidence in interaction between individuals. when companies establish long-term relationships with customers via social and interpersonal networks.

Berry and Parasuraman (1991) and Berry (1995) referred to social bonds as intermediate level relationship marketing in securing customer loyalty, where the service provider goes further than price incentives to build lasting relationships with the customer, building social bridges. In this approach, companies regard customers as different individuals and attempt to meet the demands of various customer groups with customized services. The individuals interacting on behalf of their organizations in a business relationship take on other roles in other contexts. (Håkansson, Ivan Snehota) Social bonds link and hold a buyer and seller closely together (Han, 1993), and represent the degree of mutual friendship and liking shared by the buyer and seller (Wilson, 1995).

– **Structural bonds**

Structural bonds are created because each party needs their partner in order to accomplish something; these bonds bring the members together, keep them together, and cause them to interact in a relationship (Han, 1998). This bond is the most valuable dimension among relationship marketing, because it offers the solution of problems to critical customers. So, even though competitors intend to imitate by investing plenty of time and money, the effort cannot pay off. When businesses encounter price competitions, it is better to adopt structural bonds for increasing competitiveness. It follows that structural bonds exist only after the relationship has been in existence for some time and that they bond and tie partners together from that point forward through the maintenance of the relationship. It is hypothesized that structural bonds are of the greatest importance in the setting relationship boundaries, creating relationship value, and relationship maintenance stages. Berry and Parasuraman (1991) and Berry (1995) consider these bonds to be at the highest level of relationship marketing; “Level Three”. This is because companies can consolidate their relationships with customer through adding structural ties beyond the temporal and social. Previous research has emphasised that customer loyalty increases as one moves from financial to social, and then to structural bonds (Peltier and Westfall, 2000). The findings of the different studies converge on a few often recurrent ‘structural’ characteristics of business relationships. That are readily were identified by Hakansson and Snehota (1995)¹ to be continuity; complexity; symmetry and informality. The first element, continuity, is derived from the maintenance of business transactions over time, following contracted steps repeatedly. Complexity may be given by the number, type and the contact pattern of individuals involved in business relationships. The variety of ways along which a relationship can be exploited for different purposes also determines complexity. Symmetry is a typical situation in industrial markets, unlike many consumer markets, because both buyers and sellers have resources and capabilities, and this tends to give rise to more balanced situations. Finally, informality is most common in business contexts, although formal contracts exist, and has been identified as more effective in problem solving.

1.2 Relationship quality

The concept of relational quality is a central building in the marketing literature. This variable varies according to different developmental stages of a relationship between customers and businesses (Athanasopoulou, 2009). The work of Smith (1998), Moliner (2009) and Vesel and Zabkar (2010) have described the quality of relationships as a mega-building that incorporates a set of key dimensions in the form of basic relational variables.

¹ Håkansson, H., & Snehota, I. (1995). *Developing relationships in business networks*. London: Routledge.

Conceptually, the previous theoretical developments of this concept have known a lack of precise definition and a lack of consensus related to its size (Huntley, 2006; Qin, Zhao and Yi, 2009). Indeed, some authors such as Woo and Ennew (2004) showed that the definition of the relational quality depends on the dimensions that comprise it. Instead, Hennig-Thurau and Klee (1997) and Mimouni and Volle (2003), show that the quality of relationships reflects "the ability of a relationship to meet the needs of customers." kim and Cha (2002) each have conceptualized relationship quality as a second order concept composed of trust and satisfaction. several marketing researchers agree in considering that satisfaction, trust and commitment as key components of the relational quality.

2. Theory and hypotheses :

This study is in an attempt to discover the effect of rational Bond on relationship quality mediated by development relationship.

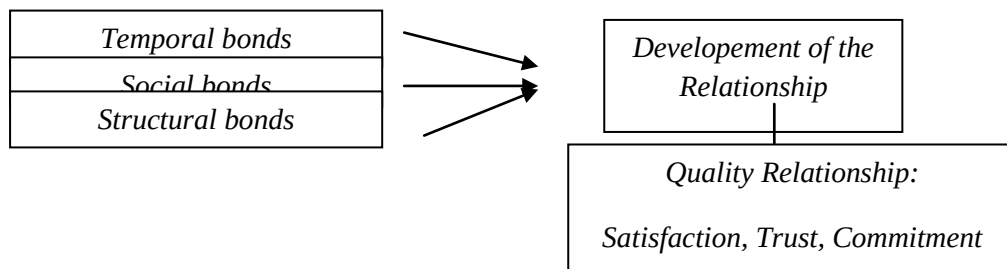


Fig. 1 Research Framework

Our work is to study, in an explanatory model, the impact of relational bonds on relationship quality via its influence on the development of the relationship in the industrial context view (see figure 1). In this way, the components of relationship development play a mediating role between the links "temporal, social, and structural".

2.1 Link between Temporal bonds and development relationship:

The time dimension becomes more important as conduct and its outcomes are rooted in the past and its effects become manifest in time. Inter-dependence and awareness of interdependence in the company and its counterparts will be decisive to the outcome of joint action. Insight into the dynamics of business buyer's sellers in business to business is required in order to cope with relationships effectively. This is even more increases the likelihood that the supplier and the client relationship will have long-term perspective. One more dimension of relationships depending on time is distance. According to Hess et al (2007), openness, attention, and involvement decrease distance between interacting parties. Closeness might enhance the stability and longevity of relationships (Nielson, 1998). Commitment together with trust is a key mediating variable for relationship (Gil-Saura et al, 2009). According to Hausman & Johnston (2009), relationship commitment might be defined as an exchange partner's belief that the relationship is worth the expenditure of effort required to ensure its survival. Commitment among exchange partners is a key to achieving valuable outcomes, such that firms Endeavour to develop and maintain this important attribute in their relationships.

Committed customers experience relationship closeness, which over time leads to confidence about the relationship (Dagger et al, 2009). Commitment is central to the development of relationships between two companies which brings us to the issue of trust and the time dimension of the relationships. Trust is a necessary condition for commitment and commitment only makes sense if tomorrow matters. Trust, on the other hand, takes time to develop between two actors. The trust-building process has been labelled social exchange and it has been characterized in the following way: On the whole the reliance on informal bonding is common in most business cultures. Informal mechanisms, some of which are closely related to the time dimension as they build on past experience such as trust and confidence, have been pointed out in several of the studies as being more effective for the development of relationships than formal contractual arrangements. Our work is to study, in an explanatory model, the impact of temporal bonds on relationship quality via its influence on the development of the relationship.

H1. Temporal bond positively influence the development and continuity of the exchange relationship

2.2 Link between social bonds and development relationship:

Social bonding represents the norms and standards of conduct that are required for relationships, and these occur in the defining phase of relationship development as well as continuing to develop in the setting boundaries phase (Dwyer et al., 1987). It's also serve as a motivation to continue a relationship (Lawler and Yoon, 1993). Social bonding represents a greater bond than friendship or benevolence. It represents a marketing activity where the outcomes of exchange may depend on bargaining, negotiation, power, conflict, and shared meaning between buyer and seller (Bagozzi, 1978). Some aspects of social bonding such as bargaining and negotiation may occur at the beginning of a relationship, while other aspects such as shared meaning may occur later. Social bonding may positively influence the initial stages of a relationship and at the same time it may be a result of successful interactions throughout the relationship. It is hypothesized that social bonds are equally important across the stages of relationship development. It's allow companies to enjoy greater competitive advantages, as they are more difficult to replace and also helpful in increasing the customer retention rate (Crosby et al., 1990).

H2. Social bond positively influence the development and continuity of the relationship –

2.3 Link between structural bonds and development relationship:

The major customer or supplier relationships in a company are generally built up successively and gradually from only a limited involvement of the parties to often very close, far-reaching and broad exchange relationships. There are some indications that the age of the relationship is a prerequisite for a more extensive use of the relationship by the parties involved and of its continuity being a precondition for change and development (e.g. Håkansson 1989)

When a customer invests time and effort to build personal data and explain his or her preferences to an electronic seller, this relationship investment forges customer loyalty by creating a psychological barrier to terminating the relationship (Papadopoulou et al., 2001; Turnbull and Wilson, 1989; Wilson, 1995).

This study therefore proposes:

H3 Structural bond positively influence the development and continuity of the relationship

2.4 Quality relationships

The concept of relationship quality arises from theory and research in the field of relationship marketing (e.g., Crosby et al., 1990; Dwyer et al., 1987) in which the ultimate goal is to strengthen already strong relationships and to convert indifferent customers into loyal ones (Berry and Parasuraman, 1991). This research looks at relationship quality in the B2B context. Research in the literature agrees that relationship quality is a higher order construct consisting of several first-order constructs, among which trust, satisfaction and commitment to the relationship have been most commonly used (Athanasopoulou, 2009; Holmlund, 2008; Woo Ennew, 2004).

The initial origins of these three constructs lie in studies that focus on consumer markets. Although they have also been used extensively in the business-to-business context, Woo and Ennew (2004) caution that whether they represent the most appropriate conceptualization for this context remains open to debate. Among a number of constructs that have been used in relationship quality studies (an overview is, for example, offered by y Athanasopoulou (2009), Holmlund (2008) and Woo and Ennew (2004) this research focuses on adaptation, knowledge transfers, trust and cooperation as four elements of relationship quality. Trust and cooperation represent the social dimension, while adaptation and knowledge transfers can be classified within the technical dimension of relationship quality (Holmlund, 2008).

Although several studies also include commitment as a relationship quality dimension (for an overview, see Athanasopoulou (2009) and Holmlund (2008)), this research follows studies by Holmlund (2008), Jap, Manolis, and Weitz (1999), Leuthesser (1997), Naudé and Buttle (2000), Woo and Ennew (2004) and some other authors in business-to-business markets (e.g., Athanasopoulou, 2006; Boles, Johnson, & Barksdale, 2000) that do not see commitment as part of relationship quality. By combining both product quality and relationship quality, we therefore focus on five constructs (i.e., product quality, knowledge transfers, adaptation, cooperation and trust) as the antecedents of commitment. In the following paragraphs, the conceptual definitions of these constructs are presented, followed by the hypotheses that were developed on the basis of the extensive literature review. relationships of each of the companies. The activity links, resource ties and actor bonds in a relationship between two companies affect the activity structures, the collections of resources and the organizational structures of the companies involved. At the same time the activity structures, resource collections and organizational structures of the companies will influence what kinds of links, ties and bonds can develop in a relationship.

Trust and commitment : Commitment is also viewed as an essential indicator of relationship quality (Geyskens et al., 1999; Morgan & Hunt, 1994). Anderson and Weitz (1992, p. 19) define commitment as ba desire to develop a stable relationship, a willingness to make short-term sacrifices to maintain the relationship, and a confidence in the stability of the relationship. It is enduring and reflects a positive valuation of the relationship. Commitment is an important indicator of a long-term orientation in the relationship. It leads to greater relational social norms and lower opportunistic tendencies (Gundlach, Achrol, & Mentzer, 1995) and, ultimately, increased relation- ship benefits (Morgan & Hunt, 1994). Positioning of the two key relational constructs of commitment and trust in the proposed relationship

quality model can be determined by examining their links to the individual components of the proposed relationship quality construct.

Commitment and trust were “posited to be associated with effective cooperation and required for relationship marketing success” (Morgan & Hunt, 1994, Trust and commitment have also received empirical support as determinants of satisfaction (Mohr & Spekman, 1994). Trust is a central determinant useful for developing a lasting relationship, especially in the initial phase of development of the relationship. At each step of forming the relationship, trust and its multiple facets, plays a key role in pursuing the latter. It manifests itself in benevolence, competence, honesty, (Geyskens et al 1998, Swan et al 1999), past experience with a partner, The existence of a series of positive experiences and encounters that enhance trust and partner commitment, competence, willingness to reduce uncertainty, opportunism, the duration of the relationship, reputation, compatibility of objectives, cultural similarity, coordination

The satisfaction: The development of business relationships is often based on variables such as the experience, the uncertainty, the cooperation, the commitment and the mutual adaptation. In the context of the business, two different approaches measuring the success of the relations, we associate the first approach with the satisfaction as for the relation. In feel the satisfaction refers to the positive experience as regards the organization of the partnership. In a general way, the satisfaction can be defines as a global evaluation derived of all the experiences crossed with the firm (Gaborino and Johnson on 1999), an emotional answer, a final state which results from the total sum of the past evaluations and based on the perception of the performance and the expectations of the customers (Ganesan on 1994; (Patterson and Spreng on 1997). The second approach defines the success of the relations through a quantitative measure of the mutual advantage which the participants pull of these relations. The quality of the service means the answer to customer expectations. It is particularly important for the services to companies; it has a positive effect on the increase of levels of profits, the cost cutting and the increase of their market share. (Meng and Elliott, on 2009), demonstrated that the quality of service in a positive effect on the loyalty, In other words, the profitable relations allowing the partners to create some value (Rauyruen and Miller, on 2007). The relations make reference to links established between two or several companies and possess three dimensions: Powers & Reagan (2007) highlight that the factors that influence relationships are reputation, performance satisfaction, trust, social bonds, comparison level of the alternative, mutual goals, power/interdependence, technology, non-retrievable investments, adaptation, structural bonds, cooperation, and commitment. Rauyruen & Miller (2007) propose relationship quality as a higher construct for successful relationship; it includes trust, commitment, satisfaction and service quality. According to Cheng (2006), relationships are influenced by longevity, frequency of contact, extensive and effective communication, efficient and satisfactory service as well as a range of personal factors related to the skills and personalities of company representatives.

H4. The development of the relationship has a positive impact on the quality relationship

3 Methodology

3.1 Data collection

Since our problem is causal type, a purely quantitative approach is needed. This study examines secondary data. These are collected annually using a questionnaire to assess the impact of the relational bonds on the development of relations. This research focuses on the major Moroccan companies.

We used the turnover to determine which companies will be part of our sample (firms with a turnover of 50 million dirham's. Choosing the companies became among the 500 largest companies Moroccan all sectors, classified according to their turnover. This classification was performed on the database KOMPASS Morocco. Questionnaire the research was administered to 200 Companies Moroccan following the method of convenience. Administration mode questionnaire was performed according to the technique of face to face (180 questionnaires) and the technique of administration via the Internet (20 questionnaires).

3.2. Measures

The scales of the constructs used in the model, were extracted after a careful review of the pertinent buyer–seller relationship literature than adapted for the context of this study. All scales were assessed with regard to their construct validity in the market context (Singh, 1995) Social bonds and structural bonds was measured by a scale adapted from Berry and Parasuraman's (1991) temporal bonds Kumar et al 1995 Gundlach et al. 1995. Trust and commitment were measured by scales adapted from Morgan and Hunt (1994), satisfaction (Dwyer and Oh, 1987) Gaski and Nevin, 1985) The development of the relationship was measured by (Krause and Ellram, 1997; Shin et al., 2000).

Table 1 describes the operational items of the research variables and their sources. Five -point Likert-type perceptual statements were used for operationalising all constructs (1: strongly disagree, 7: strongly agree).

<u>Dimensions</u>	<u>ITEMS</u>	<u>SOURCES</u>
Temporal bonds	• It is unlikely that our company continues to work with the Firm the next two years. • We intend to share confidential information with this Firm in the future (market information, the state of competition, partnership network, ...) • We plan to further involve the Firm in our decisions (design brands, research projects and development of local choice ...). • We allocate more resources to our relationship with this Firm in the future.	Kumar et al 1995 Gundlach et al. 1995.
Social bonds The eight items for the social bonds were:	• “The Firm X is my friend,” • “I can communicate with other customers through the supplier • “I receive special treatment after I become a member,” • “The communities sponsored by the supplier provide me with product information,” • “The supplier is concerned with my needs,”	Berry and Parasuraman's (1991)

	• “The supplier gathers my opinions about services,” • “The supplier sends me greeting cards or gifts on special days,” • “I can share my opinions on the Web site.	
Structural bonds the six items related to structural bonds were:	• “I can order customized services or products from the supplier • “The the supplier provides after-sales service according to my requirements,” • “The the supplier provides full knowledge about the goods/services,” • “The the supplier integrates products or services from other sources to solve my problem,” • “I can receive complete knowledge from the Web site,” • “The the supplier resolves the problems that I encounter.	Berry and Parasuraman’s (1991)
the development of relationship	• We expect our relationship with this suppliers to last a long time • We work with this suppliers to improve their quality in the long run • The suppliers see our relationship as a long-term alliance • We view our suppliers as an extension of our company • We give a fair profit share to this suppliers • The relationship we have with suppliers is essentially evergreen	(Krause and Ellram, 1997; Shin et al., 2000)
Commitment	• The relationship that my organization has with this supplier is something my organization intends to maintain indefinitely. • My organization plans to have a close working relationship with this manufacturer in the near future. • Enhancing our relationship with this manufacturer is an important objective for our organization.	Morgan and Hunt (1994).
Trust	In our relationship, Firm • Is someone to whom I give my confidence • Has high integrity. • Gives us reliable information and	Morgan and Hunt (1994).

	advice. • I trust this Firm	
Satisfaction	• In general, we are very satisfied with the relationship with this supplier • We are satisfied with the products and services we get from our supplier	(Dwyer and Oh, 1987) Gaski and Nevin, 1985)

3.3 Statistical approaches:

We used the SPSS 18.0 statistical package for descriptive analysis of the sample structure, while AMOS 18.0 was used for the SEM. According to the two-step procedures developed by Anderson and Gerbing (1988), the first step is to develop the measurement model with good fitness employing confirmatory factor analysis (CFA) to test the reliability and validity of each construct. The second step is to further analyze the causal model of the theory, which was undertaken by SEM.

Table 1: Constructs, items, exploratory factor analysis and reliability:

The CFA results show that our measurement model provides a satisfactory fit to the data. Three levels of adjustment were assessed: the adjustment absolute incremental adjustment, and the adjustment of parsimony ($\chi^2=147,669$; $GFI=0,939 > 0,9$; $AGFI=0,889$; $RMR=0,070 < 0,1$; $RMSEA=0,076 < 0,08$; $NFI=0,946 > 0,9$; $TLI=0,940 > 0,9$; $CFI=0,961 > 0,9$; χ^2 normé=3,313 < 5).

T test associated with each contribution factor is much higher than 1.96, thus confirming the significance of the relationship of each indicator with the corresponding construct. Second, the internal consistency reliability of the constructs was verified by calculating the coefficient rho Jöreskog (1971) for each construct. The values greatly exceed the critical threshold of 0.7 (Fornell and Larker, 1981), except for the scale to measure perceived ease of use which Jöreskog's rho is 0.696. This value, approaching the critical threshold of 0.7, we can conclude that the reliability of this scale. Similarly, the calculation of rho convergent validity was satisfactory results above the threshold of 0.5 (Fornell and Larker, 1981) for all scales. We can thus conclude that the unidimensionality of these scales (Table 1).

	Items	Cronbach's α	Construct	Fiability (ρ Jöreskog)	Validity convergent e (ρ_{vc})
TEMB	TEMB1 TEMB2 TEMB3 TEMB4	0.675	Temporal Bonds	0,707	0,551
SOCB	SOCB1 SOCB2 SOCB3 SOCB4 SOCB5 SOCB6	0.748	Social Bonds	0,696	0,534

	SOCB7 SOCB8				
STRB	STRB1 STRB2 STRB3 STRB4 STRB5 STRB6	0.803	Structural bonds	0,797	0,506
SAT	SAT1 SAT2	0.705	Satisfaction	0,766	0,528
TRU	TRU2 TRU1 TRU3 TRU4	0.799	Trust	0,925	0,860
COM	COM1 COM2 COM3	0.686	Commiteme nt	0,699	0 ,772
DEVR	DEVR1 DEVR2 DEVR3 DEVR4 DEVR5 DEVR6	0.889	the development of relationship	0 ,788	0,601

Table 2 : Assessment of discriminant validity

	TEMB	SOCB	STRB	SAT	TRU	COM	DEVR
TEMB	0,713						
SOCB	0,426	0,731					
STRB	-0,300	-0,393	0,911				
SAT	0,443	0,371	-0,415	0,827			
TRU	0,453	0,253	-0,361	0,705	0,927		
COM	0,223	0,280	0,453	.526	0,352	0,727	
DEVR	0,123	0,283	0,402	0,401	0,239	0,522	0,897

The square root of the Average variance extracted for each pair of constructs is greater than the coefficient of correlation. This confirms the discriminant validity of all constructs (Fornell and Larcker, 1981).

To test the proposed model, structural equation model (SEM) analysis was performed. The structural results are shown in table 3

The fit indices indicate a good fit for the overall model: ($\chi^2 = 147,22$ GFI = 0.938, AGFI = 0.890, RMR = 0.072, RMSEA = 0.076, NFI = 0.945, TLI = 0.940, CFI = 0.961, χ^2 normalized = 3.323).

The observation of the regression coefficients shows that the causal relationships identified by the conceptual model are, for the most risk-significant at $p < 5\%$, the value of their estimator "Student's t" is greater than 1, 96 (Table 3). These relationships reflect a sizable determinism of the influence relational bond on quality relationship. The coefficient of determination (R^2) of the endogenous variable "quality relationship" is 58%, reflecting a good explanation of the quality relationship by the exogenous variables and intermediate research. In fact, 58% of the variance in quality relationship is explained by the causal model.

Table 3: Results of structural equation modeling

Hypothesis	Results		standardized estimator	T/student t	p	R^2
H1	Support	Temporal Bonds → the development of relationship	-0,391	-5,189	0,000	0,229
H2	Support	Social Bonds → the development of relationship	-0,161	-2,440	0,015	
H3	Support	Structural Bonds → the development of relationship	0,306	4,653	0,000	
H4	Support	The development of relationship → quality relationship	0,127	1,974	0,048	0,580

This study contributes to the body of knowledge by suggesting the ways to build long-term relationship with customers in inter organizational context, the three bonding strategies discussed in this study— temporal, social, and structural—encourage customer retention; however, they also create economic or psychological costs that may prevent customers from defection. The results confirm our hypotheses that the different level of relationship marketing has a positive impact on development of the relation and quality.

Conclusion

Since about fifteen years the prevailing view of companies' customers concerns the respect for the relational standards as first condition of success of their relations with their sellers. By placing the relation customer / supplier on the mode of the collaboration, the actors are equipped with additional means to improve their performance. The effective success of this collaboration crosses necessarily by a significant stage in mode joint project or the company weave the various links to satisfy the needs of his partner. It is the only way of overcoming the natural resistances in any construction site of this scale. The results of this study have some managerial implications for suppliers of the morocco industrial sector. Business-to-business relationships are complex and multidimensional phenomenon. Over time the business relationships form strong and extensive social, structural, and temporal.

The relationships get different organizational forms: partnerships, sellers buyers and others forms These forms implicate different styles of business relationships and comprise activities at multiple levels – from individual personnel to organization-wide initiatives.

In this study, we tried to clarify the methods of management of sellers buyers in the industrial context Create them and maintain them in the long term with the customer's fact henceforth left the marketing policies of these companies. On the other hand, the success of these relations depends on several variables. The obtained preliminary results show that the factors which affecting the sustainability of these relations are: the commitment, the trust, the satisfaction. They are mostly considered by the actors implied as variables contributing to the success. Finally, our research shows that the temporal links, processes and structural contributing positively to its sustainability. The conclusions stemming from the empirical study indicate that the relations developed within the framework of our case study evolve more towards long-lasting relations and of cooperation.

This established fact can be understandable by the consciousness of the companies of the increasing intensity of the requirements of their professional This would particularly be smelt in quality of the relation through the investments realized by the company. The agreements concluded between the parts are often implicit and base themselves on contracts of collaboration which include the conditions necessary for the implementation of the collaboration between dyades. The aforementioned contracts turn out complicated to conceive and informal arrangements are often of vigor during their execution.

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SPECIAL SESSION – FAIRNESS IN INTER-ORGANIZATIONAL RELATIONSHIPS

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Fairness plays a major role within the establishment and the continuance of buyer-seller relationships in business-to-business markets. Nevertheless, the construct itself as well as its antecedents, perceptions and effects haven't been investigated in depths very much in this context so far. The Special Session should address the following three topics related to the fairness phenomenon:

The Effects of Structural and Social Dimensions of Perceived Fairness and Unfairness on the Quality of Buyer-Seller Relationships – A Transaction Cost Perspective

This study explores how structural (distributive, procedural) and social (interpersonal, informational) dimensions of perceived fairness and unfairness influence the quality of buyer-seller relationships. Therefore, we develop a conceptual model, underpinned by transaction cost theory and extended through a qualitative study based on fourteen interviews in eight organizations in Germany. Our findings suggest that structural and social unfairness lead to additional ex-post unfairness-response costs which negatively affect relationship quality as an informal governance mechanism. In contrast, structural fairness creates additional transaction value, thereby improving relationship quality. However, value creation does not always arise due to social fairness; and power-dependence structures often moderate unfairness effects.

Industrial Negotiations and Contract Implementation and the Role of Fairness in Buyer-Seller Relationships

This study explores the effects of perceived fairness in the context of industrial negotiations (bargaining transactions) and the following implementation of a contract (managerial transactions). Based on the distinction between bargaining and managerial transactions, we develop a conceptual model that features the ex-ante and ex-post perspective of a negotiation and contract implementation process. We suggest that the experiences of negotiations of an industrial contract and the corresponding perceptual evaluations of the processes and interactions can affect the perceptual evaluations of the subsequent implementation results as well as possible forthcoming negotiations. Hence, the long-term consequences of a negotiator's fairness evaluations and ensuing attitudes and behaviour are examined.

How to Promote a Fairer Judgment from Business Partners and Use It to Gain Inter-organizational Compliance – A Cross-Cultural Study

Gaining compliance from business partners is considered to be important for firms, yet the use of influence strategies to elicit compliance is unilateral and sometimes aggressive. It has been indicated that fairness judgment can positively influence compliance, which, for the first time, studies inter-organizational compliance from the angle of the complying party. Conducting a cross-cultural survey in Germany and China, the authors find that fairness judgment, together with dependence, trust and bonds, have positive impacts on compliant behavior. Furthermore, the work suggests that dependence, trust and bonds are also related to a firm's fairness judgment. By specifying a more comprehensive compliance decision-making process and a more dynamic fairness judgmental process, this study aims to help firms promote a more fair judgment regarding the business relationships from their partners, and hence gain compliance from them successfully.

WHEN SOLUTION BUSINESS IS NOT THE SOLUTION BUT THE PROBLEM

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Abstract

The offering of solutions and the running of solution business has gained increasing attention in the field of business-to-business marketing over the last years. This development started over twenty years ago in practice and lately academia has also drawn more and more attention to the phenomenon. In this stream of research, solutions are typically seen ‘positively’ in a sense that they offer opportunities for sustainable competitive advantage in increasingly competitive globalizing markets. Furthermore, solution business is mainly discussed from the perspective of producers of industrial goods transforming from product to solutions business. This paper wants to confront these views with three major challenges related to solution businesses that have not been investigated that much so far: (1) capability bottlenecks in transforming into a solution provider, (2) the parallel deployment of solution and non-solution business strategies, and (3) the emergence of specialized integrators and changes of value chain structures related to it.

Introduction

The offering of solutions and the running of solution businesses have gained increasing importance in the field of business-to-business (B2B) marketing over the last years. This development started over twenty years ago in practice and lately academia has also drawn more and more attention to the phenomenon. Referring to Storbacka et al. (2013) we see solutions “as longitudinal, relational processes that comprise the joint identification and definition of value creation opportunities, the integration and customization of solution elements, the deployment of these elements into the customer’s process, and various forms of customer support during the delivery of the solution (Storbacka, 2011; Tuli, Kohli, & Bharadwaj, 2007).”

In this stream of research solutions typically are seen ‘positively’ in a sense that they offer opportunities for sustainable competitive advantage in increasingly competitive globalizing markets. Furthermore, solution business is mainly discussed from the perspective of producers of industrial goods transforming from product to solutions business.

This paper wants to confront these views with three major challenges related to solution businesses that have not been investigated that much so far: (1) capability bottlenecks in transforming into a solution provider, (2) the parallel deployment of solution and non-solution business strategies, and (3) the emergence of specialized integrators and changes of value chain structures related to it.

The capability bottlenecks in transforming into a solution provider

Various studies show that the transition from a product provider into a solution provider necessitates development of entirely new capabilities or re-configuration of existing capabilities (Brax & Jonsson, 2009; Helander & Möller, 2008; Möller, 2006; Brady, Davies & Gann, 2005; Möller & Törrönen, 2003; Cornet et al., 2000). Examples of such needed

solution business capabilities are e.g. service design (Ploetner, 2008; Tan et al., 2010), earnings design and pricing (Bonnemeier, Burianek, & Reichwald, 2010; Hinterhuber, 2004), customer sensing and market learning (Day, 2002), sense-making and agenda construction (Möller, 2010), systems integration and financing (Brady et al., 2005), and value proposition definition (Ballantyne, Frow, Varey, & Payne, 2011).

However, in spite of the importance of capability development in the successful transition towards solution business, there are few studies that provide comprehensive categorizations of solution business capabilities. Möller and Törrönen (2003), Storbacka (2011) and Storbacka

et al. (2013) are some of the exceptions. Möller and Törrönen (2003) propose that moving towards solution business requires a more complex set of capabilities, consisting of ‘relational capabilities’, ‘networking capability’, and ‘capabilities of mastering the customer’s business’. Storbacka (2011), on the other hand, emphasizes the cross-functionality of solution business, and proposes that the solution business requires well-developed ‘commercialization’ capabilities (related to creating and selling solutions based on in-depth understanding of customer value creation), ‘industrialization’ capabilities (related to the efficient development and deployment of solutions, and the ‘solution platform’ (practices and infrastructure related to the overall management of the solution business, such as suitable information technology and human resource management). Storbacka et al. (2013) argue that industrial firm transforming towards solution business should develop their capabilities for increased ‘customer embeddedness’ (i.e. targeting selected customers and becoming embedded in their processes to support the customers in their value creating process), ‘offering integratedness’ (i.e. integrating technical, business, and system elements into unbundlable solutions and aiming for performance-based earnings logic), ‘operational adaptiveness’ (i.e. adapting cost- effectively to the customers’ processes using modular approach to own operational processes), and ‘organizational networkedness’ (i.e. orchestrating a network of actors that provide various solution elements).

Storbacka et al. (2013) also compared the solution business capability development needs and paths in two different industrial contexts and concluded that solution business transformation is likely to be highly context-dependent, affected by the firm’s business logic (cf., Johnson,

2010; Hagel & Singer, 1999). However, the extant research tends to treat solution providers as a homogeneous group (Kapletia & Probert, 2010), with an implicit orientation towards so- called installed-base firms that produce investment goods creating an installed base at the customer.

Thus, even though to our knowledge there are no longitudinal and/or quantitative studies investigating the level of difficulty and the duration of solution business capability development, the above literature review and empirical anecdotes suggest that the challenges in developing suitable capabilities pose de facto obstacles for many firms from becoming solution providers.

To make things even more difficult, practitioners are not likely to find many suitable guidelines from the existing solution business research as the majority of the studies fail to provide comprehensive guidelines for capability development in inherently systemic and cross-functional solution business – while simultaneously neglecting the fundamental differences between different industrial contexts.

Parallel deployment of solution and non-solution business strategies

The literature on solution business is focused on the ‘transformation from product business to solution business’, and surprisingly little attention has been given to the fact that this is by no means a complete transformation that all firms should, or can engage in. There are many self-evident reasons for this, of which we will discuss the following three: (1) product business is important for many firms moving towards solutions, (2) all customers are not willing to buy solutions, and (3) as firms move into solutions they often apply a networked view and engage suppliers to supply components (i.e., products) to their solutions.

First, solution providers in manufacturing industries tend to have a substantial product business to support their solution business. In fact, few firms make a complete transformation from product business to solution business. Many of them will end up with parallel business models (Markides & Charitou, 2004), having part of their organization focused on solution business, whilst using their existing product business as a platform. This is viewed as important by many firms. First, focusing in parallel on product business helps the firm to create scale effects and, thus, to drive down operational cost. Second, having a focus on products forces the firms to continuously develop its technological competence, which gives staying power in highly competitive environments. Finally, many firms have profitability targets and it seems that it is easier to keep up margins in product business, whereas solution business creates growth and cash flow. Storbacka, (2011) argues that as product business is measured on revenue, solution business has to be measured predominantly with various profit measures.

Second, all customers are not willing to accept a transformation towards buying solutions as they may have a different view on value creation (Kowalkowski, 2011). Hence, it is necessary for firms to define focus markets, segments, and customers for the solution business, and develop segment specific strategies, including business goals (Cornet et al., 2000; Foote et al.,

2001; Miller et al., 2002). The outcome of such planning will be that other markets, segments and customers are likely to be the focus on the product business model. Hence, firms need to be able to make segment and customer specific value propositions (Anderson & Narus, 1991) not only for solution business but also for product business.

Finally, firms that develop their solution business based on a genuinely customer oriented viewpoint, building on a deep understanding of the customer's value creating process, will end up redefining itself from a producer to a provider. A provider does not produce everything

that it provides but attempts to integrate components of other network actors into their solutions.

A solution delivery cannot, therefore, be considered only as a dyadic exchange between provider and customer, rather as a complicated collaborative effort among several actors in a value network (Davies, Brady & Hobday, 2007; Ivens et al., 2009; Windahl & Lakemond, 2006). Often, complex solutions cannot be designed and delivered without having variety of partners contributing to it. The network dimension is becoming increasingly important as business ecosystems are getting more complex. Storbacka (2011) reports that solution providers consciously seek for standardized products from their suppliers. Furthermore, as the efficient delivery of solutions requires that the solutions components are digitalized, providers increasingly are demanding the third party components are delivered over standardized interfaces by integrating suppliers into their enterprise resource planning systems, or product data management systems. These suppliers will obviously not be moving into solution business. Rather their success is dependent of their ability to cost-effectively deliver standardized product or service components.

Emergence of specialized integrators and resulting changes of value chain structures

As already mentioned, literature has mainly focused on the transformation of industrial firms to solution providers. But solutions need not necessarily be developed by such industrial firms as (former) producers of goods. It can be seen in practice that the offering of solution can also be undertaken by newcomers entering that field as third parties. If this happens, a new market stage appears with challenging consequences for those suppliers now selling to these solution providers or “integrators” as they are often called. Furthermore, typically and due to the above mentioned bottlenecks not all producers have the ability and the competencies to become solution providers. In both cases the result for such “non-solution” providers is that the structure of their downstream value chain changes with the consequence that the former (marketing) strategies being employed must be adjusted according to the new settings (Kleinaltenkamp, Rudolph & Classen 2012; Finne & Holmström 2013). In the European railway industry, for example, a new market stage of system integrators emerged in the 1990s, including companies like ADtranz, Siemens Verkehrstechnik, DWA, GEC-Alsthom and Bombardier/Talbot. These firms, which had previously produced sub-systems, now additionally took over the responsibility for the design and realization of an entire railway system for the railway operator. The consequence of this development for suppliers of other modules or sub-systems was that they no longer directly dealt with the railway operators but had to sell their goods to these system integrators. Such suppliers that ‘fall back’ in their value chain system due to the emergence of solution providers lose the direct contact to their end customers. Through this they are in danger of losing competitive advantages and of becoming ‘reduced’ to pure suppliers of commodities.

One option to reduce this risk is to undertake multistage marketing activities involving sales-related measures aiming at the market stages – the customers of the customer – that follow their direct customers in order to influence the buying behavior of the primary customer. But undertaking such activities, like technical application service, consulting for product design or new technical developments, development of processing procedures, cost and profitability analyses, staff training, cause additional costs that are hard to cover when price competition is increasing at the same time because of their weaker position within the value chain system.

Conclusions

The shift towards solution business that can be observed in many B2B areas leads to new and typically far reaching strategic challenges for solution providers as well as for non-solution providers. So, firms active in this field have to make decisions with respect to their strategic positioning within the value chain system (Kleinaltenkamp, 2007), i. e., not only regarding the relevant market they are actually supplying to. Here, decisions need to be made with respect

to two basic strategic options: First they have to determine if the firm wants to be active on only one or on several stages of a value chain system. Second, it has to be determined if this firm must be proficient in just a few or in multiple fields of competence in order to provide successful offers of the products and services in question.

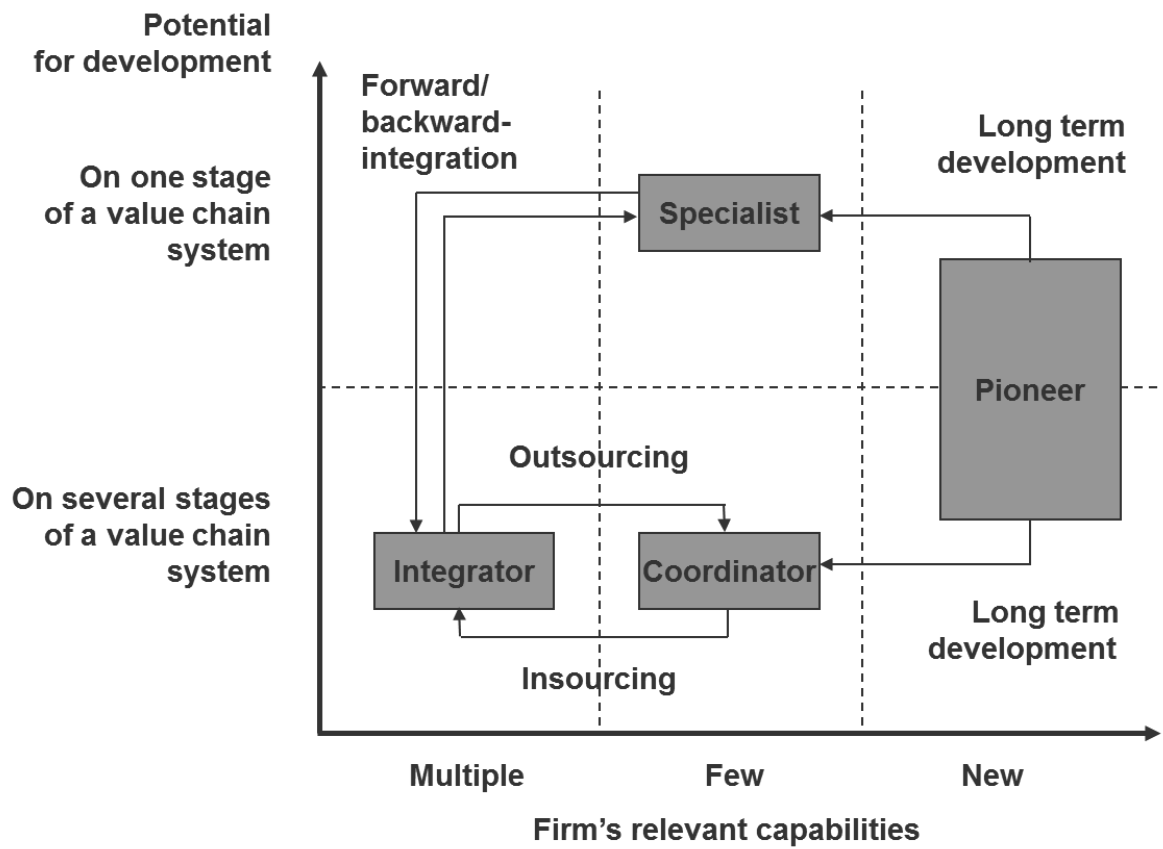
These options may be different depending on whether or not the firm is already active in the market or is a pioneer who wants to enter the market (see figure 1).

Insert Figure 1 about here

One possibility is to act as a specialist concentrating on a specific stage of a downstream value chain. In this case the vendor only needs a limited number of competencies. A second possibility is that a firm can broaden its field of activity by integrating or connecting different stages of downstream value chain: First, this is possible if the firm acts as an ‘integrator’ with a high degree of vertical integration of value chain activities. This requires that the firm in question must possess a corresponding number of competencies. Second, rather than implementing the processes in question itself, the firm may ‘only’ orchestrate the processes of other firms as a ‘coordinator’, so that a total offer is created. For this kind of business activity only a few capabilities are necessary; mainly in the fields of project and network management.

Furthermore, such strategic determinations typically are not static as their preconditions may change due to changes of the observable value chain systems. This may make adjustments necessary in the one or the other of the mentioned directions. Thus, a ‘specialist’ can become an ‘integrator’ by adding further value added activities by means of a forward or backward integration. An ‘integrator’ can become a ‘specialist’ by concentrating on certain added value activities, which means the abdication of rendering certain processes. Furthermore, ‘integrators’ and ‘coordinators’ can become representatives of the individual other category by outsourcing and in-sourcing of processes. Finally, there are always new vendors as competitors on the markets in question caused by the drafted changing processes.

Figure 1: Strategic options for suppliers in business-to-business markets



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MOVING OUT OF A LOW-POWER POSITION – EVIDENCE FROM INDUSTRIAL SUPPLIERS

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Abstract

The aim of this research is to study how quasi-commodity suppliers move out of a “commodity trap” with key customers in a specific industrial Business-to-Business environment.

An in-depth qualitative study is used to examine the case of several dyads (FMCG key customers/corrugated packaging suppliers).

The findings of our study cast another light to Benton and Maloni’s own results (2005): they conclude that “the suppliers (also) appear to believe that as long as they can maintain their relationship with the manufacturer, this performance will be created as a natural output”. In the case of quasi-commodity suppliers, performance is not considered as a “natural” output, but performance becomes the “trigger” of the relationship: a performance-based contract sets the basis for a customer-centric solution approach, which initiates the competitive differentiation.

To reach the required level of performance and to move out from a low-power position, the suppliers develop a two-step process: first the move from the product to “Process Support Services”, leveraged by the customer knowledge developed from the product selling and second, the initiation of “Performance Process Services”, to reach the required level of performance and set itself in a position to outsource the customer’s business processes, hence creating interdependency with the key customer.

Keywords

Customer-supplier relationship; low-power; quasi-commodity

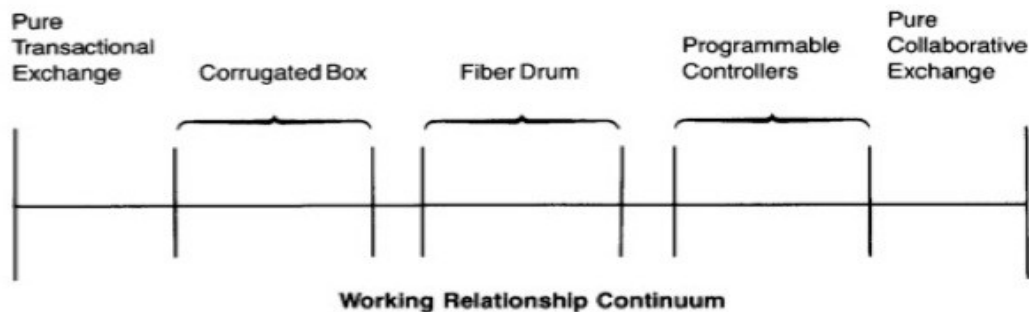
Introduction and Objectives

Collaborative vertical relationships (between suppliers and customers) have gained rising attention since the nineties in marketing academic research (Kanter, 1994; Napolitano, 1997; Dyer, 2000; Ehret and Plötner, 2006; Ulaga and Eggert, 2006) as researchers link relational benefits to higher value creation and appropriation (Wagner et al., 2010).

Nevertheless, some scholars, often belonging to the procurement research stream, referring to the seminal article from Kraljic (1983), have highlighted that product category management impacts on vertical relationships (Gelderman and van Weele, 2005): e.g. Bensaou (1999) relates “strategic partnerships” to highly customized products whereas “market exchange” relates to standardized products.

Axelsson and Wynstra (2002) and Svahn and Westerlund (2009) support this relational dichotomy: supplier relationships are transactional when the market is competitive (standardized products) and collaborative when customers search for customization of products and service solutions (Dubois and Gadde, 2000).

In a study conducted by Anderson and Narus (1991), standardized or quasi-commodity products (i.e., corrugated packaging) are the nearest surrogates for pure transactional exchange as shown in Figure 1.



Still, in a recent academic research on “vertical cooptation”, Lacoste (2012:655) shows that, when a quasi-commodity product is supplied within the customer’s supply chain to be integrated within a high value brand, then the supplier may be in a position to develop with their key customers a relationship, predominantly based on cooperation. Hence, the purpose of this study is to examine the counter-intuitive phenomenon whereby even quasi-commodity products can lead to a vertical collaborative exchange and to answer to the following research questions:

- 1) How do commodity or quasi-commodity suppliers move out of the commodity trap?
- 2) How do such suppliers offset their low-power position and create a countervailing power versus their key customers?

The present study will demonstrate how quasi-commodity (corrugated packaging) suppliers build a collaborative relationship and initiate a countervailing power with their key customers. Hence, this study will contribute to the literature on supplier/customer exchange: although such dyadic exchanges have been studied to some extent before, previous seminal articles tend to carry out a “static” analysis (Kraljic, 1983; Bensaou, 1999) or related to the relationship maturity stages (Dwyer et al., 1987; Cannon and Perreault, 1999; Salle et al., 2001), whereas the power dynamic has been mostly studied from a buyer’s perspective (Cox, 2001a & b; Caniels and Gelderman, 2005, 2007) and such dynamic that allow suppliers to move their power position from a low one towards interdependence with their key customers has been largely overlooked and we attempt here to fill in this gap.

In a qualitative study, data were collected from two key customers in the food industry and three of their corrugated packaging suppliers. A brief review of the literature on power is presented first, and how the power balance in customer-supplier relationships can be changed, focusing on the concept of countervailing power; then “servitization” (Vandermerwe and Rada, 1988) is studied as a foundation for power change. Later the methodology and case studies are presented, followed by the study results and analysis. Last, the paper concludes with an examination of research limitations and future research directions.

1. Literature review: The concept of “power” in vertical relationships

The study of power can be found, not exclusively but with a high level of interest, in the channel management literature (El-Ansary and Stern, 1972; Hunt and Nevin, 1974; Wilkinson, 1974; Wilkinson 1979, Gaski, 1984; Gaski, 1986).

Although most of these studies apply to the dyad or triad (i.e., dealer/distributor/client relationships), Gaski and Nevin (1985:140) acknowledge that such studies may be easily applied to other interactions, including those between customer and supplier.

Many definitions have been given to the word “power”. Dahl (1957: 203) wrote: “A has power over B to the extent that A can get B to do something that B would not otherwise do.” This definition was expanded by Emerson, who commented that: “the power of actor A over actor B is the amount of resistance on the part of B which can be potentially overcome by A” (1962: 32).

Rooted in the first social exchange theories (Thibaut and Kelley, 1959; Blau, 1964; Emerson, 1962), power is analyzed within dependence relationships, which conveys the idea that each party has power over the other. Power imbalance is the difference between the actors’ power and a measure of the relative power of actors in the relationship (Molm, 1990: 429). This means that one party is less dependent and more powerful (Molm, 1990) or, from the opposite perspective, that one actor is less able to “resist” and therefore “suffers” under its perception of the other actor’s power.

Power can be defined according to five types (French and Raven, 1959):

1. Expertise: power is acquired by the possession of knowledge or specific expertise;
2. Referent: power is achieved as the submissive party identifies with the values of the dominant party;
3. Legitimate: others recognize authority as being legitimate;
4. Reward: power is obtained because the dominant party is in a position to reward the submissive party, who is interested in getting the reward;
5. Coercive: this form of power exists when the dominant party may launch punitive actions against the other party.

Cox (2001a) analyzed supply situations that give power to the buyer; these can then be classified according to the different forms of power described by French and Raven (1959) (Figure 2).

"Expertise" power - The supplier's offer is standardized - The supplier does not have the advantage of asymmetric information over the buyer - Costs of the market information search are low for the key account	"Legitimate" power - Few customers/many suppliers - The switching costs for the suppliers are high - The switching costs for the key customer are low
"Referent" power The key customer represents a large percentage of the total market for suppliers The key customer corporate brand may be prestigious	"Reward" power The vendor is highly dependent on the key customer in terms of turnover, with few alternatives

The very definition of the key customer bestows upon the customer expertise, referent and reward forms of power. The expertise power is the integration of the basic product of the supplier into a more complex supply chain, which is fully controlled by the customer. The referent power of the key customer is often linked to its leadership position in its market. Working with this leader can be an asset for the supplier, as it will promote further relationships with other customers in the same market.

The power of reward is linked to the turnover that the key customer may give to the supplier: if the key customer obtains the desired sales conditions, it can increase the supplier's profit and grant it preferred supplier status (Lacoste, 2012).

When key customers are in a dominant position, they mostly rely on their non-coercive powers. Coercive powers are not necessarily required, since key customers can get the cooperation they desire from their suppliers without using constraint, relying only on their expertise, referent or reward power to motivate their suppliers. With its referent power, the key customer may attract many potential suppliers and increase its independence of choice; with its reward power, the key customer may increase its pressure on the supplier to lower prices in exchange for higher volumes. The relationship between power and customer size has been highlighted by some researchers (e.g., Little, 1970; Porter, 1980) and empirically validated by Berthon et al. (2003), who showed that more important buyers had more control over the decisions of their distributors or suppliers.

Further to the relationship between power and customer size, some scholars have investigated the relationship between power and purchased products.

Referring to the Kraljic quadrant, Caniels and Gelderman (2007) show that in the leverage quadrant (high purchase turnover of standardized products), buyer dominance over the supplier is the highest: competitive bids and fierce negotiations reflect the fact that many interchangeable suppliers are available (2007:222).

Buchanan (1992) stresses the availability of alternatives resources and low switching costs as two major relationship characteristics that explain the high power-dependence imbalance in buyer-supplier relationships.

From there, we can guess that suppliers will do their utmost to shift the balance of power in their favor and to decrease the power and dependence asymmetry. The concept of reciprocity

(Molm et al., 2007) may help to rebalance the distribution of power.

When the power or resources are concentrated within one party, the other party will tend to set up forces that result in a countervailing power (Galbraith, 1956). A supplier may work on an idiosyncratic offering, so that the key customer strengthens its ties with this supplier. Hence, the non-coercive power decreases as the independence of choice may disappear and a re-balance of power happens in favor of the supplier. Collaboration, based on the interdependence of both parties, becomes a means by which countervailing power is created (Filser and Paché, 2008).

This countervailing power is also embedded in the resource dependence theory, since the control of one organization over another depends on the level of resources needed and the dependence on such resources (Pfeffer and Salancik, 1978). By establishing a specific marketing strategy, the supplier will discover the specific needs of its key customers and try to create a competitive barrier to be the sole supplier of the specific resource. Hence, despite the reward or referent power attached to its key customer status, a powerful customer will not use any form of power when its supplier controls important resources and uses marketing strategies that create interdependence, thereby establishing a countervailing power based on collaboration. The supplier of standardized products is to build the capability to turn its standardized products into some “idiosyncratic offering” to create this countervailing power.

2. Literature review: why creating a countervailing power is more difficult when you sell standardized products

Some researchers, particularly in procurement, became interested in analyzing situations where the supplier was in a position of power. Bensaou (1999) argues that the products must be complex, be with a proprietary technology, have few suppliers of large size, and have a concentrated market. Caniels and Gelderman (2007) confirm, with their study based on the quadrants of Kraljic (1983), that in the context of strategic product supply, the supplier may be in a position of power. These results have been called “provocative”: to state that a supplier can dominate in a mutually satisfying partnership is to defy conventional wisdom (Caniels and Gelderman, 2007: 227). The implications of these studies may be restricted to relatively specific contexts. However, Cox (2001b), who believes in a more general approach, has asserted that the supplier can hold all the levers of power if it builds high barriers and blocks its competitors from market entry. However, Cox does not explain how the supplier can create this “monopolistic competition” (Chamberlin, 1933).

A review of the academic literature on supplier development reveals indications that suppliers may gain power as the relationship develops and matures. Dwyer et al. (1987) describe a stage process during which the relationship develops from awareness to commitment. Ford (2001) explains that the long-term commitment results from a decrease in uncertainty and distance in inter-firm relationships, whereas other scholars stress the concept of commitment through long-term orientation and trust (Ganesan, 1994; Morgan and Hunt, 1994). Nevertheless, commitment alone cannot explain the creation of the supplier’s countervailing power. Some studies do not support the conceptualization that relationships inevitably move towards the commitment stage. Krapfel et al. (1991) oppose collaboration to domination and submission without establishing any continuum between these relationship management forms. Cannon and Perreault (1999) define taxonomy without any stages. They call one relational form “mutually adaptive” and explain that a strong operational linkage characterizes it with some interdependence created by mutual investments.

Recent research on “close” or “partnership-like” relationships posits a degree of mutual dependence between the buyer and the supplier as a prerequisite (Kim et al., 2010; Goffin et al., 2006). The setting of such studies is within the IT and automotive industries, dealing with complex or strategic products. Some scholars (e.g., de Leeuw and Fransoo, 2009) recognize that, despite extensive research on buyer-supplier relationships, “the effects of product characteristics have yet to be explored” (Terpend et al., 2008, p 43). Indeed, commodity or products with low complexity seem to have been excluded from these studies: “commodity players have little to bring to the table (...). This leaves as the most interesting potential partners those firms that have some unique strengths” (Vollman and Cordon, 2000).

Hence, academic research so far does not provide suppliers of standardized products with any theory how to offset their low-power position. Petersen et al. (2008) even points out the need for more research on shifting power and dependency asymmetries.

Still, Benton and Maloni (2005) reproaching suppliers with placing too much emphasis on the maintenance of their relationships with buyers and overlooking their performance within the supply chain, hint that suppliers must stop seeing performance as a natural output of the relationship, but specifically work on it – this may specifically applied to suppliers of standardized products.

Some other scholars have stressed the need to move from products to solutions (Bennett, Sharma, and Tipping 2001; Cornet et al. 2000; Davies et al. 2006; Foote et al. 2001; Sharma and Molloy 1999; Slywotsky 1996) as a way to increase value creation and to improve their competitive position.

3. Literature review: from “servitization” to solution selling or “hybrid offering” as a first step for changing the power balance

Baines et al. (2009) in a review of the academic literature on “servitization” explain that the concept was first seen (Vandermerwe and Rada, 1988) as “offering goods combined with closely related services “ (2009, p. 555), until it shifted towards more customer centricity, with “tailored solutions” and a relationship-based interaction (Oliva and Kallenberg, 2003). Tuli et al. (2007) provide a review of definitions of the concept of customer solutions: most of them evolve around the idea of “creating high-value solutions by integrating various products and services” (Foote et al., 2001). Brady et al. (2005, p 360) write that “this trend has particularly affected the high value, engineering and software-intensive capital goods sectors, where firms design, integrate, and deliver complex products and systems (CoPS) on a project basis in small batches or as one-offs for business users, operators, service providers and/or government agencies (Hobday 1998; Miller et al. 1995)”.

Again extant research links “solutions” to high value capital goods, but beyond the concept of “solutions”, simply bundling services to products is part of many supplying company marketing strategies, whatever the product typology.

Based on Vargo and Lush (2004) seminal article on service dominant logic for marketing, a supplier, adopting service logic, would gear its (industrial) activities towards supporting the customer’s practices beyond the product (Grönroos and Helle, 2010) and hence create incremental value, which can be shared between the supplier and the customer. The key concept is “reciprocal value creation”, with service as mediating factor (Grönroos and Ravald,

2009). In this process, the supplier becomes a “co-creator of value” and is in a position to gain higher margins with premium prices (Grönroos, 2011).

In their article on hybrid offering, showing how industrial products are offered together with services, Ulaga and Reinartz (2011) classify four types of services: product life cycle services, asset efficiency services, process delegation services and process support services.

The last category of service, product support services (PSS) is presented as the supplier focussing on the customer’s processes, not the manufacturer’s good (2011, p 18): such services “leverage strong product expertise and process application skills, they strongly differentiate the supplier in the market”. The authors give the example of a commodity supplier (industrial gases), who moved ahead of competition by providing a unique knowledge how to apply gases in customers’ processes, but they do not further study the implications of PSS on the customer-supplier relationships and the power change.

It would be interesting to understand exactly the mechanisms by which a standard product supplier manages to differentiate itself in the supply market and the gradual evolution of the customer-supplier relationship from a power perspective. Such an issue is a key challenge facing suppliers today and this is why we decided to examine the relational practices by which quasi-commodity suppliers respond to situations of high customer power.

2. Research design

To measure the reality of organizations, Mintzberg (1979) advises against testing and questionnaires and insists on collecting field data. Some scholars also highlight the fact that case research is particularly adequate in new situations or in the study of change process (Halinen and Törnroos, 2003), when little is known about the phenomenon and current theories seem inadequate (Easton, 1995; Eisenhardt, 1989, Yin, 2008).

This research follows their recommendations and builds on two case studies, represented by two multinational companies (key customers) in the food sector and three of their corrugated packaging suppliers.

5.1 The first case

Key customer 1 (KC1) is a French FMCG¹ group, and is a leader in its industry. Its turnover in 2011 amounted to 19 billion € and it employs around 100,000 people worldwide.

KC1 was long accused of fostering adversarial relationships with its suppliers. Its purchasing strategy was focused on cost savings and the internal positioning of their purchasers was to be found in the action of bringing savings via distributive negotiations with their suppliers, as stated by one of the purchasers:

“In the end, the power of the buyer resides in the fact that he can launch calls for tender (...). Savings exist because purchasers can demonstrate them; otherwise they are invisible”.

Although KC1 was previously accused being adversarial by this point in time it had developed partnerships with a few chosen suppliers in order to help enhance the value of its brands, thereby creating a firewall around these competitive brands. This change occurred as a result of executive-level strategic alignment (i.e., coordination between the Vice-Presidents of purchasing, marketing and R & D). Initiated in 2006, this procurement strategy was based on

¹ Fast Moving Consumer Goods

the search for value through the pursuit of lower costs (the concept of Total Cost Ownership, TCO) and of innovation provided by suppliers, with willingness, since 2010, to include CSR (corporate social responsibility) initiatives.

5.2 The second case:

Key customer 2 (KC2) is a FMCG group of European origin and is also a leader in its industry (some product lines directly compete with KC1). Its turnover in 2011 amounted to over 70 billion € and it employs about 320,000 people globally.

This key customer, known for seeking consensual relationships with suppliers, has modified its procurement strategy over time. Since the mid-1990s, it has sought purely relational national partnerships (whereby partnership contracts were established with tacit renewal after five years, without any call for competition for the duration of the contract), but since 2003 it moved from a pure domestic approach to a top-down approach with a selective partnership at the European level. A Supplier Relationship Management program was later employed to select, and develop relationships with, suppliers. Purchases were purely operational at the local level; these dealt solely with local projects. The geographic dimension and the supplier segmentation overlaid each other. The resulting interaction between these two aspects was based on a pyramidal approach that moved the customer from having supplier relationships based on prices and costs (low-cost suppliers or challengers), to having relationships of quasi-integration (i.e., “preferred” or “strategic” suppliers).

Suppliers were encouraged to move towards a preferred supplier status according to their capabilities and resources, whereas few of them (only one per product category) managed to reach the ultimate status of strategic supplier. Each “business” (Business Unit) managed its suppliers according to the same segmentation. However, marketing strategies and purchased products could be weighted in favor of preferred suppliers and one strategic partner, or of standard suppliers (i.e., search for low-cost products).

5.3 Description of suppliers

The suppliers are companies that produce and sell corrugated packaging. Two (A and B) are multinational companies; the third (C) is a mid-sized company with a high level of activity centered in France. All three are or were suppliers for each of the two key customers during the study.

Over the years, corrugated packaging has fallen into a commodity trap because of latent overcapacity and low technological barriers. Also, it belongs to the routine product quadrant described by Kraljic (1983), in which suppliers struggle to maintain their margins following the pace established by major FMCG customers, which, for the most part, are buying with tenders. KC2 was an exception in this regard and displayed great innovation when launching the “partnership” concept in 1995.

5.4 Research methodology

In 2008, the VP of Procurement from KC1 gave an interview to the specialized press², in which he explained that a drastic change in their purchasing approach was to build “strategic partnerships” with selected suppliers. This raised the question how much the relational practices of those key customers had changed and whether their historic corrugated suppliers could definitely move out of their “commodity trap”? This situation presented an opportunity for unusual research access (Yin, 2008; Eisenhardt and Graebner, 2007) on vertical relational

² «Le rôle des achats est aussi de capter l'innovation» - Décision achats N°113 - 01/04/2008

practice; this multinational company and its main competitor would be suitable cases to study the evolution of their relational elements with their network of corrugated suppliers. Thus, an exploratory line of enquiry (Yin, 2008) was followed from 2008 to 2012: an in-depth qualitative study was carried out within the two companies (KC1 and KC2) and those of their three main suppliers.

We collected data from both sides of the dyads, as recommended by Wilson (1996) and Brennan and Turnbull (1999), and did it in an independent way, avoiding the bias of contacting a supplier under the supervision or recommendation of its customer.

On the customer side (KC1 and KC2), informants were chosen first at the most senior level within the procurement department, second according to their length of employment, so that we could gain an in-depth knowledge of their company relationships with suppliers. Then we contacted purchasers specifically in charge of packaging and we also secured an informant who was part of the buying center, dealing with corrugated suppliers but from a more technical perspective (e.g., Corporate Packaging Manager). Eisenhardt and Graebner (2007) write that bias in data collection is limited when informants include organizational actors from different hierarchical levels, functional areas. On the supplier side, we tried to contact the person in charge of the customer relationship at the highest level, such as the key account director and another informant, part of the account-dedicated team. Again, we also tried to have informants with a good record of customer relationship.

The major informants are listed in Table 1:

Key Customer 1(KC 1)	VP Global Purchasing
	Packaging Purchasing Director
	Research Centre Manager
Key Customer 2 (KC 2)	European Purchasing Group Manager (packaging)
	Corporate Packaging Manager
	Corrugated Sourcing Manager
Supplier A	Managing Director Key Accounts
	Key Account Manager
Supplier B	President Corrugated Europe
	Regional Managing Director
	Marketing Director
Supplier C	Group Sales Director
	Product Manager
	External Communication Director

The mixed interviews method described by Romelaer (2005) was adopted. These interviews begin with a focused semi-structured interview, after which the interviewer assumes the role of “guide” in the discussion. This method permits the informant to speak spontaneously after the researcher launches the theme of the interview with a short sentence. The researcher then merely guides the interview, when necessary, with reformulations. The researcher provides little direction otherwise, which allows him or her to collect data, which, may not otherwise be generated, all the while remaining within the intended scope of the research. The other advantage of this method is that it helps the researcher to maintain some distance and avoid direct questions that could be biased.

Conversely, there is a growing awareness that informants may produce “a manufactured image of idealized doing” (Woodside and Wilson, 2003), that may not conform to

observations. Repeating interviews with the same informant within a few years time (2008/2009 and 2012) may contribute to the triangulation of newly built theory from the field data; by adopting multiple analytical perspectives, the process of “systematic[ally] combining” theory and empirical data is reinforced (Dubois and Gadde, 2002). Hence, the logical validity of this study is founded on the practitioner’s dyadic perspective, interviewing informants from both sides of the dyad.

In terms of external validity, Eisenhardt (1989) recommends multiple case studies, but Yin (2008) and Gibbert et al. (2008) recognize that researchers may also conduct different case studies within one organization. This kind of nested approach (Yin, 2008) is the line we followed with the three suppliers: each supplier serviced both focal customers, which allowed us to examine a total of six dyads.

An initial thematic coding of interviews was performed, followed by a finer work of analysis and coding to permit further conceptualization. The codes were not derived from the theoretical approach, but were set mainly *in vivo*, from the material to be analyzed. In that sense, we followed Piekkari et al.’s recommendations (2010) that ‘tacit knowledge’ gained through immersion in the field should guide our case study approach.

The data collected from the qualitative research builds a strong corpus of knowledge in which the theory-building process was grounded. To check the reliability of our findings, we organized a workshop to present the preliminary results with a mixed audience of executives (some being our informants) and academics. The feedback led to minor suggestions regarding the wording of the analysis. From an academic perspective, we presented a draft version of the paper at an academic workshop and then used peer-reviews to amend it before submitting an improved version to a major conference; again, the reviews and audience comments were used to finalize this article.

6. Study analysis and findings

6.1 From cost reduction to collaborative relationship

In the early 1990s, the suppliers of corrugated packaging were entangled in a process of commoditization of their products. Both customers were willing to standardize the products to drive prices down by using tenders on an increasingly important scale. Purchasing services gradually structured and organized themselves at the national or European level.

The first to successfully break this downward spiral of unprofitability was supplier C, which managed to develop a lower-weight paper that enabled it to reduce the final cost of its packaging. Unfortunately, the supplier failed to protect this competitive advantage, and suppliers A and B soon followed suit; it rapidly cost supplier C its position as cost leader. These three suppliers found themselves in fierce competition: the strategy of cost domination prevailed (Porter, 1980). KC1 established with suppliers A and C adversarial-type relationships, with allocations of wallet share fluctuating according to the outcomes of tenders. The relationships could be described as being “transactional[ly] sustained” (Dyer et al. 1998a & b; Palmer, 2007).

KC2, which worked primarily with suppliers A and C, gradually realized that a purely transactional relationship with many suppliers not only diminished the quality of the purchased product, but also failed to bring synergies to their own products and brands. In the mid-90s, KC2 decided to launch an innovative process of partnership in France. They defined a five-year agreement with two supplying “partners”; to each partner they allocated 50% of their corrugated packaging needs, with fixed prices and a mechanism for indexing the evolution of the cost of raw material. Additionally, the suppliers committed to introducing innovations

that would reduce the amount of corrugated purchases by 12% over the lifetime of the contract. In doing so, KC2 put an end to transactional relationships and laid the groundwork for collaborative relationships.

This purchasing strategy was in fact the consequence of a new corporate strategy that involved the symbolic merging of most of the KC2 brand businesses into a single headquarter and the desire to create a single corporate culture, to eradicate some historical but very local brands, in order to bring most products under the umbrella brand of the corporate brand.

The management of KC2 thought that one way of succeeding was to change their purchasing strategy and to bring all brands to work with the same suppliers within a new « partnership project ».

It is borne out by academic research “that actions such as longer-term contracts and open communication about future opportunities for collaboration represent important buyer signals motivating supplier co-operation” (Johnston and Kristal, 2008). It should be noted that suppliers were selected to participate in this collaboration via a request for quotations, which was won by suppliers B and C, whereas A, the historic partner of KC2, lost all business. It is possible that supplier A did not adequately assess the tendering process and the willingness of KC2 to move towards a formal partnership contract.

In specific studies focusing on a customer’s relationship quality and perception (Walter et al., 2003; Ulaga, 2003), the supplier is described as the one that adds value to the relationship.

Walter et al. (2003:165) argue that “[t]he more a customer finds a given supplier to fulfil direct functions, like reducing purchasing costs, delivering quality, covering a large volume or serving as a safeguard, as well as indirect functions, like gaining access to the market by the supplier relationship, using the supplier’s information base, inspiring innovation through the supplier or simply enjoying the social benefits of the relationship, the higher he or she will perceive the quality of this relationship”. The authors even stress “the role of function fulfilment is even more important when there is competition in the supply base” (Walter et al., 2003: 166).

In our case studies, there is a strong competition in the quasi-commodity supply base, but there is little to no differentiation between the suppliers. Nevertheless, one of our key customers (KC2) establishes the rules under which a relationship is going to be cooperative, even without a prior transactional relationship. In a counter-intuitive way, and for reasons, which are purely related to the customer internal alignment, the supplier-customer relationship moves away from the traditional relationship paradigm (i.e., a transactional orientation) towards a relational orientation (Grönroos, 1994; Peck et al., 1999). This suggests the following:

Proposition 1: within a competitive and undifferentiated quasi-commodity supply base, key customers and suppliers can take the initiative to manage a new form of relationship based on a performance partnership contract, without necessarily having had prior relationship experience.

6.2 From the collaborative approach to the implicit construction of a “countervailing power”

Suppliers B and C found it difficult to meet the terms of their contracts with KC2 during the first years of the so-called partnership. They were quite unprepared for the demands of this new collaborative approach.

Supplier B struggled the most: it had to create a dedicated team and hire new staff profiles with strong technical expertise. Employees were required not only to work on the packaging itself, but also on the packaging lines in the customer's plants in order to increase productivity. It soon became obvious to supplier B that its innovation efforts would not be sufficient to reach the required savings threshold of 12%, and that it should work on improving customer packaging productivity as well as the entire logistics process. Interestingly enough, because of the internal pressure to succeed in this innovative partnership project, KC2 managers were prone to help their suppliers. Although, progress was slow and the Partnership Director once said,

"Do not force us to kick You out..."

This sentence showed how reluctant they were to see supplier B to fail. They helped their suppliers to move towards a more collaborative relationship, not that they were convinced, at that stage, that more value would be created, but internally they were bound to demonstrate that their own organisation could work on a partnership mode.

One of the purchasers, said,

"Why did we do our first partnership with corrugated packaging – because it was not a strategic product and hence, the risk was minimised...(…), in this first partnership spirit, we became a "captive" customer – I wanted to move out of this! My boss said no."

As both parties had to make the partnership a success, the collaborative approach shifted the focus from the supplier's product to the definition and implementation of logistics services.

The aim of the suppliers was to move their products beyond the definition of "commodity", and instead to offer a range of services that allowed them to become anchored to the key customer. The services offered by the suppliers were free, and, unlike in the study of Reinartz and Ulaga (2008), the suppliers did not seek to assign a price to the services; this strategy allowed them to build their countervailing power vis-à-vis the key customer.

Indeed, by embedding their products into logistics services, the suppliers increased the value creation by shifting their offerings from products to services. They could then increase their share of the value without making the customer aware of the change (Anderson and Jap, 2005). For example, they offered more expensive packaging that allowed KC2 to pack more products inside one container and reduce the customer's overall logistical costs. The customer, benefiting from a significant reduction in the cost of transportation, subsequently put less pressure on price negotiations for any new packaging that was developed.

In that sense, supplier B used the PSS approach (see *infra*) described by Reinartz and Ulaga (2008), but the aim was not to differentiate them from competition, but to add value to their own products. They built a virtuous circle in which they decreased the customer processing cost, which allowed them to increase their own product price and to increase the value appropriation.

This work on the supply chain total cost enabled supplier B to build strong ties with the key customer and gradually to overtake the work of the customer's own technicians. Part of the logistic expertise was outsourced, in an implicit way, through packaging supply contracts. Supplier C followed the same strategy, but instead of focusing on improving the efficiency of the total supply chain, it focused on supplying packing machines that optimized packaging, in order to boost the efficiency and speed of packing operations. The suppliers built their countervailing power by converting themselves into "quasi-internalized service centers" and forging ties that were not easily breakable.

Benchmarking itself with KC2, KC1 tried to convince supplier A that they, too, planned to adopt a more relational approach. However, once supplier A offered KC1 some highly

innovative packaging, the customer launched a tender inviting other corrugated suppliers to copy the packaging - ultimately signing a contract with the supplier offering the lowest price. Supplier A terminated the relationship and worked hard to come back as a preferred supplier of KC2 during the partnership contract renewal period (2000), with a promise of expansion including a European contract (knowing that supplier C could not be fully eligible for such a contract as they were mainly based in the domestic market).

Ulag and Reinartz (2011), when defining hybrid offerings define two types of services oriented toward the customer's process: process support services (PSS), which are services to assist customers in improving their own business processes; and process delegation services (PDS), which are services to perform processes on behalf of the customers. Hence, our own research unveils another form of services oriented toward the customer's process: the "performance process services" (PPS), which are a combination of both types of services described by Ulag and Reinartz. With PPS, suppliers provide first services (PSS) to assist customers in improving their own business process (specifically within the supply chain) but it is goal-oriented with a performance to be achieved as established by the key customer (productivity improvement). To reach that performance, suppliers can use different tactics and provide different services (e.g., decrease costs along the supply chain, or improve packing efficiency).

By providing the suppliers with a freedom of choice in process improvement, the key customer also delegates the process improvement to suppliers and relies on the suppliers' expertise to outsource productivity improvement, which leads to a second step of more integrated services: PPS. This suggests:

Proposition 2: Quasi commodity suppliers can create a hybrid offering based on "performance process services" (PPS), forming the core development of a partnership-like agreement, based on a performance output. This PPS hybrid offering is founded on the suppliers' integration of the customer business process, leading the customer to outsource their productivity improvement to their suppliers.

6.3 The current features of the supplier "countervailing power" and the benefits for both parties

Gradually organizational learning (Argyris, 1957) spread beyond the boundaries of the customer-supplier relationships outlined above, and infiltrated the industry more generally as mergers or recruitment among the corrugated suppliers resulted in a dissemination of their ability to improve the productivity of their key customers. At the same time, key customers 1 and 2 slowly converged their purchasing strategies and their level of procurement requirements vis-à-vis their suppliers. The countervailing power of the suppliers became based on their ability to develop their customer-centric services and PPS hybrid offering at the European level (suppliers B and C partly failed vis-à-vis KC2, as they were too slow to move their performance-gear know how from a national to the European scale and were replaced by supplier A, who took over as preferred supplier). Another company that sought to strengthen its European presence acquired supplier C, and most recently supplier B; consequently, supplier B and C have now merged their customer-centric know-how on a larger scale and can now compete on equal terms with supplier A.

The countervailing power of suppliers is based on their ability to commit to reduce the costs of their key customers through packing solutions or organizational innovations, thereby playing a bigger role in enhancing their key customers' competitive barriers.

We are talking here of a "countervailing" power as the key customers' power did not decrease: by moving their purchasing strategy from a national to a regional or global

perspective, they even have increased their purchasing power, by increasing the suppliers' dependency on their business, decreasing the number of suppliers, first at the national and then at the regional level, hence increasing each supplier's share of wallet, and leveraging the volumes to maintain their power (Cox, 2001b). From the high power basis built by the key customers, suppliers managed to build their own power base, "countervailing power", and move out of their low-power position by creating some interdependence with PPS.

KC2 understood at an earlier stage, and more comprehensively, the importance and benefits of their suppliers building some countervailing power as a consequence of better performance output. In 2011, KC2 posted a 15 % trading operating profit. In contrast, KC1, which could not resist mixing some transactional elements into its relational approach, posted a slightly lower trading operating profit of 14.7% in the same period of time.

The main benefit of the relational approach for suppliers is that their products are "de-commoditized". Suppliers can subsequently enter into a positive relational path that creates a closer strategic and operational fit with their key customers.

This suggests,

Proposition 3: by embedding their (commodity-type) products into a PPS hybrid offering, suppliers move out of the "commodity trap" and create an interdependent relationship with their customers, reducing the power asymmetry and building a countervailing power.

6.4 Final findings and discussion

Too often, marketing research takes a one-sided view and ignores that the actions of the customer and supplier are interdependent in B-to-B (Ford, 2001). When the customer has power (mostly via expertise, referent and reward types of power) to enforce the relationship rules, the supplier's power in this case is defined as a "countervailing power", because it is a reaction to the asymmetry of power (which favors the key customer). The supplier extends the value creation to offset that asymmetry of power, by integrating the customer business process, which becomes a way to improve the customer's performance. We can describe it as a quasi-vertical integration, based on the strategic differentiation brought by the supplier, which is at the level of services (intangibles) rather than at the level of provided products (tangibles). This leads to the creation of the "extended" firm; the competitive advantage of the supplier becomes integrated into the key customer's core competence (Hamel and Prahalad, 1989). The supplier's knowledge and expertise replaces an aspect of business that the key customer willingly relinquishes in order to focus on its core business. The key customer is enticed to transfer or outsource this expertise as the supplier commits to a high performance output.

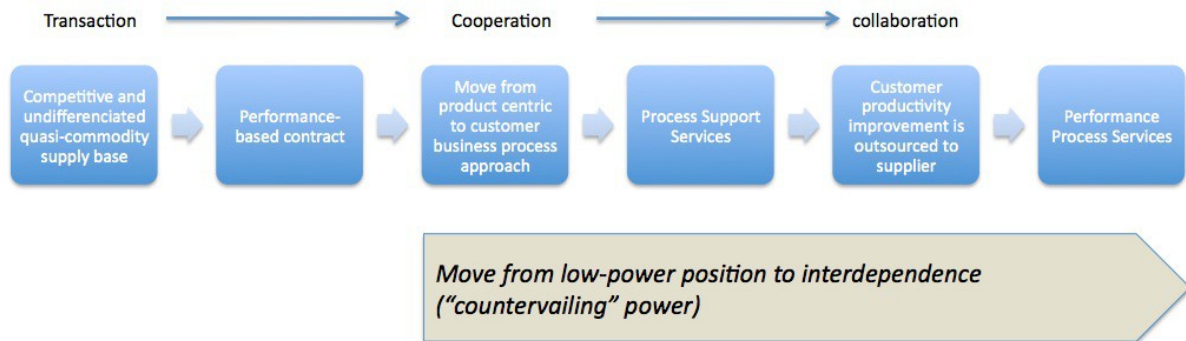
In that sense, our study cast another light to Benton and Maloni's own results (2005): they conclude that "the suppliers (also) appear to believe that as long as they can maintain their relationship with the manufacturer, this performance will be created as a natural output". In the case of quasi-commodity suppliers, performance is not considered as a "natural" output, but performance becomes the "trigger" of the relationship: a performance-based contract sets the basis for a customer-centric solution approach, which initiates the competitive differentiation.

To reach the required level of performance, the supplier develop a two-step process: first the move from the product to "Process Support Services", leveraged by the customer knowledge developed from the product selling and second, the initiation of "Performance Process Services", to reach the required level of performance and set itself in a position to outsource

the customer's business processes.

Such a competitive differentiation is based on a supplier's ability to build inter-organizational ties, and to meet the specific needs of the different brands of each key customer. The level of customization is no longer at that of the customer corporate, but rather is set according to the positioning and value of each product line or brand (Lacoste, 2012).

The conceptual framework proposed in this paper is summarized in Figure 3.



7. Conclusion and implications

Whereas academic research shows a strong interest in supplier-customer relationships, the mechanisms by which a supplier moves out of the “commodity trap” and the evolution of the customer-supplier relationship during this process have not been studied.

From a theoretical perspective, we revisit the seminal work of Kraljic (1983) with its proposed purchasing portfolio modeling. We show that by embedding their quasi-commodity products into a specific service offering, suppliers can move out of the leverage quadrant towards the “strategic” quadrant with a hybrid offering, which increases value creation with higher supplier performance. The notion of suppliers’ countervailing power is highlighted as an important construct that goes together with the creation of this specific hybrid offering: the “performance process services” (PPS). The role of both the supplier and customer in creating this form of hybrid offering is shown.

This is where our findings are slightly counter-intuitive: a new stream of literature tends to show that supplier performance is relationship driven (Benton and Maloni, 2005) and this is particularly highlighted by the concept of customer attractiveness (Hald et al., 2009; Schiele et al., 2010), which stresses the role of the behavioral antecedent “preferred customer status” in supplier’s performance (Schiele et al., 2011, p 17).

Our results show that, historically, a performance-based contract with specific metrics (equivalent of 12% corrugated packaging purchase turnover to be saved along the supply chain) signed with suppliers (with little relational background and selected by a competitive bid), was the foundation of the development of a relationship aimed at reaching that performance goal.

We find here a process during which the customer can become preferred as an output, rather than an antecedent, once the supplier starts moving out of the low-power position and starts reaching the performance goal with a hybrid offering. Along the process from the first stage of PSS to PPS, the willingness of the customer to move further into the “servitization” process and to outsource the business services, is necessary. At that stage, a relational strategic initiative from the customer is expected: Nagati and Rebolledo (2012: 622) demonstrate that

“suppliers should consider developing closer relationships with customers having the potential and the intention of knowledge sharing”. This knowledge sharing is necessary to move forward to the implementation of PPS. Such closer relationships are nevertheless the outcome of the first successes in the deployment of the performance-based contract and are gradually developed moving from transactional to cooperative (PSS) to collaborative³ (PPS). Those counter-intuitive findings are clearly related to the quasi-commodity nature of the studied products, whereas Benton and Maloni (2005) or Schiele et al. (2011)’s sampled suppliers were critical ones. In our quasi-commodity purchasing segment (Kraljic, 1983), buyers generally create competition between suppliers, regularly using competitive bids, and strive to maintain their power position (Gelderman and Weele, 2002; Araujo et al., 1999). In our study, the collaborative bonds are an outcome of the willingness to reach the pre-determined performance goal within the process of creating a hybrid offering that was gradually defined as the only way to reach that performance goal with a product, which offered little opportunity to be “augmented”.

This research has also managerial implications for both suppliers and key customers. First, this research should entice suppliers to move out of the commodity box and to look for intangible relational benefits that they can offer to their customers.

Moving out of the product box is not always easy, but in some industries, it is the only way to maintain and develop profitability. Becoming a customer-centric supplying organization will help the supplier to think strategically in terms of value creation. Our study even shows that the process of embedding products into customer process-related services can be the initiative of the sole supplier, if it is prepared to offer a performance-based contract, which may convince the customer of the derived benefits.

Hence, powerful key customers should not be afraid of creating some interdependence with potential strategic suppliers, since this is the best way to enhance innovative solutions that will strengthen their competitive advantage.

This research contains some limitations, as the customer/supplier relationships were studied in the context of one specific product range: corrugated packaging. The qualitative nature of the study prevents a major expansion of the research results, even if the objective of the study was not to quantify but to explore the creation of a countervailing power by the supplier. Further research should include a broader sample of key customers and types of purchased products, to confirm the validity of the results in multiple industry contexts.

Countervailing power is a concept that has been under-researched since power is primarily studied from the perspective of the party that holds it, with little regard for its dynamic nature and the way it can be transmitted to the submissive party. The present study is based on this dyadic perspective. Additional research could examine the network perspective involving other actors in the value chain (e.g., retailers, consumers) and their influence on the creation of countervailing power.

These limitations should be kept in mind when considering the results of this study. Nevertheless, new insights are provided for both academics and practitioners into the concept of “countervailing power”, i.e., moving out of a low power base with powerful customers, which remain a promising field of investigation.

³ See Trent, 2005, for a definition of cooperation versus collaboration

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Table

Key Customer 1(KC 1)	VP Global Purchasing
	Packaging Purchasing Director
	Research Centre Manager
Key Customer 2 (KC 2)	European Purchasing Group Manager (packaging)
	Corporate Packaging Manager
	Corrugated Sourcing Manager
Supplier A	Managing Director Key Accounts
	Key Account Manager
Supplier B	President Corrugated Europe
	Regional Managing Director
	Marketing Director
Supplier C	Group Sales Director
	Product Manager
	External Communication Director

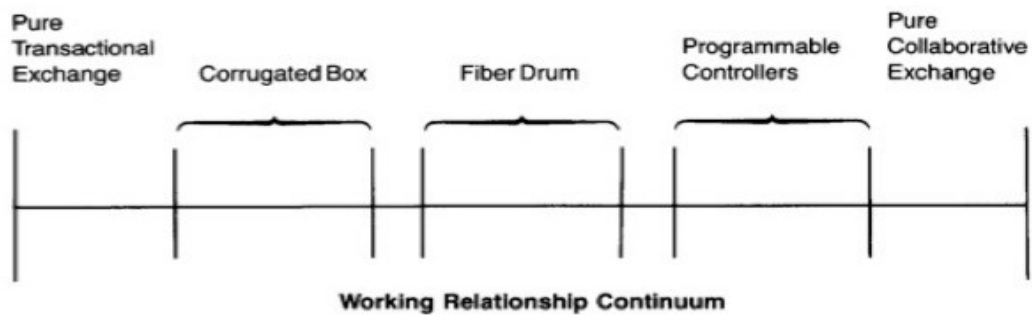
Table 1. Major informants from key customers and suppliers**Figures**

Figure 1 – Transactional and collaborative relationships based on Anderson and Narus, 1991

"Expertise" power - The supplier's offer is standardized - The supplier does not have the advantage of asymmetric information over the buyer - Costs of the market information search are low for the key account	"Legitimate" power Few customers/many suppliers The switching costs for the suppliers are high The switching costs for the key customer are low
"Referent" power The key customer represents a large percentage of the total market for suppliers The key customer corporate brand may be prestigious	"Reward" power The vendor is highly dependent on the key customer in terms of turnover, with few alternatives

Figure 2 - Types of power in customer-supplier relationships (adapted from Cox, 2001b).

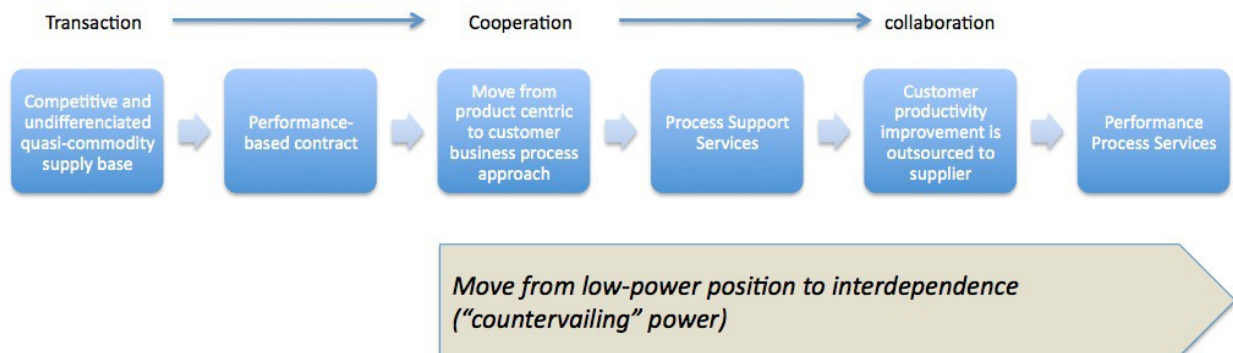


Figure 3 - The proposed framework: how to move out of a low power base.

Fuzzy Set Qualitative Comparative Analysis: What it is and How it Helps Understand Business Market Management Issues

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Introduction

Analyses of causal relationships represent an important approach used to understand the linkages between strategic decisions, organizational structures, management activities, and business performance measures (e.g. Fiss, 2011). Manifold studies have examined causal relationships between different types of constructs, such as strategy implementation, customer retention, or firm financial performance. Although these studies have greatly contributed to our understanding of *linear causation* (and to a lesser extent also of non-linear causation) and the net effects between the constructs of interest, little is known about what is called *complex causation* and how it can be analysed (Ragin and Fiss, 2008). Complex causation is defined as a situation "... in which an outcome may follow from several different combinations of causal conditions ..." (Ragin, 2008, pp. 23). Examination of complex causation entails consideration of all theoretically possible configurations of causal conditions that may influence an outcome in question and thus represents a major methodological challenge (Davis, Eisenhardt, and Bingham, 2007; Ragin, 2008; Wagemann and Schneider, 2010). Previous studies indicate that the analysis of configurations plays a crucial role in organization theory and management research. Considerable parts of current organization and management research understand firms as complex systems that comprise interconnected structures and practices (Fiss, 2007, 2011). However, conventional statistical methods used to test causality are often less proficient at handling such multi-faceted interdependencies. Frequently employed data analysis methods, such as regression analysis or structural equation modeling, are based upon linear and symmetric relationships between constructs of interest. These constructs are treated as competing in explaining variance in the outcome(s) rather than concentrating on ways in which causal conditions may combine to contribute to desired outcomes (Greckhamer et al., 2008; Ragin, 2008). The mismatch between management theory and methods (Fiss, 2007) and the limitations of general linear methods (Greckhamer et al., 2008; Ragin, 2008) underscore the need to explore further approaches that may help management researchers analyse complex causation. However, one should think of such approaches as complementary to the existing ones, not necessarily as competing. In this paper, based on set theory, we introduce fuzzy set qualitative comparative analysis (fuzzy set QCA; Ragin 1987, 2000, 2008) as a novel data analysis approach to examine complex causality, develop a framework for conducting such an analysis, and by so doing improve management researchers' diagnostic toolkit.

Fundamentals of fuzzy set qualitative comparative analysis

Central to QCA is the so-called causes-to-effects approach (Mahoney and Goertz, 2006), which means that set-theoretic methods describe cases as combinations of attributes (i.e. configurations of causal conditions) and the outcome in question (Fiss, 2007).

For example, firms with superior market performance (outcome in question) may be characterised by a combination of excellent market knowledge, a clear management strategy, and effective strategy implementation (configuration of causal conditions). Because set-theoretic methods consider configurations of causal conditions, they represent valuable analytic tools to examine situations of complex causality. As Greckhamer et al. (2008) emphasise, QCA takes into account that outcomes of interest seldom have a single cause (multi-causality), that causes rarely operate independent from each other (interdependence), and that a specific cause may have different (i.e., positive and negative) effects depending on context (asymmetry). Thus, set-theoretic methods are particularly useful for examining equifinality (Fiss, 2007, 2011), that is, situations in which “a system can reach the same final state from different initial conditions and by a variety of different paths” (Katz and Kahn, 1978, pp. 30). Equifinal solutions are generally understood as alternative pathways to achieve an outcome of interest. They are treated as logically equivalent and thus substitutable (Ragin, 2008). Identification of equifinal solutions for specific issues has evolved as an important area of management studies (e.g. Marlin, Ketchen, and Lamont, 2007; Payne, 2006), because it provides firms with a variety of optional design choices for a desired outcome (Fiss, 2011), bearing potential for efficiency gains.

In order to examine which combinations of attributes lead to the outcome in question, set-theoretic methods, such as fuzzy set QCA, rely on Boolean rather than linear algebra. Set-theoretic approaches build upon the premise that relationships among different variables are best understood in terms of set membership (Fiss, 2007). Conventional methods of QCA, such as crisp sets, define membership in sets using binary values (1 = membership, and 0 = non-membership), that is, a specific case either shows or does not show a particular causal condition. With fuzzy sets, however, membership in sets is not restricted to binary values of 1 and 0 but may instead be defined using membership scores ranging from ordinal up to continuous values (Ragin, 2008). A fuzzy set can be viewed as “a continuous variable that has been purposefully calibrated to indicate degree of membership in a well-defined and specified set” (Ragin, 2008, pp. 30). Therefore, fuzzy set QCA allows researchers to specify their constructs not only in kind, but also with regard to the degree to which certain attributes are present (Fiss, 2007). In order to assess set-theoretic relations with fuzzy set QCA, both causal conditions as well as the outcome in question are represented in terms of set membership scores. The primary objective then is to explain cases that show desired values for the outcome in question by describing the degree to which causal conditions or combinations of these conditions are present. Thus, fuzzy set QCA explores how the membership of cases in causal conditions is linked to membership in the outcome (Ragin, 2008). These set-theoretic relationships are interpreted in terms of necessity and/or sufficiency; a causal condition is defined as necessary if it has to be present for an outcome to occur, and as sufficient if by itself it can produce a certain outcome (Ragin, 1987, 2000, 2008).

Framework for conducting fuzzy set QCA

Based on recommendations by Ragin (1987, 2000, 2008) and Fiss (2007, 2011), we suggest a multiple-step approach to perform fuzzy set QCA. This approach involves four stages including (1) modeling of causal configurations and potential outcome effects, (2) calibration of causal conditions and the outcome in question, (3) analysis of how (configurations of) causal conditions contribute to the outcome in question, and (4) evaluation and interpretation of results. In the next subsections, we describe each of these steps in more detail.

Modeling of causal configurations and potential outcome effects

The most pivotal part of a fuzzy set QCA is the development of the model, which includes specification of causal conditions and the outcome in question. Fuzzy set QCA seeks to identify the common causal conditions underlying an outcome by investigating the attributes of cases exhibiting that outcome (Greckhamer et al., 2008, Ragin, 2000, 2008). Both specifications of relevant causal conditions as well as selection of cases (i.e. the empirical data) are important issues in this first stage of a fuzzy set QCA (Greckhamer et al., 2008). Theory and previous empirical research may guide researchers identifying relevant causal conditions and developing hypotheses about how these conditions contribute to an outcome in question.

Calibration of causal conditions and outcome in question

After relevant causal conditions and the outcome in question have been specified, a key stage to useful fuzzy set QCA is the generation of well-constructed fuzzy sets, which raises the issue of calibration. In essence, calibration of measures attaches a truth value to a statement (Ragin, 2000). In management studies the external criteria that are used to calibrate measures and transform them into set membership scores may reflect standards based on substantive, i.e. theoretical and extant empirical knowledge (Ragin, 2008). This knowledge specifies what constitutes full membership, full non-membership, and the cross-over point (Ragin, 2000). To calibrate measures and translate them into set membership scores, researchers may employ an indirect or a direct method (Ragin, 2008). The indirect method relies on the researcher's allotting of cases into groups according to their degree of membership in the target set (Ragin, 2000). In contrast to the indirect approach, the direct method uses three qualitative anchors to structure calibration: the threshold for full membership, the threshold for full non-membership, and the cross-over point (Ragin, 2000). Calibration of measures using the direct method can be conducted by means of the fs/QCA software program (Ragin, Drass, and Davey, 2007), which includes commands to automatically run this transformation of variables.

Analysis of how (configurations of) causal conditions contribute to an outcome in question

Once measures of the causal conditions and the outcome in questions have been transformed into fuzzy set membership scores, fuzzy set relationships can be examined. Fuzzy set QCA investigates complex causal relationships based on the set-subset relationship (Fiss, 2011; Ragin, 2008). The analysis of how causal conditions contribute to the outcome in question involves three major steps (Fiss, 2011; Ragin, 1987, 2000, 2008): construction of the truth table, preparation of truth table for analysis, and execution of the analysis to identify configurations of causal conditions that show an outcome in question. In the first step, a data matrix is constructed that consists of 2^k rows, where k denotes the number of causal conditions selected. This data matrix is the so-called truth table. Each row of the truth table displays a specific combination of causal conditions as well as the number of cases high on these conditions (i.e. conditions with fuzzy set membership scores greater 0.5). The full truth table lists all possible combinations of causal conditions with some rows showing many, some only a few, and some no empirical cases (Fiss, 2011). In the second step, the truth table is prepared for further analysis. This step involves elimination of rows from the truth table that do not meet frequency thresholds and an acceptable level of consistency for the remaining rows of the truth table. Frequency refers to the number of cases for a solution to be considered. Consistency refers to the extent to which cases correspond to the set-theoretic relationships expressed in a solution (Fiss, 2011). Based on the aforementioned conditions, the initial truth table is prepared for further analysis.

In the third step, the truth table is examined using the fs/QCA software program (Ragin, Drass, and Davey, 2007) and applying the truth table algorithm as outlined by Ragin (2008). This algorithm is based on a counterfactual analysis of causal conditions (Fiss, 2011; Ragin, 2008).

Evaluation and interpretation of results

The final step when performing a fuzzy set analysis refers to the evaluation and interpretation of the results. The truth table algorithm reports three types of solutions, namely a complex, a parsimonious, and an intermediate solution. Each of these solutions displays configurations of causal conditions leading to the outcome in question. The three types of solutions differ to the extent in which logical remainders have been considered (Ragin, 2008b). Because the complex solution considers neither 'easy' nor 'difficult' counterfactuals, it is unnecessarily complex and thus plays a subordinate role when it comes to interpretation of findings (Fiss, 2011). Based on the parsimonious and the intermediate solutions, researchers may detect core and peripheral causal conditions that contribute to the outcome in question. As Fiss (2011, p. 403) points out, "... core conditions are those that are part of both parsimonious and intermediate solutions, and peripheral conditions are those that are eliminated in the parsimonious solution and thus only appear in the intermediate solution". Thus, inspection of the parsimonious and intermediate solutions allows researchers to draw conclusions regarding the causal essentiality of specific combinations of causal conditions (Fiss, 2011). Finally, and in order to assess the relative importance of configurations of causal conditions for an outcome, researchers may inspect coverage values. Coverage is a proportional measure of the extent to which the solution 'explains' the outcome. It indicates the percentage of cases that take a given pathway to the outcome in question (Fiss, 2011; Ragin, 2000, 2008).

Summary

The primary objective of this article was to introduce fuzzy set QCA as a novel analytic approach to examine management problems characterized by complex causality. In this article, we present the fundamentals of fuzzy set QCA and suggest a framework for conducting such analyses. We suggest a multiple step approach to conduct a fuzzy set QCA. This article encourages researchers to examine further complex causality inherent to management issues by means of fuzzy set QCA.

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‘MADE IN CHINA’: ITS FUTURE PATH

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Introduction

The world markets have become more intensive over that last few decades with a large number of emergent countries entering into the global competition. This is particularly true in Asia where there now are generations of emergent countries striving for market share. The general development path has been laid down by countries such as Japan and South Korea with each country within the region adopting its own specify trajectory defined by its entrepreneurs steered by government intervention. An important aspect for each of these nations has been the perception of their products. An aspect central to development is the ability for a country to gain strong brand images for its products.

In International Marketing country of origin has been explored by a number of authors such as Peterson and Jolibert (1995), Agrawal and Kamakura (1999) and Usunier & Cestre (2008). The impact of country of origin on consumers has received considerable attention. These have concentrated on consumer appraisal of products and the decision making processes, see Kaynak and Cavusgil (1983), Nebenzahl and Jaffe (1996) and Pappu et al (2007). The difficulty for emergent nations is that consumers' perceptions are disposed more favourably to developed countries' products than those, see Papadopoulos et al, (1989) and Leonidou et al, (2007). Generally the views of the consumers have been sought rather than others in the supply chain such as exporters and manufacturers.

China launched itself onto the global market towards the end of 1970s with a set of policy reforms. These created a range of opportunities for Chinese and other entrepreneurs to exploit the considerable resources of China. It can be said to have developed along the lines of many emergent countries following what has been described by economist (Mathews, 2006) as the 'catch-up strategy'. This was particularly successful for China as it became rapidly a major manufacturer of products. The impact on the economy was very high growth rates that have continued over a long period, only recently did it become the 2nd largest world economy, Flanders (2011), and it often referred to as the 'World Factory'.

China, as one the latecomer in industrial development (Mathews, 2006), took the form of the manufacture or assembly of products for international companies. Hence many of the goods bought by consumers across the world have been manufactured in China, with a Made in China' logo embossed on the product, see Loo and Davies, (2006). Yet the purchasers of such items will still hold the view that Chinese products are of poor quality and would normally they would expect to pay a low price for them (Leonidou et al, 2007). The products they purchase are often consumed on the basis of an international brand. The image of Chinese products are not helped by the number of scandals that have been reported in the media about sweatshop products and products that maybe poisonous products (Kasriel, 2007).

The future of China's economy will potentially be determined by how the perception of its products. The current consumer gap in perception provides a challenge for Chinese manufacturers and exporters and of course for the policy makers in the Chinese government. It ap-

pers currently that China is viewed as the land of low prices and so foreign buyers' will in the short-term continue to purchase from China. Yet this provides a stumbling block for China, as her currency and workers expectation rise there will be pressure to achieve the desired price level set by these foreign buyers, especially as other Asian competitors can offer potentially even lower prices. This has issues has already been faced by Japan and South Korea (Yamazawa, 1992).

Using views of producers it will explore these ideas. It will provide a model of development for other emergent countries. It shows that China faces the problems of previous emergent nations and the solution may be similar, but may be inhibited by barriers specific to China. The views indicate that entrepreneurs expect government intervention rather than their own efforts.

Emergent Country Models

A wide range of potential models have been used to describe the development of emergent countries. One such strategy can be described by Vernon product cycle theory and this has been amended by others such as Yamazawa (1992) and Mathews (2006) which suggest a 'catch-up strategies'. This strategy generally assumes an export orientation in terms of sales volume for the emergent nation. For Japan this was described as the following 'the sequence of imports, import substitution, export expansion, maturity, and reverse imports.' (Yamazawa, 1990). Initially the emergent country acquires/copies the technology of more developed countries replaces imports with home produced material. During such a period there is usually a period of trade protection within the home market. This leads to producing for the external market primarily because of cheaper labour costs, often there will be development either of the product or the processes used to produce it. The 'new' product then you can be exported. The development of the product is the step with enhancement. The strategy may change over time with either acquisition of new technology from developed country or internal development of technology. The latter is dependent on developing human capital. Obviously having arrived at this stage one becomes a competitor with the developed world.

In the early stages one may have the benefit of cheap labour, but as time develops this is lost. Also in the initial stage one may defend home markets with high tariff walls which disappear over time as one enters into global trading and such as becoming a full member of WTO. Loss of protection and comparative advantage leads to crisis where sales no longer is the route to success but need to focus on profitability and greater use of the human capital for innovation and creativity. Essentially the highly competitive Asian market place causes production to switch to the cheapest location meaning others have to take other routes. Both Japan and Korea have gone through this cycle and have emerged to a new stage.

Obviously governments play a role in the development of the economy. They act as both a spur, but also as an inhibitor, see Kimura (2009). In the early stage the approach may be relatively easy with as in the case of China the opening up of the economy to foreign concerns. Yet often governments are not the best guides to entrepreneurial success and often the policy they establish can have both short-term and long-term negative benefits (Kimura, 2009). It should be also accepted the 'catch-up' model is not identical for every emergent country. Every country will have its own path based to some extent the resources of the country and nature of the state. For example the main impetus for Japanese and South Korean develop-

ment was their switch to quality. They also benefited from a receptive home market. The perception of Chinese production is that it produces poor quality products and that Chinese consumers would prefer to buy international brands rather than Chinese brand. Obviously one could argue in the initial period of opening up China exporting was more appropriate until Chinese economy had developed sufficiently to absorb products made in China. The situation today, however, is different China has many prosperous consumers who would make a strong internal market. As such they could be regarded as a major resource for Chinese producers.

Becoming the world 2nd largest economy with a strong currency and an affluent emergent class has lead China to face some of the problems faced by Japan during the 1990s. Whilst the crisis is not as obvious as the case for Japan, it does face the issue of highly competitive rivals who can lower their prices. Hence China is possibly in a stage of transition from its previous model to new model which so far has not been defined. In Japanese case the argument was that it needed time to resolve prime issue of profitability (Schaede, 2012). One can argue that this new alignment started out of the crisis along the usual path of transition which takes time to develop. The aim is to create a new congruence and to start to align all aspects within this structure (Schaede, 2012).

Method

Often studies of emergent nation development have been described through quantitative methodologies. Equally the perception of consumers of emergent countries has been addressed via surveys. Such studies are valuable in shedding light on the situation, but they cannot explore the detail opinion/attitudes which a qualitative study can provide. Hence this study has chosen to base itself on qualitative research to reveal this greater depth. The approach is to use netnography since this will allow the researchers to gain the voice of the community under study, in this case a large set of Chinese producers/exporters. In the use of netnography there has not been any intervention by the researchers into the debates without imposing any pre-specified construct onto the community. Kozinets (2002) initially conceptualized Netnography as a method to explore consumer views within online communities and subsequently it has been employed by a range of authors, such as Sandlin, (2007) and Xun and Reynolds (2010) as an online marketing research tool to gain insight into the voices from internet. Previous practical experience of one of the researchers indicated that Chinese exporters on a daily basis exchange their opinions on issues associated with trading/exporting. Hence from this community there is a wealth of online views/opinions on the subjects under study on Chinese products and exporting behaviour.

The research has focussed on three online forums. These were chosen since they were the most popular forums on the research topic according to Baidu.com, a leading Chinese search engine. Confirmation was also sought from Chinese exporters that these could be considered to be the appropriate forums to use. In analysing the information the initial focus was to investigate the perception of the community on China's brand and their views and opinion on their products and exporting. Hence the threads of interest in the initial search were restricted to 'Made in China', the China brand and branding of China. The starting part was careful reading of the material and identification of the threads that related to these specific issues. This resulted in over 200 threads with over 1000 pages of material from 7 years of material from June 2005 until June 2012. Eventually all the material was imported into Nvivo 9 software that allowed Chinese characters and analysed. The underlying approach to coding and

further analysis was to follow the general inductive approach as detailed by Thomas (2006). Obviously in this paper it will not be possible to display the full richness of the material gathered and only a part of the analysis will be capable of being shown.

The Current Situation for Chinese Producers

Since the opening up of the Chinese economy to foreign business China has to some extent followed the Vernon's 'catch-up model'. This has meant manufacturing low value-added products for export which have been cheap and of relatively low quality, see Hutton, (2007:120). It also has become the 'world's factory' assembling/manufacturing international branded products in plastics and cloth and also high technology products such as ipads and cameras. There has been some technology transfer to Chinese producers, but so far few Chinese products have become international leading brands. The following quote illustrates a view within producers/exporters.

- *'Talking about the white goods industry, after entry the 21 century, 'Made in China' has already replaced Japan to be the centre of world manufacturing. However, the painful reality is that 'Made in Japan' replaced 'Made in Europe/America' by applying 'manufacturing + Branding' strategies, but 'Made in China' only replaced Japan by 'manufacturing', not 'branding', in fact, we have fallen into the tender trap by producing product for other people's brands since.'* (Zhishi 2008-1-5 12:44 BBS-CNNET, 05.01.2008 12:44)

From the research there are several good reasons for this. China has found that the barriers to entry to trade have been low with this strategy. It primarily could use cheap labour to provide a competitive price. The expectation of foreign buyers and companies that prices would be low attracted them to China. Over time, though, costs have risen along with the value of the Chinese currency. It is summarised in the following quotes:

- *'I completely agree with you, I have the same feeling. Even though, the business looks good and keeps us busy, but the product price keeps reducing. The labour wage and other cost have continuously increased; there is no room for profit. We have been developing different new product, even much creative than others, but only the profit still very thin. It's like we have been busy for whole year for nothing.'* (颐美居 2010-07-29 07:41; ABBCN, 04.07.2010)

Yet more importantly is the economic structure of China and the lack of protection of intellectual property rights. Regions and cities (towns) focussing on a single product has meant that competition between companies is fierce. Margins have become very narrow, leading to profits 'as thin as paper'. The increasingly number of producers have been driven to the edge of survival with the demands of workers for better conditions and competition. The reduced price has undoubtedly impact on quality. Cheaper materials may be substituted to achieve the price desired by the producers' customers. If you cannot produce for the price then someone else will. This leads to the perception of Chinese products as being inferior.

- *'The copying phenomenon is really serious in China, a lot of firms don't care the quality, they make business as instant deal, once have the deal done, get the money, they just leave.'* (kevin1900sy 2011-5-30 10:48 FSH, 29.05.2011)

The perception of the inferiority of Chinese product is held not only by the rest of the world, but by Chinese as well. It is partially due to the habit of selling the inferiors in domestic market, this attitude means that 'Made in China' is not a favoured brand unless it is associated with an international brand. Some international buyers have asked to take off 'Made in China' logo to enhance their resale due to the low value of 'Made in China' brand.

- *'I had one customer before, he wanted to change the 'Made in China' logo into 'Made in USA', sounds like 'Made in China' had really bad reputation, which really chilled me up.'* (通用狂龙2011-06-15 20:57; ABBCN, 15.06.2011)

Future of 'Made in China' is 'Created in China'

The last section illustrated the difficulties that the Chinese producers face, which is generally seen as getting worst with competition from other primarily Asian countries. China could lose the label of 'World Factory'. Many of the producers/exporters acknowledge this possibility and are willing to contemplate solutions. Whilst there are many issues associated with the 'Made in China', the hope is to tackle these by developing the concept of 'Created in China' where a wish list can be defined. Many of these are obvious and are supported by the literature of development of countries such as Japan and South Korea (Kimura, 2009). The switch from low value added products to high value added products is seen as the solution. The movement from assembly of products to the creation of products based on innovation. There needs to be money for research and development, better school to produce individuals with the required skills and talent allowing creativity, and development of brands.

There are features of the current situation which can be seen as inhibitors and they are also acknowledged by the producers/exporters. It is clear that the thin profits do not facilitate expenditure on research and development and branding. The rising expectation of the workers is another inhibitor to development. The education system is highly competitive, but currently leads to rote learning without creativity. One major force against development, though, is copying which means that producers know their incentive to innovate is low, since competitors will quickly follow developments offering lower prices without paying for research and development.

Speculation about 'Created in China'

In this section the authors speculate about the future as summarised by Figure 1. The research leads to the conclusion that the status of Chinese products needs to be enhanced. The attitude to the product has to be positive and perception of low quality needs to be switched to high quality. This is a very traditional model for product development, following the Japanese approach of developing quality to enhance sales (Kimura, 2009).

Unlike Japan model, though, China has a distinct advantage of having a large and increasing prosperous population providing a strong local market. Chinese government has established various ways to encourage local economic development. It may be that development of brands could initially be an internal activity, enhancing the status Chinese products amongst Chinese people. This change of attitude may aid the development of international brands. Another most important requirement is for the Chinese government to establish greater protection of intellectual properties rights. This may induce larger number of producers/exporters to spend on research and development and this might have an impact on the current economic model in China of specific regions or cities producing particular products. This needs to be explored further.

Conclusion

China's emergence, as the world's second largest economy has focused global attention on its future development. The result of this research clearly indicates the major problem for China lies with profit, which is majorly caused by the allowance of copying in China. From our evidence, many of the Chinese firms, especially those SMEs, see themselves as on the edges of survival. Hence it is crucial for these firms to find a way to gain a reasonable profit for their long-term future. The results provide some practical implication for both policy maker and industrial practitioner, especially for emerging markets like China. The research sheds light on the practical barriers that inhibit the development of the brand from 'Made in China' to 'Created in China'.

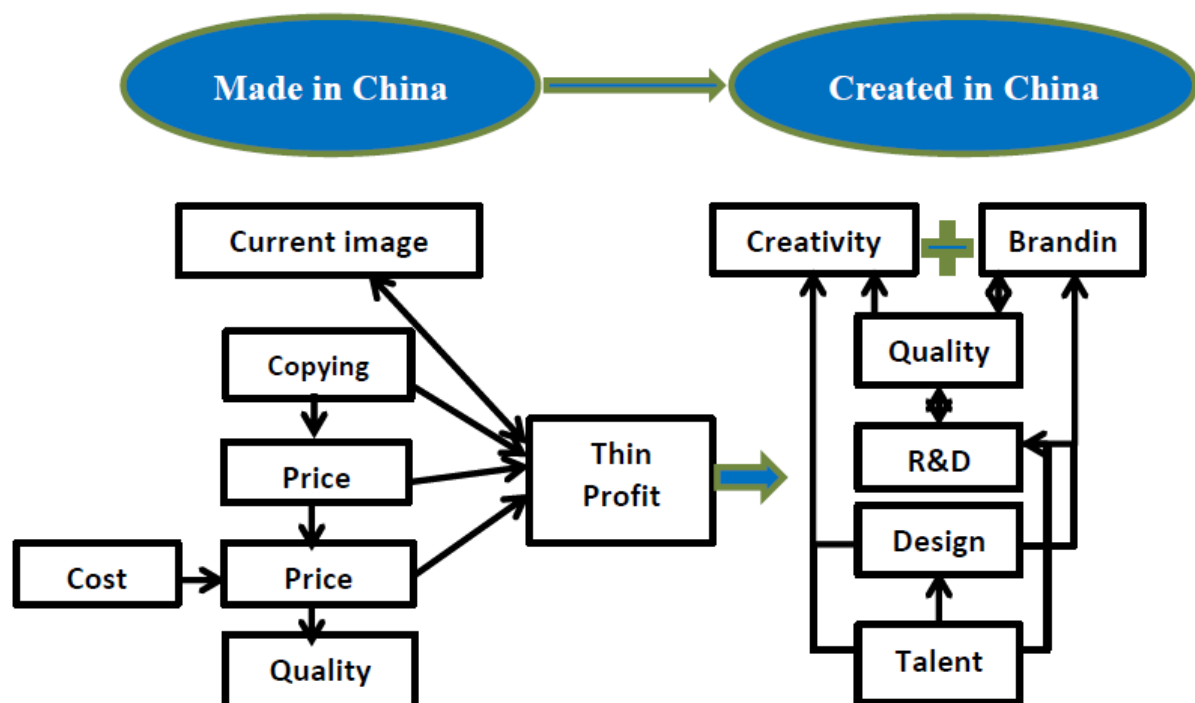


Figure 1: The Transition from 'Made in China' to 'Created in China'.

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FRANCHISE BUSINESS OPPORTUNITY IN MEXICO

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Abstract

The main objective is to review the growth that have taken the franchise in recent years in Mexico and answer the question; why this model is so successful franchise? Based on the theory of transaction costs and agency theory, the method used for this research is analytical. It can be concluded that the action of buying a franchise should be investigated carefully. Although legal protection is available, the best strategy for this model is that it covers many weaknesses in markets such as opportunism

Keywords: Transaction costs, Franchise, franchisor, agency theory, opportunism.

Resumen

El objetivo principal es hacer una revisión sobre el crecimiento que han tenido las franquicias en los últimos años en México y responder a la pregunta del ¿Por qué este modelo de franquicias es tan exitoso? basándonos en la teoría de los costos de transacción y la teoría de la agencia. El método utilizado para esta investigación es el analítico. Se puede concluir que la acción de compra de una franquicia debe investigarse con mucho cuidado. Aunque se dispone de protección legal, la mejor estrategia para este modelo es que cubre muchas debilidades en los mercados como el oportunismo.

Palabras clave: Costos de transacción, franquiciado, franquiciador, oportunismo, teoría de la agencia.

1. Introduction

Mexico is a country that has all the resources to get access to a position within the group called BRIC, comprising Brazil, Russia, India and China, which have been designated this name because it could exceed the gross domestic product (GDP) of the economies. It is well known today that most of national economies are in a recession due to the mismanagement of its resources, which has helped other economies to faster development. Mexico currently has the resources to enter the fight for that place and achieve an international projection to drive growth in its economy and through a well-established strategy to position itself within other economies through a business model called franchising.

Franchises are business models that have already achieved a level of knowledge in the world. Franchise happens to be a safe way for companies wanting to expand. Not all franchises can be applied in the same way in all countries but they can do some

adaptations as did McDonald's in India with their veggie burgers. Franchising is the growth option in a country, whether the system of business expansion most used and developed in the modern economies, especially in certain sectors. It is important for positioning and prospects may have growth because of its profitability and the coverage can have on other markets.

Franchises are currently known and recognized throughout the world, including Subway, Burger King, Helados Holanda, el Pollo Pepe, among others, but generally the best known are the food, but not for that the other items can be equally less striking. We are living in an era where technological advances, ideas, globalization and the desire to know more lead us to demand more, but the risks must be taken with calm and mostly with experience. A good option is the franchise, which give us the knowledge and a less risky manner we can move forward and grow. United States has used this model where retail has extensive stability and 95% of businesses that are established under this system survive while making a business on our own account we know that 1 in 10 or 15 companies will achieve good results and remain.

2. Franchises in Mexico

Mexico is consolidating as a country of franchise investments for U.S., Spain, Brazil and Portugal because it is a key market for the franchise industry. At least 40% of the expansion projects are oriented to Mexico. Mexico currently has 1013 franchise concepts, a figure that places the country in seventh place in the world and second in Latin America, and has more than 65,000 outlets (FIAF, 2012).

According to the Mexican Franchise Association (Asociación Mexicana de Franquicias, AMF) there are over 235 companies that achieved accreditation from the Ministry of Economy (SE) and that growth was allowing tripling the base last year. Regarding the development of new franchises, there are 452 companies that are in the process of becoming new networks, thanks to the support of the program (AMF, 2012).

3. Franchise system

In the franchise system, there is a franchisor and a franchisee. The franchisor is a natural or legal person that has a solvent company and commercial prestige, besides it should have a new concept of business or have any interesting or attractive feature to want to be franchised. The franchisee is a person or entity that pays to obtain the rights to market the products he purchased. Currently being given much publicity to franchising since in some cases, it has become a very successful model.

The interest in investing in Mexico is due to the size of the consumer market and the experience that has been acquired. The costs of obtaining a franchise from the lowest investment ranging from \$ 5,000 to \$ 100,000 pesos and more investment can range from U.S. \$ 301,000 to U.S. \$ 600,000, which would be the cost of a franchise of McDonald's or Burger King with an initial amount of up a million dollars. First, it must focus on knowing how or have done well to be successful franchises and how they have

sustained over the years, so we have to know what were the major theories and lines of research applied to franchises.

4. Theories on the franchise system

In the literature it is found that the development of the franchise is based on six theories, agency theory, and theory of transaction costs, theory of resource scarcity, theory of the extent of risk, contractual theory and theory of signals. Based on these theories, the focus is on the agency theory and the theory of transaction costs. Speaking of the theories more used to explain the franchise with a focus on business strategy, it is not possible to skip the theory of transaction costs, which, together with the agency theory, dominate the literature of franchises (Burton, Cross & Rhodes, 2000).

A. Agency theory

The agency theory (Jensen and Meckling, 1976) is the most commonly used to explain the relationship between the franchisor and the franchisee, and also the establishment and development of the contracts governing the relationship. In franchising there are a franchisor (principal) and a franchisee (agent) which maintain a working relationship where the owner is the franchisor who has objectives such as expanding the business and the franchisee takes responsibility and work to perform some tasks to create a company combining his skills and abilities to achieve common goals.

Although agency theory assumes that the agent may be tempted to hide information about his or her real primary qualities, as the franchisee should be aware of the hard work, commitment to work and enjoy working with other people, be good supervisor and organized to perform the work assigned (Jensen and Meckling, 1976). In this case for the agent, opportunism is diminished because this capital invested to acquire knowledge or recognition of the company at stake, what means that the agent will act rationally for his or her own interests.

In a franchise, the franchisee could not act opportunistically against the interests of the franchisor as it is the owner of the establishment for which he has made significant capital investments, time and work. Thus, it is assumed that there is great interest in the franchisee that the business runs well (Brickley and Dark, 1987).

B. Transaction costs theory

Transaction costs are the costs that companies incur when, instead of using their own internal resources, they go to market to find these products, services and rules set out in a contract. Companies seek to minimize those costs as much as possible, although it is known that this is only possible in a competitive market.

The origins of the transaction cost theory (TCT) goes back to the theoretical framework initiated by Coase (1937, 1960, 1994) and continued by Williamson (1975, 1981, 1991),

in which firms are seen as efficient agents (Chang and Rosenzweig, 2001), they outsource activities to external agents who are ready to perform at a lower cost than if it had been done the same company.

When the company decides to enter a market is at risk of being affected by opportunism and wants to take advantage of the limited rationality of agents and uncertainty, where each individual takes risks. Such actions lead companies to generate costs for the enforcing contracts that somehow guarantee security because there will be a regulatory body to protect these interests and the above costs are high opportunism. Other activities that further raise transaction costs are searching for information on pricing, product quality, labor, finding buyers, sellers, knowledge of the real situation, purchasing power and sourcing, contract formulation and subsequent monitoring to ensure compliance of the same part of the agents involved.

The franchise model allows minimizing the costs and risks compared to investing in a business in the transfer of goods and / or services, where it is spoken of imperfect information and the parties have made investments, each of which promotes its own interests at the expense of others, using a behavior that leads to opportunism (Jones, 1987:199).

From all the above mentioned, the franchise system is a widely studied model by its franchisor, increasingly refined and adapted to new trends. It was created in Mexico the Mexican Franchise Association (MFA) (Asociación Mexicana de Franquicias, AMF) in 1989 with the purpose of helping the economic development of Mexico and following the laws, rules and support for the acquisition of franchises and business. Mexican Quality Certified (Calidad Mexicana Certificada, Calmecac) have created the so-called "Seal of Quality", whose main objective is to arrange the market and boost the activity between the franchisor and franchisee by helping them to have more credibility and trust when making investments.

Franchises in Mexico are based on two articles: 142 Industrial Property Act and 65 of its Regulation (IMPI, 2012). The legal framework of franchises is constituted by the Constitution of the Mexican Republic, Articles 25 and 28 of the Commercial Code, the Federal Civil Code, Copyright Law, Consumer Protection Law, Competition Law, Law of Commercial Companies, Industrial Property Law and Competition Law.

Williamson (1991) introduces an additional aspect in the discussion of the theory of transaction costs, combining the criterion of efficiency as a fundamental aspect which measures the performance of the company, in order to save costs. Mexican law requires franchisors delivering a Franchise Offering Circular (COF) to be surrendered by either domestic or foreign to those who wish to acquire a franchise

A view of a franchise as a unit business for sale of another is a very well established network with others and these in turn to other organisms that cause minimal opportunism. So it must be studied the company as an economic organization that presents problems associated with transaction costs, generation of transaction costs besides the "Know How" which basically is the secret of success of it.

Here it is discussed bounded rationality; together with the opportunism which are two assumptions made by Williamson (1981) on the behavior of economic agents. The assumption of bounded rationality means that economic agents try to maximize their profits but do not always succeed and thus enters the opportunism that is to benefit oneself.

5. Knowledge (know-how)

Is the delivery or transfer of business knowledge, is to know the formula for success of each franchise in particular. It is formed by the experience and technical capabilities that are on a specific activity of a specific market. This knowledge is captured in a "Manual of Operations and Procedures" that the franchisor gives the franchisee, along with education and training on all aspects of the business, when the franchise is purchased. The franchisee must perform activities as described in the manual, acquiring the "know how" carries a cost and another if is not met as stipulated, it could even affect the franchisor. This manual contains information in the fields of administration, finance, marketing, human resources, control, and production and is designed to be the verbatim.

In Mexico there is an association that protects the rights of the franchisor's intellectual property against piracy through the work that has been developing the Mexican Institute of Industrial Property (IMPI), dependency created by the Ministry of Commerce and Finance (Secretaría de Comercio y Finanzas, Secofi) for the registration and protection of all matters relating to industrial protection, trademark, and patent rights in charge to regulate permits and licenses of brand, but as it has seen is difficult to control so it is important to have a well-established core competence and a good strategy. A foreign franchise may be easier to enter another country through the franchise system existing in the country and adapting quickly (International Franchise Association).

The theory of transaction costs and agency theory are basically developed by Williamson (1975, 1985) and Coase (1937). It is important to mention that more studies have been done on the allocation of theory of transaction costs in multilevel companies and hybrid business organizations helping to understand how companies make their entries into new international markets.

6. Problem statement and research question

The creation of franchises as a business in Mexico has been growing in recent years. According to figures from the AMF, from the 1013 estimated franchises in the country, about 500 are really active, and nearly half of the operating are already accredited in the PNF.

According to the AMF, the turnover of this sector in Mexico is about 85 billion dollars annually and directly employs more than 500,000 people. According to these data, the sector continued the trend of previous years, growing 13% in 2011. To achieve this potential franchise to materialize, it is necessary to boost the sector through specific support clearly aimed at the use of these successful models (AMF).

So it is important to know what good the franchises are doing to be successful and have achieved growth.

7. Objective of study

The aim of this paper is to analyze the franchise model in general terms to know about the growth and expansion that have franchises in our country in recent years.

8. Methodology

The methodology used is the analytical of information obtained from the literature review regarding the theory of transaction costs and agency theory. It also is analyzed the information provided by the Mexican Franchise Association, the Canadian Intellectual Property Institute Industrial, American Federation of Franchising (FIAF, 2012) and the World Franchise Council (WFC, 2012).

9. Conclusions

Franchising is a business expansion mechanism that has been very successful not only in Mexico but throughout the world. It is a time that franchises have achieved worldwide recognition and have created food habits and customs specially affecting consumers. This model helps to minimize transaction costs and reduce the risks of investing in a business. The implementation of this business model has created the need for agencies "regulatory" to help and guide both parties' franchisor and franchisee. Not all franchises that exist in Mexico are national and in fact, the most successful franchises are foreign but also those with a high transaction cost.

What would these advantages of buying a franchise.

- Rapid expansion.
- The recognition of a recognized brand allows better access to the market, avoiding risks and costs of marketing and product positioning.
- The brand benefits from increased market presence.
- Having access to strategic locations for marketing the product. Having a "backup" recognizable to negotiate better and take advantage over the competition.
- Maintain control of the business, but with certain limitations (Generally the costs of operating business units are superior to a franchise).
- The existence of economies of scale with respect to marketing, purchasing and operations.
- Advertising campaigns are optimized, you get better prices for volume purchased, cost sharing research and development, etc.

- You can have statistical information about the market in which the franchisee works to analyze growth, investment and future development.
- The risk when you have a franchise, rather than a network, is lower in case of financial problems.

Disadvantages of franchising for the franchisee

- Less flexibility in business operations as it has franchisees that must negotiate to implement certain changes
- Must meet contract terms.
- Mismanagement of other franchisees may harm the image of the brand, and therefore the business of self.
- The possibility of negative actions by the franchisee that could damage the image of business, regardless of contractual clarifications.
- The possibility to assume serious legal problems, and which is original responsible for the quality of a product or service.
- The loss of control over the business. This can occur with rapid expansion of the franchised network and poor layout in the organization of the franchise.
- The franchisor loses a potential share of the profits, which is used by the franchisee. That is, there is a lower gross profit margin.

The information available as to the success of a franchise is not reliable because many people believe that buying a franchise is going to ensure financial success. But there is also the sad side where buying a franchise has led to financial ruin. Buying a franchise should be investigated carefully.

We must not only think of the advantages of buying a franchise, but should think about creating a model that can be used and franchisee.

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Cross Country Differences in the Network Capability Development of Entrepreneurial Firms

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ABSTRACT

Focusing on the micro-brewing industry in Ireland and Belgium, the purpose of this article is to report the findings of a study designed to address the cross country differences in the network capability development of entrepreneurial firms. A rich literature supports the idea that networks are important for small, entrepreneurial firms. This paper adds to this extant literature though profiling the factors impacting the development of network capability and in doing so, will takes a step towards considering the cross country similarities and differences of such factors. The empirical research entailed semi-structured interviews with eight micro brewing entrepreneurs and small businesses in Munster, Ireland and six micro-brewing enterprises in Limburg, Belgium comprising a total of 21 hours of interview data. Using multiple levels of analysis and greatly facilitated by culture, findings suggest that the Belgian entrepreneurs are more developed than the Irish entrepreneurs in terms of network capability development. Past network experience, information sharing and joint problem solving represent some of the factors found to facilitate network capability development. Conversely, a desire for control over decision making and a lack of knowledge sharing inhibits network capability development. This paper contributes to a clearer view of network capability development and has implications for practice, academia and policy as inhibitors to the development of network capability must be addressed to ensure continued survival and growth for our entrepreneurial base.

Keywords: Network Capability; Entrepreneurship, Micro-Breweries; Ireland; Belgium

Introduction

The purpose of this article is to report the findings of a study designed to address the cross country differences in the network capability development of entrepreneurial firms. A rich literature supports the idea that networks are important for small, entrepreneurial firms. Network capability, defined as a firm's ability to develop and utilize inter organizational relationships to gain access to various resources held by others (Walter, Auer, Ritter, 2009), can assist entrepreneurs to overcome some of the contextual challenges that characterize them. Many of these characteristics stem from the relative size of the entrepreneurial firm and include; resource constraints due to both liabilities of newness and smallness (Baum, 1996; Stinchcombe, 1965); dependency on a small market, lack of specialist marketing expertise (Carson, 1985); a lack of finance and difficulty in accessing raw materials (Mumbula, 2002);

and a 'survival mentality' (Hankinson et al., 1997) characterised by 'firefighting' in their day-to-day activities (O'Donnell, 2004) emanating in a lack of long-term strategic planning. Such constraints can be overcome through external network ties enabling the entrepreneurial firm to grow and survive through bringing opportunities and resources into the firm (Hite, 2005; Lechnera et al., 2006). That is, the network approach posits that firms can access resources and capabilities through their interconnected networks and interfirm linkages (Gulati, 1999).

As firms must build rather than buy capabilities (Teece, Pisano, and Shuen, 1997), network capability is not inherent but rather is evolutionary in nature. This suggests that not all firms will develop network capability at the same pace or in the same manner. Yet there is a scarcity of research illustrating why this is the case. Given the perception that relations between firms are important for entrepreneurial effectiveness coupled with the contextual challenges faced by many entrepreneurial firms, it seems prudent to address the factors affecting network capability development. Focusing on the micro-brewing industry in Ireland and Belgium, this paper will address this critical research gap profiling the factors impacting network capability development and, in doing so, will take a step towards considering the cross country similarities and differences of such factors. For this paper, multiple levels of network analysis are used to assess the research question which will give a deeper, richer portrait and allow for a more integrated inquiry.

The paper begins by providing the context for the paper, both the microbrewery industry and country contextual factors for Ireland and Belgium. The motivation for the entrepreneurial firm's engagement in network capability development processes is outlined and the rationale for employing network analysis at a multiple levels. A multilevel framework for analysing the factors that impact the development of entrepreneurial firm's network capability is presented. A qualitative methodology for the empirical study is employed using semi-structured interviews with eight micro brewing entrepreneurs and small businesses in Munster, Ireland and six micro-brewing enterprises in Limburg, Belgium comprising a total of 21 hours of interview data. Key findings are presented, discussed and conclusions are drawn.

Industry and Country Context

A Micro/Craft Brewery can be largely defined as any brewery that produces less than 30,000 HL of beer annually. Due to the smaller scale of production and smaller batch sizes, the process is more labour intensive as automation of the process would 'impersonalise' the craft itself undermining the ethos of a micro brewery. This scale allows the creation of more wholesome, stylistically accurate, full-flavoured beers that aim to please the discriminating, not necessarily the average, palate. Unlike the large brewers, the focus is not on volume and efficiency, but instead is on taste, balance and quality. Micro brewing in Ireland and Belgium is not an overnight phenomenon and the industry is growing worldwide. In 1983, 43 brewing firms operated in the United States. By June 1997 that number had risen to 1,273 (Carroll and Swaminathan, 2000). Microbreweries around the world are striving to emerge in an industry where currently a virtual monopoly exists. In the American beer industry the market share held by the four largest firms is 80% with craft beer accounting for about 6% of total beer sales (Carroll and Swaminathan, 2000).

The main advantage that they hold over their large-scale competitors is that the process allows for flexibility in adjusting to the marketplace, a marketplace that is becoming more demanding of their beers.

Ireland, an island to the north-west of continental Europe, has been a member of the European Union since 1973. With a population of 4.2 million, Ireland has transformed itself from a largely agricultural society into a modern, technologically advanced economy. In Ireland, within the food and drink manufacturing sector, Ireland has the natural resource base necessary to succeed and excel internationally (Bell and Shelman, 2010) and has a huge range of its own firms in this area. One of the key reasons that Ireland does not have a greater number of international food and drink manufacturing firms may be that they do not actively participate in networks. In addition the sector is growing, with 7 micro-breweries being established in the last three years (see table 2). However, the micro-brewery movement has been slow to take off in Ireland, and accounts for merely 1% of the 494 million litres produced in 2011 (Euromonitor Report, 2012). In recent years the sector has reportedly seen a resurgence of interest from consumers, customers and the media. However, growth has been slow which may be attributed to a lack of network capability as volumes remain insignificant compared with the mainstream beer brands.

Belgium, with a population of 10.7 million people, is a founding member of the European Union and hosts the EU's headquarters. Belgian beer is important in terms of the image of the country, but the economic impact cannot be overlooked. In 2011, there were more than 120 breweries offering a total of over 500 kinds of beer. 1,551 million litres was produced in 2011 and Belgian brewers exported more beer than domestic consumption mainly to France, the Netherlands, Germany the UK and the US. According to Euromonitor (2012), the return of Belgians to their roots contributes to the success of the micro-brewery abbey-style beers, local strong lagers and regional beers often associated with local authentic food. Instead of consuming high quantities of lager like two decades ago, consumers increasingly want a quality experience with beer. This was encouraged by numerous TV broadcast about the local culture of beer sponsored by the Belgian Confederation of Brewers, which is awakening the nostalgia or the curiosity of Belgians for their regional beers. From many years, authentic Belgian strong premium beers have been the fastest growing category in Belgium.

Literature Review

Background

The network concept has been widely employed in entrepreneurship research (Birely, 1985; Elfring and Hulsink, 2003; Chen and Tan, 2009). As their size insinuates a particular vulnerability to resource constraints, entrepreneurial firms are becoming increasingly dependent on external resources and capabilities as they pursue their goals for survival, successful emergence and growth (Jarillo, 1989; Lechner and Dowling, 2003). A widely cited benefit of entrepreneurial networks is the ability to provide "conduits, bridges and pathways" (Hite, 2005, p. 113) or an "entrance ticket" (Lechner and Dowling, 2003, p. 11) to external knowledge and resources. Additionally, the sharing and pooling of resources within a network can lead to the emergence of new resource configurations assisting the firm to respond quickly to environmental changes (Gemünden et al., 1996). However, as noted by Möller and Svahn (2003), network benefits do not come freely, rather they require the development of specific organizational capabilities, network capabilities. Network capability

comprises a firm's ability to initiate, maintain, and utilize relationships to gain access to various resources held by other actors (Walter, Auer and Ritter, 2006; Mitrega, Forkmann, Ramos and Henneberg, 2012). In an entrepreneurial context, network capability refers to the capacity of new ventures to identify, establish, coordinate and develop relationships with different players in the market (Chen et al., 2009). Hence, that the ability to develop the skills to engage in effective cooperation has become a core skill of successful entrepreneurs.

Network Development Factors and Levels of Analysis

To capture the multilevel layers of network capability, the authors used network analysis to provide a framework for a comprehensive analysis of the factors impacting the development of network capability of entrepreneurial firms in an Irish and Belgian context (Lincoln, 1982; Gnyawali and Madhavan, 2001; Ritter and Gemünden, 2003; Brass, Galaskiewicz, Greve and Tsai, 2004; Provan, Fish and Sydow, 2007). Network analysis and properties capture individual network nodes, dyadic interaction, and system or whole network levels which includes industry and environmental relationships. As a research tool, network analysis is valuable for uncovering the patterns of order underlying empirical observations (Knoke & Kuklinski, 1982), thus potentially beneficial in enhancing our understanding of the factors impacting the development of network capability in a cross country context. Network analysis provides a mechanism to bridge micro and macro level explanations of the factors impacting the development of network capability capturing the context of relations within which entrepreneurial actors participate and make decisions. Thus this research examines actors (firm level), their relationships with other actors (inter-firm level) in addition to the network or system of relationships (systems level).

Firm Level

The authors recognise that there has been considerable empirical research into networks and network attributes at a firm level. Given that entrepreneurial networks are often context dependent, experientially based and embedded in and seasoned with the entrepreneur, the first level of network analysis concerns the individual firm and their relationships based on individual characteristics and preferences. That is, at an individual actor level, the personal characteristics and preferences of the entrepreneur has the potential to impact on the development of network capability. Previous network experience would affect network capability development as it has the potential to influence the entrepreneurs' willingness and ability to partner (Dyer and Singh, 1998). Positive network experience would enhance development as they would have experienced the benefits stemming from network embeddedness such as access external opportunities and resources (Hite, 2005), critical information, advice and ideas (Larson and Starr, 1993; Hoang and Antoncic, 2003). An entrepreneurs' growth orientation would play a pivotal role in their orientation towards network capability development. Gartner (1990) highlights networks as a trajectory and model for entrepreneurial firm growth with growth often expressed as an entrepreneurial fundamental. Gray (2006) found that positive attitudes and motivation in relation to growth led to high absorptive capacity in SMEs facilitating the exchange and combination of knowledge in a network setting. Conversely, the entrepreneurs may exhibit an anti-business, 'hobbyist' approach favouring quality of life protectionism over business growth (Morrison et al., 2003; Reddy, 2007). The personal characteristics of the entrepreneur may also impact network capability development.

Extant research focuses on the personal characteristics of the actor as entrepreneur. Early research indicates defining and distinguishing qualities such as; independence, need for control, self reliance, resourcefulness, confidence, initiative and a preference for challenge (McClelland 1961; 1987; Hornaday and Aboud 1971; Timmons 1978; Solomon and Winslow 1988; Hite, 2005). A desire for control stemming from an independent, internally orientated established means of doing business (Nooteboom, 1994) and a strong belief in self-reliance might mitigate network capability development and promote the entrepreneur as a more atomistic actor in the network. Conversely, social and communication skills, product knowledge (Hill, 2001), innovation, responsiveness to change (Wynarczyk et al., 1993), and flexibility (Van Gils, 2000) are useful for network capability development.

Inter-firm Level

At an inter-firm level the nature of the relationships and interactions between firms can impact on the development of an entrepreneurs' network capability. How information, knowledge and resources and activity links are created (Håkansson and Snehota 1989, 1995) can shed light on the factors that may enable or inhibit the emergence of network capability. Therefore, this paper argues that how entrepreneurs connect to other actors including interactions with competitors, customers, distributors and suppliers constitutes a key element the development of network capability. A key factor at this level stems from whether the entrepreneurs operate or have a preference towards operating in a relational or transactional manner within the value chain. Dwyer et al., (1987) discuss the differences between discrete and relational exchange with discrete transactions characterised by very limited communications and narrow content whereas relational exchange transpires over time with each transaction viewed in terms of its history and its anticipated future. In recognising that "no business is an island" (Håkansson, 1989) and entrepreneurs often cannot govern all the relevant resources and activities necessary for their operations, another important factor relates to the level of information and/or resources exchanges by the actors within their relationships and networks. Embedded interpersonal and inter-organisational relationships are viewed as a route way through which emerging entrepreneurial actors gain access to critical strategic information, ideas, opportunities, resources and advice held by other actors (Hite and Hesterly, 2001; Batjargal, 2003; Hoang and Antoncic, 2003; Ramos-Rodríguez et al., 2010). The desire to attain complex, tacit knowledge embodied in people may facilitate network capability development as it involves extensive communication and the building of relationships. Conversely, if the resources required are explicit and available in a in a disembodied form, this may inhibit entrepreneurial participation in networks. The entrepreneurs' view of the competition may affect network capability development. For example, relationships with competitors can give access to temporarily needed resources or lead to the temporary pooling of resources, which should positively influence firm performance (Lechner and Dowling, 2003) and network capability development. This would translate to a sense of community driven by collective goals as opposed to individual ambitions.

Systems Level

In the wider sense of network capability, a firm is connected to a range of other influences which may impact on their ability to develop capability. For example, larger dominant competitors may limit routes to market which have to be accepted by the new entrant.

Major events and festivals, now widely featured in the marketing strategies of different nations (Ritchie and Ju, 1987; Mules 1998; Gnoth and Anwar, 2000) and popular in the micro-brewery world, can act impact network capability development. The willingness of national and local state agencies to engage with the industry can affect network capability development. In addition, a network of firms can form industry associations and lobby groups which can enable collective action and, through participation, access by a firm to industry knowledge and experience. Given that the purpose of this article is to report the findings of a study designed to address the cross country differences in the network capability development of entrepreneurial firms, an examination of the wider environment including cultural factors is imperative. Hofstede (1980) defined culture as how people think and behave as a society highlighting how countries' cultures differed along four dimensions: power distance; masculinity/ femininity; individualism/collectivism; and uncertainty avoidance. These differences can influence how different nationalities operate in business interactions and may go some way towards explaining the similarities and differences in the network capability development of entrepreneurs in Ireland and Belgium. According to Hofstede (1980) both countries should have similar behaviours along some dimensions due to their closeness in relative cultural dimensions, but differ in power distance and uncertainty avoidance as indicated in Table 1.

Cultural Dimension	Ireland	Belgium
Power distance	28	65
Masculinity/ Femininity	68	54
Individualism/Collectivism	70	75
Uncertainty avoidance	35	94
Long term orientation	43	38

Table 1: Comparison of Cultural Dimensions (Hofstede, 1980)

As can be seen in Table 1, at 28, Ireland is a society that believes that inequalities amongst people should be minimized whereas in Belgium inequalities are accepted suggesting hierarchy as essential (Hofstede, 1980). In terms of relational capability development we would expect a strong desire for control by Belgian entrepreneurs' with information sharing prevalent in an Irish context. Masculine societies are driven by competition, achievement and success (Hofstede, 1980). For network capability development this represents a paradox whereby on the one hand a strong desire for growth may enable NC development as firms strive to access the resources and capabilities external to their organisations necessary for growth whereas a desire to supersede the competition and become the 'best in their sectors' would limit relationship development. Both Ireland and Belgium rank highly as an individualistic culture which, according to Hofstede, in the work environment translates to work being contract based with autonomy favoured, inhibiting the development of network capability. Low uncertainty avoidance would make Ireland the more creative nation, embracing new ways to approach problems which may include joint problem solving, indicative of network capability development. However, both countries are more focused on a short term orientation whereby immediate goals may surpass willingness to make short term sacrifices for long term network results. Although an extremely valuable framework for cross country cultural analysis, Hofstede's research was conducted within an etic framework, applying a common framework across a variety of situations. For network capability development, as can be seen by the preceding discussion, the results are ambiguous and paradoxical. Therefore, this paper employs data collected from an emic perspective to compare network capability development from two different countries.

Methodology

Research Design and Data Collection

The core aim of this paper article is to report the findings of a study designed to address the cross country differences in the network capability development of entrepreneurial firms. Taking the view of entrepreneurial capabilities as a process (Gartner, 1985; Jack and Anderson, 2002), process research clearly fits this research question. The literature review identified three levels of analysis to provide a frame of reference to understand the factors influencing the development of network capability. Semi-structured interviews were utilised in this research both in the Irish and Belgian context with the aim of developing an understanding of the respondent's world (Easterby-Smith et al, 2002:87), in particular their network capability development. Semi-structured interviews were conducted with 8 Irish entrepreneurs and 6 Belgian entrepreneurs. Each participant was interviewed for approximately 1.5 hours with 21 hours of interview data collected in total. Each interview was conducted with the entrepreneur. This was deemed important by the authors as, due to the nature of the exercise, they were the actors who could make immediate decisions within the company and were fully responsible for the firm's network activity. Regarding the Belgian micro-brewers, each interview was conducted in Limburg at the owner's premises. Due to the distance involved, the authors made comprehensive preparations prior to the trip. They studied each breweries website and obtained detailed company information to understand the operations of each company. A series of issues to be explored with each entrepreneur was devised prior to interviewing (Patton, 1990:280). The question structure was loose, allowing for variations to emerge on a case-by-case basis. All of the interviews were taped and transcribed immediately following the interviews. Documents attained for the purpose of this study included company and product brochures, presentation materials, business plans, newspaper articles and company information on websites. Following the interviews, this information was analysed in conjunction with the interview notes to ensure consistency with the findings. The diversity of sources facilitated the validity of the network capability development processes through triangulation (Yin, 2003).

Participant Selection

Eight micro-brewery entrepreneurs, comprising the whole network of micro breweries in the Munster province of Ireland, participated in this study. Six micro-brewery entrepreneurs from Limburg, Belgium, participated in this study. We initially contacted 8 potential micro-breweries in Limburg but one refused to participate in the study while it was not possible to interview the other due to language barriers. The researcher was aware that access could present difficulties within a Belgian context so ensured that the entrepreneurs were located within a 60 km radius of Hasselt to minimise travelling distance. This follows Yin who stated "In general, convenience, access and geographic proximity can be the main criteria for selecting cases ... allowing for a less structured and more prolonged relationship to develop between the interviewees and the case study investigator" (Yin, 2003: 79). Entrepreneurship is often defined in terms of the characteristics of the decision maker within the firm, in particular their personality traits and socio-cultural traits (McClelland, 1961; Kets de Vries, 1977; Greve and Salaff, 2003). Although seven of the Irish participant firms and three of the Belgian firms have been established for more than three years (see table 2), based on their core characteristics such as risk taking (Palmer, 1971; Timmons, 1978; Welsh and White, 1981; McClelland, 1987), being innovative and creative (Schumpeter, 1934; Harwood, 1982; Drucker, 1985; Gibb, 1987), and adaptive to change (Drucker, 1986; Naman and Slevin,

1993), the sample can be classified as entrepreneurial. An overview of each entrepreneur is outlined in Table 2. Firm A-H represents the Irish brewers, Firm 1-6 the Belgian.

Firm	Employees (E)/ Partners (P)	Age	Education	Years in business	Raison D'Être	Export	Experience	Brew P/Y	Type of business	State Funding
A	2P	32/34	Accountant/Engineer	1	Hobby	No	Course in UK	3000 HL	Brewery	Yes
B	3P	55	Artist/Publican	3	Hobby	No	Course in UK	190HL	Brewery/Pub	Yes
C	2P 10 E	40	Builder	1	Suitable site	No	Course in Irl	5500 HL	Brewery	Yes
D	4P 1E	38	Multi media and quantitative surveyor	2	Hobby/Unemployed	No	On job	2800 HL	Brewery	Yes
E	1P/2 E	42	Publican	12	Chance	No	On job	6000HL	Brewery/Pub	Yes
F	2P	37	IT	2	Hobby	No	UK brewery	1,000HL	Brewery	Yes
G	1P 1E	42	Fitter	3	Hobby	No	Irl Brewery	1000HL	Brewery/Contract Brew	Yes
H	1P	58	Business diploma	1	Hobby/Differentiation	No	On job, brewery supplier	260 HL	Brew pub	Yes
1	2P 4E	45	None	19	Family	Yes	On job	2600 HL	Brew Pub	No
2	2P	48	Mechanic	1	Hobby	No	On job	160 HL	Brewery	No
3	2P 100E (part-time)	50	Economics/Marketing	1	Business	No	On job	3,500HL	Brew Pub	No
4	2P, 2E	52	None	14	Hobby	Yes	On job/other brewery	3,000HL	Brew Pub	No
5	1P	45	IT	13	Family	Yes	Brewing Course	650 HL	Brewery	No
6	3P 3 E	37	Business	1	Family	Yes	Brewing Course	3,000HL	Brewery/Contract Brew	No

Table 2 Summary Description of Participating Entrepreneurs

Data Analysis

Data for this study was collected over an eight month research period. The authors used the network approach to analyse the factors that may enable or inhibit entrepreneurs to build network capability. The logic of the network perspective is that the firm or entrepreneur cannot be viewed as an autonomous, self-reliant actor (Zaheer, Gözübüyük and Milanov, 2010). It posits that firms access resources and capabilities through their networks of inter firm linkages (Gulati, 1999). The network approach is valuable for gathering data that identifies the type of relationships between entities and network analysis is useful for uncovering the patterns of order underlying empirical observations (Knoke and Kuklinski, 1982). Network capability cannot be built in isolation by the entrepreneur; instead the emphasis is on identifying the evolution in orientation from an individual to more collective orientation.

Therefore, multiple levels of network analysis are necessary to assess the research question and provide a deeper, richer portrait and allow for a more integrated inquiry. As can be seen in Table 3, at an individual firm level, the key indicators of network capability development include; previous network experience; growth ambitions; a desire for control and an independence mentality. At an inter-firm level the nature of the relationships and interactions between firms can impact on the development of an entrepreneurs' network capability. This is indicated by whether the entrepreneurs showed a preference for relational or transactional exchange, and the level of information and knowledge shared within the network. The entrepreneurs' view of the competition could translate to a sense of community driven by collective goals as opposed to individual ambitions enabling network capability development. At a systems level, the use of complementary firms for innovation would influence network development. In addition, as can be seen in Table 3 and outlined in the literature review, the structure of the industry, the willing of government to support the industry, festivals and industry associations also have the potential to impact on the study.

Level of Analysis	Network Capability Development Indicators
Firm Level	Previous network experience; growth ambitions; a desire for control; and an independence mentality
Inter-firm Level	Relational or transactional exchange; information sharing; knowledge sharing; sense of community
Systems Level	Industry structure, use of other complementary firms in innovation, festival participation, government intervention industry associations

Table 3: Factors affecting Network Capability Development

NVivo, a software tool, was used to facilitate the organisation and analysis of documentation and interview data. Given that process and qualitative data has been described as “messy” (Langley, 1999: 691), NVivo acted as a support system to assist in managing and analyzing the large volume of complex data and rearranging the data into smaller coded groupings to facilitate insight, comparison, and theory development (Strauss and Corbin, 1990). NVivo was used to further analyse and describe the individual entrepreneurs and facilitated a cross-country comparison of the factors impacting network capability development.

Findings

Firm Level

The first set of factors which have an effect on network capability development are outlined in table 3. Only one of the Irish brewers had previous network experience in the industry as opposed to all of the Belgium brewers. This impacted on the network capability development in an Irish context as experience enabled the brewers in seeing opportunities and benefits emanating from engaging with networks: *“In Canada the brewers didn’t see themselves as individuals; they saw themselves as an organisation against a much larger organisation, Coors” (ENT G).*

This entrepreneur was frustrated as the other brewers' lack of experience as it prevented him from building valuable connections with them: *"I was trying to convince them to club together and look Heineken as the competitor but they failed to see that they failed to see that, they absolutely failed to see that"* (ENT G). Conversely all of the Belgian brewers had network experience in the micro-brewing sector mostly rooted in culture and family traditions: *"My grandfather started a beer business 50 years ago so I have grown up in the industry"* (ENT 6); *"brewing in some shape or form is in my blood"* (ENT 5); *"I have come from came from four generations of brewers"* (ENT 1). Another, without family connections, had been employed in the industry for 24 years so had built up worldwide connections which greatly facilitated the successful launch of his new brewery (ENT 3). Regarding culture, the strong tradition and vibrancy of the micro beer sector facilitated the entrepreneurs in gaining positive network experience. Clear opportunities and benefits that stemmed from connections included assistance at time of set-up, family recipes and access to a large supplier and distributor network.

The findings suggest that a lack of business ambition and vision can inhibit entrepreneurial network capability development. Six of the Irish entrepreneurs presented no growth ambitions inhibiting their participation in networks. For some, the business was viewed essentially as craft venture: *"For me it is more about the craft than the business"* (ENT B). This was similar to ENT 2 in Belgium who showed fidelity to the business as craft as opposed to the newer automated brewing techniques. Regarding growth he noted: *"We would need to be brewing 80,000 –100,000 litres per year to pay one person to give up their job. It would then turn into a normal, all day job and would get boring after two weeks"* (ENT 2). From an Irish perspective, lack of growth ambitions was also indicated by local market scope, for example, ENT G decided that they would not sell their beer beyond a 30km radius from their brewery. For the most part the Irish participants noted that they had a preference towards growing *"slowly and organically"* (ENT B). This was evidenced by the fact that they had no immediate desire to export and promote their craft beer internationally. As was noted *"we have no real interest in exporting, we have been approached a couple of times but it has amounted to nothing"* (ENT A) or *"we might in time, but not yet"* (ENT D). Some of the rationale for this was related to financial and physical resources such as bottling facilities but the major reason was the restricted ambition and vision for the business and the leap of faith it would require. Conversely, all of the Belgian breweries were engaged in extensive exporting within Europe and for some to the US and Japan. This may be attributed to more relaxed export legislation and culturally driven through their physical proximity to the rest of Europe. The micro-brewery sector is time-honoured in Belgium and recognised distributor networks for the product have been long established. Additionally, language barriers posed no problem whereby he entrepreneurs spoke multiple languages fluently.

The Irish entrepreneurs had a preference towards independence in their operations with a clear desire for control over their decision making inhibiting network capability building. . For example, when asked would additional partners be taken into the business to relieve some of the resource pressures common responses were: *"NO, NO NO"* (ENT B) and *"NO. We will always work on our own. I am headstrong. I will only do it my way"* (ENT E). This desire for control was indicated in many of their other operational decisions, for example, in procurement when asked would they come together with other brewers to lessen delivery charges and lower prices through bulk buying the most common response was: *"No, we like to be in control of when our product arrives, how much we buy etc. As well as that it would take a huge amount of co-ordination, it would not be worth it"* (ENT F). Control and independence did not characterise the Belgian breweries.

For efficiency in procurement processes some of the entrepreneurs combined the purchase of supplies and shared distribution. *“Another brewery will deliver our beer for us outside the Limburg region”* (ENT 2); *“I only start deliveries when my van is full. I will deliver beer for others”* (ENT 5). Five of the entrepreneurs in Belgium rely on each other to complete the beer making process, again showing a lack of independent mentality. For example, two of the brewers buy one of their beer varieties from another micro-brewery and put their own label and branding on it. A further two outsource the majority of their production and bottling. In Ireland recipes were hoarded with care showing a lack of trust: *“We would never share information about our mix of ingredients, definitely not”*; *“I would never share my recipe”* (ENT E; G). In Belgium, the brewers were more open regarding their recipes and techniques, they shared recipes and as ENT 1 noted; *“the other brewers can take some of our beer to experiment with”*. This may be due to the fact that the sector is more established in Belgium and each brewer has carved a niche in the market. Specialisation in the craft sector was evident whereby the brewers produced very different products and focused on either organic beer, herb infused beer, mainstream beer or strong ‘hoppy’ beer. In addition, due to the maturity of the sector and the strong craft beer culture in Belgium, the customers have a more fine tuned taste palate to differentiate between beer styles making the entrepreneur’s products more complementary than competitive. In Ireland, customers are less sophisticated operating in a sector that is striving to gain awareness and momentum. As ENT B noted: *“The Irish palette is bland. If you don’t sell Heineken or Carlsberg you don’t exist”*.

Inter-firm Level

The factors that impacted the development of network capability at an interfirm level are outlined in table 2. Within Information sharing with members of the network enabled network capability development but did not translate into more detailed knowledge sharing or joint problem solving. The information that was shared was explicit, not complex and easy to transfer, hence did not necessitate embedded relational ties. The Irish brewers liked to share information that they had learned through experience. For example, one brewer noted that he met a novice brewer at a festival recently who was meeting a distributor with the hope of outsourcing that side of her business. He stated, *“I told her that the distributor had a bad reputation and not to use them, I knew them from old and the tricks that they had pulled”* (ENT G). Small pieces of information like that for a new entrepreneurial company are hugely important. For the brewers in business less than three years, general information was very useful for answering questions and solving minor problems, however the information could be found out in numerous alternative ways. For example: *“Other micro-brewers have helped us sort out problems in relation to cooling, yeast issues, sourcing, raw materials, dealing with suppliers, that sort of thing”* (ENT F). Financial savings were also made following information sharing, *“We have received advice on what equipment we can use and installation which has helped us to save money”* (ENT A). Information was also shared regarding suppliers with one brewer stating *“I have recommended suppliers to a lot of the new guys”* (ENT G). They seemed willing to help each other out when problems presented themselves which is evidenced in the following quotes; *“We sell our pints using a pump system. If I was having trouble hooking it up, I would call another brewer”* (ENT D); *“Sometimes a bar will get one craft beer in. If it goes well they will sell more craft beers. So we might share information about good customers. Some bars in Dublin are getting really into the craft beer scene”* (ENT C); *“We are often on the phone to other brewers asking for information about a customer who is slow to pay to see if they have had a similar experience with them”* (ENT H).

Although beneficial, no relational investment was made between the brewers. Some useful information was shared between the brewers and their equipment suppliers: *“The guy we bought the brewery from came over, did two brews, gave us recipes, ideas and was at the end of the phone for the first few months giving us advice and dealing with problems”* (ENT O). Therefore, a certain amount of tutoring accompanied the purchase of equipment whereby a week or two was spent with a master brewer providing an *“intense education”* (ENT O). However, these initial intense relationships did not develop beyond what was required at the time.

Similarly, information was shared between the entrepreneurs in Belgium. However, more complex detailed knowledge and joint problem solving was evident among the micro-brewers. One brewer noted that he was experiencing problems with the flavour of his beer. To this end another entrepreneur and his master brewer engaged with the firm until the problem was solved, *“crushing the grains more finely and adding an extra ingredient to assist the sugar in fermenting”* (ENT 2). The Belgian entrepreneurs also placed emphasis on building tight relationships with their customers, particularly in the export market, to ensure that problems that arose could be jointly solved. They invested time and energy travelling across Europe and attending international beer festivals. Co-innovation was prevalent in the supply chain whereby some of the breweries co-produce beer with retail customers jointly sharing inputs and profits. ENT 5 engaged in a coproduction with a farmer who supplied products for his beer. *“He liked our beer and wanted to make a product with us using his herbs so we started cooperation for production. We make the beer here and at the end of the production process we put some of his herbs in”*. Another stated that *“although we do not co-invest in other breweries, we have given some of them recipes and have helped them to launch their own beer”* (ENT 6). Clearly, a stronger culture of cooperation exists amongst the Belgian brewer than their Irish counterparts.

For the most part, within Ireland, relationships with suppliers were weak and transactional, with few if any relational elements. For the participants, the bulk of their raw materials had to be bought outside of Ireland, generally from the UK and Germany. Although they strived to buy locally, no producer of the raw materials existed. As one participant noted *“Even with a critical mass of micro brewers forming in Ireland no real support industry exists. However, as more and more micro breweries come on board we hope that a support industry will grow around us”* (ENT A). Malt was available at one point in Ireland for the micro-brewing industry; however the company supplying them since signed an exclusive deal with a large brewery preventing them from obtaining it locally. This almost doubled the price of the raw materials for the industry as they were faced with shipping costs and, in some cases, exchange rates. Significant supply chain efficiencies could have been made in an Irish context through joint procurement, however, in many circumstances the entrepreneurs ensured that they did not use the supplier as others, again showing a competitive flavour. For example, each micro brewery went to great lengths in sourcing their bottles and made sure that they stood out clearly from the others. According to ENT D: *“we want our bottle to be unique, to stand out in an off-licence. We want it to be very different to everyone else’s.”* This transaction based approach to business led to little added value through information sharing with suppliers: *“Suppliers in this industry could be useful but they are not”* (ENT A). Interactions for the most part were transactional and not long-term or embedded; *“If somebody offered the exact same product at a lower price we would switch”*; *“Suppliers are a different kettle of fish entirely. It is very difficult to engage with them”* (ENT F); *“We like to switch around our suppliers on a regular basis”* (ENT D). However, the participants are clearly loyal to the suppliers that could influence the flavour of their beer.

“We are loyal to the English hops suppliers as we really need them. We also buy some raw materials from America. With the specialty stuff you need to have good relationships in place as the difference could be huge with the taste of the end product if you lost one of them” (ENT E). The participants also sought quality in their supplies and stated that they didn’t necessarily opt for the cheaper raw materials. *“The quality of ingredients is important. We buy the most expensive malt but it works as for us, quality is more important than price”* (ENT B). Only one of the brewers were loyal to their suppliers and stated *“We have a good relationship with our suppliers and would not change them”*. They enjoyed having a social relationship with their suppliers and felt that as a result they benefitted in terms of delivery times and price. *“A connection with suppliers is very important. If somebody asks me where I get my ingredients from I can tell them in detail – At our level it is very important”*. *“Suppliers – I have a good relationship with them. I know them, I speak to them, I have met them so can see their faces – there is a connection – I know each of my suppliers personally – I’ve been to their plants – chit chat with them – I know where my raw materials come from”* (ENT G).

The Belgian brewers engaged in relational exchange with the majority of their suppliers. For them, quality was more important than price and for the most part, they strived to buy as many supplies locally as they could. None of the brewers changed suppliers on a regular basis stating that they were supplied by *“the best in Belgium”* (ENT 3). In terms of more exotic hops, purchasing from *“the USA, Australia or NZ we only use one supplier and we get to know them pretty well. We might consider switching if the price was a bit better but it involves a lot of work to find one so we haven’t changed. The search process takes time* (ENT 6). Similarly ENT 1 *“We try to work with local people as much as we can but our specialised beer is made using American hop. We also work with hops from Hungary. We use the same importers all the time. We tell them what kind of hop and malt that we want and they source it. We do not deal directly with the suppliers themselves, they are an agent. That means we do not usually know the people who grow the materials but it more efficient”*. In terms of culture, the moderate climate and the nature of the soil are particularly favourable for the growth of the barley and hops, essential ingredients for beer production. Additionally, the primary component of beer, water, is supplied by the numerous mineral sources available in Belgium and in some parts of Belgium; the air directly provides the wild yeasts that are used to produce beers of spontaneous fermentation. Locally grown raw material suppliers facilitates relationship building as opposed to Ireland where the entrepreneurs felt that suppliers were *“too disparate and geographically spread to engage with”* (ENT C). In addition, standardised bottles and packaging has been developed in Belgium for the industry for ecological purposes and hence three of the breweries combine bottle purchases for to gain economies of scale.

Within Ireland, generalised goodwill towards one another is evident throughout the findings with the entrepreneurs helping each other out whenever the need arises. They were friendly towards other micro-brewers and felt a common bond against the giant multinational brewers and to nurturing a new industry: *“We are all going through the same struggles but we do help each other out”* (ENT A). The brewers also maintained friendly relationships with their retail customers, and, in some cases, with suppliers: *“I know most of the brewers... We share supplies with...if they run out – we help each other out”* (ENT D); *“Good healthy competition and fun – there is real camaraderie, I really believe that, maybe I am being naïve”* (ENT B); *“...have enjoyed a lot of loyalty from them over the years...They are interested in what we are doing and like to talk about it, they like to take a sense of ownership in it, they identify with what we are doing”* (ENT A).

None of the brewers described relationships that were close or special with other brewers with relationships generally kept at arms' length and not developed for mutual value: *"An event is okay in terms of working together – working together in business would be a different ball game altogether. We all have our own ideas. ...We will always work on our own"* (ENT E). Another likened a network of brewers as *"like trying to herd cats"* (ENT A). Another noted that *"There were too many maverick, entrepreneurial individuals there to work together"* (ENT E). One of the entrepreneurs likened it to sibling rivalry *"like watching what your sisters and brothers are up to – wishing them well but wishing yourself to be better"* (ENT A). The lack of interest in more embedded relationships characterised the entire sample except one brewer who operated out of altruistic motivation and had built significant network capability with other brewers and with his customers.

A sense of community was also prevalent amongst the Belgian entrepreneurs. According to ENT 3 the brewers are *"friends at one level, but fighting for hectolitres all the same"*. ENT 1 similarly stated *"At the top level we are one big family, really close friends as we really know each other. Our representatives compete on the ground but they are also friends who competitions between them to see who sells the most beer. There are many family links among the brewers as well"*. They noted that they could call on each other if they ran out of raw materials; however it rarely happened due to the plurality of suppliers available due to favourable conditions towards growth and the lack of time it took between ordering and delivery. Multiple local outlets were also available for buying raw materials in small quantities, largely due to the widespread culture of the "hobby" brewer. Such outlets were described as *"having a wide variety of hops and malt but more expensive than their larger counterparts"* (ENT 4). The brewers also developed mutual value through the co-production of beer. For example, three brewers came together to make a particular cheery flavoured beer. ENT 1 described the reason for the collaboration: *"We were not too happy with our first cherry beer so we decided to work with another brewery to make a much better beer"*. Culturally, the Irish and Belgian brewers had a different view of their competitive space and branding which impacted on their network capability and willing to work together. For example in terms of exports ENT E stated: *"We are all out looking for business. We know our beer is good quality and we can charge for this. If our beer was sold beside another Irish craft beer that was being sold cheaper the distributors would all push the cheaper beer. We want our product to be unique, to stand out as a distinct brand in an off-licence. We want it to be very different to everyone else's"*. The Belgian entrepreneurs simply noted that *"Belgian beer is a great brand"* (ENT 1; 4; 5) and trusted the consumer to differentiate between their individual products.

Systems Level

The structure of the industry facilitated the development of network capability in an Irish context. The main reason for the development of interconnected relationships between the entrepreneurs in the sector is that, at the moment, they do not perceive each other as being competitors. The reasons for this are many. They noted that *"each of our beers is very different"* (ENT C) indicating that they have all carved out their own niche in the market. Others noted that the main reason that competition is not tight is because they are *"geographically spread so we all have our own little piece of Ireland"* (ENT E). Clearly, the participants seemed to focus on larger corporations when defining the competition. *"I would argue that our competitors are Guinness and Heineken, the big guys. When we go into the pub we want to go in because they are taking a big brand."*

At the moment the industry is so fidgeting that we try as much as we can to work together to raise awareness of the whole industry rather than trying to swipe each other's customers" (ENT A). Clearly, gaining awareness for the industry as a whole and increasing the share of the micro-beer market in Ireland was a key factor enabling network participation. As stated *"We are achieving a little more mass in the market collectively. We feel that if somebody picks up a bottle of micro brewery beer from a shelf it is as much a win for us as whoever made the beer, as they have managed to create awareness for a craft beer as a viable product"* (ENT F). However, the participants noted that as the industry grows the likelihood is that they will start to view each other as competitors noting that as collective marketing share increases *"It will come down to survival of the fittest"* (ENT F). Another compared the industry to sibling rivalry stating that: *"it is similar to watching what your sisters and brothers are up to; wishing them well but wishing yourself to be better"* (ENT A). The Belgian brewers seemed to consider the larger breweries as a different sector in lieu of competitors and rarely referred to them in the interviews. Their breweries were not as geographically spread as the Irish, but instead of that factor increasing competition, it seemed to bring them closer together as friends. *"Here in Limburg there are only a few breweries. We work well with our Limburg colleagues but also with the brewers in the rest of Belgium. There are no quarrels, feuds or hostile takeovers. In fact our master brewer just set-up his own business and continues to work with us"* (ENT 1). The Belgian brewers felt that their beers were unique and culturally, the history and story behind their beer was as important as the beer itself. *"Beer needs to tell a story, it needs to be a real experience"* (ENT 4); *"passion and history are important for the brewing process"* (ENT 3); *"our beer is for people who would like to discover new beers and beer connoisseurs"* (ENT 6); *"beer and emotion go hand in hand, the correct setting for the story is important"* (ENT 1). The micro-beer market is also increasing in Belgium and the tendency for the customer is to drink less beer that is made to a higher quality. As ENT 4 noted: *"At the time we acquired this brewery the market for specialty beers was not as large as it is today. There has been a revival of the small beers in recent years. People are not drinking as much beer, so if they drink it must be something special. That is the niche that we all operate in"*.

Both the Belgian and Irish entrepreneurs engaged in complementary innovation. Innovative activity occurred between an external partner and a micro-brewer where the collaboration involved incorporating the beer into the partner's product and co-branding. For example, beer flavoured crisps, sausage meat, pies, bread and casseroles were all cited. In another case a brewer approached a spice company to co-design the right spice for a new beer. In some other cases, it is just a matter of using another company's product as an ingredient and not having any major engagement whilst still offering the partner name recognition, or just simply bundling the beer with other product, for example, in one case, in a Christmas hamper. The use of complementary firms in innovation, in particular food firms, was dyadic in nature and tended to emerge opportunistically although it does provide access to a node in another connected net. For the Belgian brewer and customer, food and craft beer are a natural combination. In fact one of the brewers described beer as *"food for the country"*. Each of the Belgian entrepreneurs produced their own cheese with local farmers highlighting that *"beer and cheese for the Belgian is like wine and cheese to the French"* (ENT 5). However, although the same farmers were engaged in the innovation process for many years, no co-investment was involved. As ENT 2 stated: *"He knows nothing about making beer and I know nothing about making cheese. We are both sticking to what we are good at"*. Other products co-produced in Belgium included bread, sausage meat, pate and chocolates.

In Ireland, Government sponsored events represented a solid factor enabling the entrepreneurs' development of network capability, particularly enabling the formation of a network of micro-brewers. Festivals operated and run by Bord Bia (The Irish Food Board) were said to *"cost nothing"* and *"are a good promotional tool"* (ENT F). The participants noted that coming together as an industry at events helped to raise awareness of the industry as a whole and at an individual level assisted them *"to get our name out there"* (ENT C). The festivals also served to correct misconceptions that Irish craft beer was more expensive than the better known brands with the point being *"to encourage people to taste many types of beer, to enjoy beer, not to get really drunk"* (ENT B). The use of the brewing network as a promotional tool at festivals also acted as an enabler. The collective mass of brewers led to free publicity which in turn enhanced awareness of the industry as a whole. The following quote captures the benefits of using festivals as a key promotional tool enabling entrepreneurial participation in networks. *"If you go to a newspaper as an individual you can take an advert out but if you go to the newspaper and explain that the Irish microbrewers are having an event then you get a lot of free publicity out of it. It works very well that way as people say wow when they read that there are 17 of us. You can therefore promote yourself in a better manner at a lower cost"* (ENT G). All of the participants attended the majority of beer festival around the Republic of Ireland which enabled network participation as positive experiences ensued. Within Belgium, the individual brewers were responsible for organising festivals and each microbrewery had their own festival. This was facilitated by more relaxed licensing laws whereby festivals could be held outdoors at markets or at the brewers' premises regardless of having a publican licence. As was noted: *"there can be 200 festivals a year in Belgium so it is impossible to go to them all"* (ENT 5). The Belgians placed more emphasis on travelling to European festivals than the Irish which they deemed very useful for making and meeting export contacts. Again, this could be attributed to the relative ease at which they could travel to neighbouring countries with their beer due to their location within Europe.

The Irish entrepreneurs engaged with the state and many benefits ensued. All of the Irish entrepreneurs received funding towards their equipment and machinery without which many of them stated they would not be operational. However, the participants noted that the grants received required a lot of paperwork which was a massive time consuming process. Funding was also allocated in order to assist them in the development of a website and for branding purposes. Conversely, within Belgium, no funding was given to the entrepreneurs by the state and each brewery was responsible for the full cost of set-up. They stated that support was available in the French speaking region of the country: *"You get 60% finance from the French speaking of Belgium which is 15 miles away. Instead of helping us at this side, they are making it more difficult with all of the controls that they are putting in place"*. Massive regulations have been put in place in Limburg by health and safety officials to ensure that tight controls are in place for the brewing process. This has led to Belgian breweries becoming computerised and fully automatic which, for two of the entrepreneurs, takes from the craft and culture of authentic Belgian beer.

All of the Belgian entrepreneurs are members of the Belgian Brewers Association, a century old tradition, who meet once a month in Brussels. The entrepreneurs noted that the meetings are useful to: *"talk about all the new things that are happening in our world, new rules, exports"* (ENT 1). Another noted *"all the problems that we are having are put on the table and everybody discusses them, we share experiences"* (ENT 5). Membership is open and the price for joining depends on hectolitres produced so no one business is excluded. The association facilitates the development of network capability development as they take responsibility for promoting the sector as a whole.

For example, they produced a television series whereby each microbrewery was visited by English actors, and produce a lot of promotional materials and brochures. For the entrepreneurs this was deemed essential as they do “not have the same budgets for marketing as InBev” (ENT 3). The Irish brewers are at the early stage development of an industrial association. However, unlike the Belgians, the core aim of the group is not to further develop relational capability, rather to lobby government to gain further funding, was to keep their tax status, to try and change the laws on licensing, and to position their network in relation to the core health and alcohol debate. As noted by ENT A: *“If we work as a unit we have some voice”* (ENT A).

Discussion and Conclusion

Findings from the empirical study are consistent with previous works by Powell, Kuput and Smith-Doerr (1996) and Teece, Pisano and Shuen (1997) which illustrate the complexity of the network capability development; capability development is not automatic and takes time to build. It reiterates the importance of acknowledging and addressing the factors in Table 3 to overcome the inhibitors and further develop the factors enabling network capability development if micro-enterprises are going to be in a position to gain access to network resources. The authors were surprised at the lack of network capability evident within the Irish entrepreneurs. The authors expected information sharing and joint problem solving to be prevalent given their low power distance score (28, Hofstede, see table 1) allowing for flatter organisational structures. However, in keeping with the literature (McClelland 1961; 1987; Hornaday and Aboud 1971; Timmons 1978; Solomon and Winslow 1988) the entrepreneurs’ independence mentality coupled with a strong desire for control posed a significant inhibitor to network capability development. Strong firm boundaries were in place and an individualistic culture, whereby relationships for information and knowledge sharing with external actors were limited by necessity and sales. Conversely, the Belgian entrepreneurs were more open with their information and knowledge sharing and were much further along in their network capability development processes. Again this is surprising given their high power distance score of 65. This may perhaps be attributed to the strong cultural focus of beer in Belgium and its long established lineage as a traditional product. The strong beer culture may also have impacted on growth ambitions in a Belgian context. According to Morrison et al. (1999) in relation to entrepreneurial growth, three key factors are important; intention, ability and opportunity to grow. With the exception of one (ENT 2) the Belgian brewers intended to grow and had witness the growth of other microbrewery brands in the past such as InBev, now the largest producer of beer in Belgium. In keeping with the literature (Lechner and Dowling, 2003), growth from internal sources alone proved difficult for the Belgian participants, but it did not hinder an increase their production levels. For example, the brewers were willing to contract out the production of their beer to another brewer on a regular basis with deep levels of interdependent trust evident. Of the six brewers interviewed, two of the firms outsourced the production of more than 95% of their produce to another brewery in the province and a further two, through a joint collaboration, co-produced one of their major brands. However, the Irish entrepreneurs were not strategically active in their network activity favouring autonomy in their daily operations in lieu of introducing network partners to their business to facilitate growth. They seemed unable to connect and embed their own limited resources to novel resources within the network with collaboration, trust and commitment underlying the process leading to the identification and execution of coordinated solutions to organisational problems (Uzzi, 1997).

Regarding growth, many of the Irish entrepreneurs assumed growth within the sector was not possible beyond a certain level whereas for others quality of life protectionism superseded growth ambitions where they viewed their enterprise from a craft or “hobbyist” perspective consistent with the findings of Morrison, Breen and Shameem (2003) and Reddy (2007). Similar to Gray (2000) we attribute this disparity to the way in which the entrepreneurs view their social and economic surroundings, including the diverse sector specific cultural characteristics evidenced throughout the findings.

The findings support Håkansson & Snehota (1989, 1995) who suggest that firms’ development cannot take place in isolation from the environment with the lack of a network approach to their business models leading to significant inefficiencies in the supply chain. It was surprising within Ireland that value chain activity links and resource ties were not perceived as necessary despite common problems faced by the entrepreneurs. Wider environmental forces such as the virtual monopoly in existence limiting supplies and semi-controlled distribution channels favours inter-firm cooperation within the collective micro-brewery network. However, a direct and individual as opposed to network approach to purchasing and distribution mitigated their strategic choices for creating and capturing value within the network (Shafer, Smith and Linder, 2005). This was clearly not the case in Belgium whereby the entrepreneurs engaged in joint procurement with other breweries to ensure efficiencies in purchasing raw materials in a context where no supply issues existed. In addition the Belgian brewers showed a readiness and ability to jointly produced products to solve common problems that they were experiencing, indicative of emerging embedded ties (Uzzi, 1997; McEvily and Marcus, 2005). This joint problem solving assisted the entrepreneurs to realise the potential benefits inherent in networks participation and enabled their network capability development.

In the Republic of Ireland there is a government policy of encouraging co-opetition in the food sector (Bell and Shelman, 2010) where members of a supply chain are encouraged to both compete and cooperate with each other (Bengtsson and Kock, 2000). This is at odds with current practice as findings suggest that funding for the micro-brewers was allocated on an individual, competitive basis and where training supports were evident, the support agencies purposefully selected non-competing firms. This reflects the high individual score attributed to Ireland by Hofstede (1980). Perhaps greater benefits could be derived from funding allocated at a network level to encourage joint problem solving and address the inhibitors to network capability development. In Belgium, the sector seems to take responsibility for its own marketing (Belgian Brewers Association) and each entrepreneur was responsible for the purchasing of their own equipment. This led to more than one partner being involved in each business and many investors who help to expand the network and knowledge base of the brewer.

This research advances the academic research literature by addressing the factors influencing network capability development and explores the similarities and differences in the network capability development of entrepreneurs in Ireland and Belgium. This is important as findings suggest that it cannot be assumed that entrepreneurs engage in extensive network activity. Both Ireland and Belgium are regarded as a hotbed for entrepreneurial talent and creativity in the food and beverage industry. However, Irish firms have not developed growth trajectories similar to their Belgian or other International counterparts which may be due to a lack of participation in networks. In practice, understanding network inhibitors and enablers may assist entrepreneurs to engage in a process leading to the development of network capability.

Network capability can assist the nascent entrepreneur to overcome some of the resource constraints that characterise them through the development of resource ties and activity links indicative of the markets-as-networks approach to marketing. Extensive empirical testing of the conceptualisation could enhance the reliability of the findings depicted by the authors. Such empirical studies could be conducted in an entrepreneurial context in a different industrial context. Similarly, to conduct this study selecting participant actors from the same core network would lend new perspectives on the conceptualisation and reveal how actors within the same value chain perceive and relate to each other.

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IMPACT OF ASYMMETRIC POWER ON TRANSACTION COST ECONOMICS

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Abstract

This abstract was written as an application for participating in the 6th International Conference on Business Market Management (BMM 2013), Bamberg, Germany, June 20 – 22, 2013.

This research is the preliminary test of the whole PhD research which focuses on how asymmetric power might affect the predictions of transaction cost economics (TCE; Williamson, 1975). This study develops a refutable model on the basis of TCE, relational contracting theory (RCT), and inter-organizational power theory. This model explains the mode of governance, namely formal contract and solidarity, under different asymmetric power relationships: (a) asymmetric power relationships, (b) mutual-dependent relationships, and (c) independent relationships. I test my hypotheses with data collected from 198 selling firms in oil and gas industries in Norway. The results support my hypotheses that under asymmetric power relationship TCE cannot fully explain mode of governance.

Thus, this research's objective is to investigate the ability of TCE to explain mode of governance. TCE (Williamson, 1975, 1981, 1985, 1991a, 1991b) is the leading theory in understanding modes of governance (Coase, 1937). Although TCE has received wide recognition, it has also been subject to criticisms. This research is specifically concerned with two issues: (1) the "scope conditions," which explain the conditions when TCE works well and when it does not (David & Han, 2004: 54), and (2) the incorporation of relational governance in the TCE framework; TCE overstates the transacting party's desirability of market and hierarchical governance and fails to account for the social structure within which exchange is embedded (e.g., Granovetter, 1985; Poppo & Zenger, 2002).

In this study, the scope condition is a type of power in buyer-seller relationship in which (a) one party has relatively high power and the other party has relatively low power, or (b) they are mutually dependent, or (c) they are independent. In different types of power in buyer-seller relationships, partners may make different decision from what TCE predicts.

Power asymmetry occurs when a firm with relatively high power is able to control its exchange partner's decisions and behaviors (El-Ansary and Stern, 1972). In this research, such decisions and behavior pertain to the degree of hierarchical governance (Williamson, 1985) and relational governance (Macneil, 1978, 1980). It is of interest to study the synergy of specific investments and asymmetric power. Specifically, in asymmetric relationships, the degrees of such governance might be lower or higher than usual. Similarly, this research also has an interest in the ability to explain of TCE on mode of governance under the mutual-dependent and independent relationships. Specifically, degree of relational governance may be lower when firms have dependent relationships than when they have mutual-dependent relationships.

Research Hypothesis

To address the gap in the literature and answer my research question, a research model and testable hypotheses have been developed and subjected to empirical testing.

The research model is presented in Appendix. The summary of the hypotheses and structural links in the model are presented in the Appendix.

The first two hypotheses are the baseline hypothesis testing whether the common tenet of TCE framework and the alternative mode of governance are empirically supported.

H1: The degree of specific investments is positively related to formal contract.

H2: The degree of specific investments is positively related to relational governance.

In hypothesis 3 and 4, I elaborate on the relationship between asymmetric power and mode of governance, a topic that McAlister, Bazerman, and Fader (1986), Lusch and Brown (1996), and Shervani, Frazier, and Challagalla (2007) have also empirically studied.

In an asymmetric power relationship, the stronger firms will demand market governance in which it can obtain autonomy and benefit from market competition (Williamson, 1975). They may be able lower the transaction costs even though they employ high specific investments under uncertainty (Shervani, Frazier, and Challagalla, 2007). The stronger party can gain more protection for its assets at risk and more access to its partner's information (e.g., Dwyer & Walker, 1981; Frazier & Rody, 1991; Frazier et al., 1989; Heide & John, 1992).

H3: Specific investments are more negatively related to formal contract when firms have high power than when firms have low power.

A weaker firm might prefer norm of solidarity to govern the relationship because such norm can make stronger firm to work collaboratively. However, the stronger party is likely to avoid such norm and retain its right to use its power to earn unilateral benefits from the relationships at the expenses of its weaker partner (Dwyer & Walker, 1981; Frazier et al., 1989; Frazier & Rody, 1991; Kale, 1986; Roering, 1977; Wilkinson & Kipnis, 1978).

H4: Specific investments are more positively related to norm of solidarity when firms have low power than when firms have high power.

Under mutual dependent relationships, it is easy for firms to develop norm of solidarity. Kumar, Scheer, and Steenkamp's (1995a) bilateral convergence theory suggests that exchange partners with symmetric inter-dependence share common interests and goals. Therefore, they do not engage in opportunistic behavior. Rather, they are likely to employ relational governance that expresses the sentiment of joint responsibility (Cannon et al., 2000).

H5: Specific investments are more positively related to norm of solidarity when firms have mutual dependent relationships than when firms have independent relationships.

On the contrary, when partner firms are independent, they do not share common interests and goals. It is risk for firms to make specific investments without any safeguards because its partner firms may employ opportunistic behavior. Therefore, firms need to use formal contract to govern their exchange.

H6: Specific investments are more positively related to formal contract when firms have independent relationships than when firms have mutual dependent relationships.

Method

Setting, sample, and data collection

The unit of analysis is the buyer-seller relationship. The chosen research context is Norwegian upstream oil and gas (O&G) industry. This industry exhibits the phenomenon of interest to varying degree. This industry typically consists of two types of companies: large buying firms and small selling firms. Buying companies are large oil firms or their big main contractors who purchase products or services from supplying companies or subcontractors. Both buyers and suppliers are external firms that are nominally independent without cross-holdings.

I collected data in three phases. First, qualitative data was collected from specially selected supplying firms in the O&G industry. Second, informants from the relevant companies were identified. Third, a structured questionnaire were prepared and sent out by email.

First phase was to become familiar with the empirical setting, practical use, practical understanding of critical constructs, and the hypothesized relations between them. Phase two was to identify informants in the supplying companies. I had 510 initial contacts from Sunde (2007), Vatne (2007), and own search from the Internet. In this study, managers or dedicated salespersons with in-depth knowledge of the exchange were contacted, as this person is assumed to meet Campbell's (1955) criteria. I collected data from one side of the dyad by firstly contacting the supplying companies through telephone calls, and ask them to select their firm representatives who are knowledgeable and have willingness to be informants.

Last phase was to distribute questionnaires using email. Only 349 prospective respondents agreed to join the survey. After two - four weeks, I sent reminders in case the prospective persons did not complete the questionnaires. The data collection was held from February until November 2012. Completed surveys were obtained in 198 of the 349 cases, resulting in 56.73% response rate.

Observations of 198 can be divided into four groups: (a) buyer dominant relationships with 93 observations, (b) seller dominant relationships with 15 observations, (c) mutual dependent relationships with 57 observations, and (d) independent relationships with 33 observations.

Operational measures

Regarding operational measures, specific investments is independent variable and is defined as the degree to which the assets that support a given transaction and cannot be redeployed easily outside a particular exchange relationship (Cannon et al., 2000; Geyskens et al., 2006). Base of empirical studies (Gulbrandsen, 1998; Heide, 1987; Heide & John, 1990; Joshi & Campbell, 2003) 8 items were used to measure this construct with a seven-point Likert scale ranging from "Strongly disagree" to "Strongly agree".

The construct of formal contract is dependent variable and is defined as the degree to which one exchange partner has ability to develop rules (e.g. dispute resolution mechanisms) and give instructions. Five indicators of formal contract are developed based on Haugland and Reve (2004) with seven-point scale, anchored from "Strongly disagree" to "Strongly agree". Norm of solidarity is another dependent variable. Reliance on solidarity parties have an attitude that success comes from working cooperatively together, not competing against one another. Parties stand by one another in the face of adversity and the ups and downs of marketplace competition (Cannon et al., 2000).

“Solidarity promotes a bilateral approach to problem solving, creating a commitment to joint action through mutual adjustment.” (Poppo and Zenger, 2002: 710). A high degree of solidarity represents a safeguard to both parties because it deters both parties from using decision control in an opportunistic way.

Based on empirical studies (Antia & Frazier, 2001; Bello et al., 2003; Dwyer & Oh, 1988; Heide & John, 1992; Jap & Ganesan, 2000; Lusch & Brown, 1996) four items were used with 7-point scale, anchored by “Strongly disagree” to “Strongly agree”.

Analysis and Results

It is important to establish the validity of all constructs. Accordingly, I followed Anderson and Gerbing’s (1988) two-step approach. I selected to analyse data from the buyer dominant group first, since it is the largest group. The constructs were analysed using confirmatory factor analysis with the help of LISREL 8.7. Items were factor analysed separately for their respective factors to investigate whether items load significantly. Items with loadings less than 0.50 were removed. Then I analysed the full measurement model. The model yielded a $\chi^2_{(59)} = 67.84$, RMSEA = 0.040, CFI = 0.980, GFI = 0.898, indicating a good fit.

Furthermore, I evaluated the constructs in the full measurement models for other four groups, using the same factorial structures used in a group of buyer-dominant relationships. A group of seller-dominant relationships cannot be analysed by LISREL due to small sample size. The full measurement models for other three groups have good fit. A group of all observations received $\chi^2_{(59)} = 85.30$, RMSEA = 0.048, CFI = 0.971, and GFI = 0.938. A group of mutual dependent relationships yielded $\chi^2_{(59)} = 48.16$, RMSEA = 0.000, CFI = 1.000, and GFI = 0.883. A group of independent relationships yielded $\chi^2_{(59)} = 56.445$, RMSEA = 0.000, CFI = 0.930, and GFI = 0.787.

Base models

Hypotheses 1 and 2 are base models and were estimated via LISREL 8.7. This is to establish a baseline against which the added contribution of the effect of asymmetric power. Data from all observations were used in these two analyses. The base model yielded $\chi^2_{(59)} = 82.375$, RMSEA = 0.0448, CFI = 0.972, and GFI = 0.940, suggesting a good fit. The model explains 12.30 percent of the variance in formal contract. Buying firms’ specific investments has a positive relationship to formal contract ($\gamma = 0.347$, $p < 0.01$), consistent with the TCE prediction. However, selling firms’ specific investments has a negative relationship with formal contract ($\gamma = -0.031$, $p > 0.10$). Therefore, hypothesis 1 is partially supported.

Regarding the second hypothesis, the base model explains 8.6 percent of the variance in solidarity norm. As anticipated, both seller’s and buyer’s specific investments have positive relationships with solidarity norm ($\gamma_{seller} = 0.158$, $p < 0.10$; $\gamma_{buyer} = 0.262$, $p < 0.01$). Therefore, hypothesis 2 is supported.

Impact of asymmetric power on TCE

Hypotheses 3 and 4 compare the relationships between stronger firms and weaker firms. Therefore, data from a group of buyer-dominant context was used for testing these two hypotheses, where buyer is the stronger partner and seller is the weaker partner in the relationship.

To be able to compare the effect from sellers' specific investments on formal contract and the effect from buyer's specific investments on formal contract, I (a) made equality constrain between the factor loadings of seller's specific invests and buyer's specific investments, and (b) allowed the error terms between these two variables to correlate. The model yielded $\chi^2_{(59)} = 67.638$, RMSEA = 0.0399, CFI = 0.982, and GFI = 0.898, suggesting a good fit. The model explains 5.8 percent of the variance in formal contract. As anticipated, stronger partner's specific investments are more negatively related to formal contract than weaker partner's specific investments are ($\gamma_{buyer} = -0.016$, $p > 0.10$; $\gamma_{seller} = 0.244$, $p < 0.10$). Hypothesis 3 is therefore supported.

Regarding hypothesis 4, the model explains 2.3 percent of the variance in solidarity norm. Contrary to the hypothesis, stronger partner's specific investments have more strongly related to solidarity norm than weaker partner's specific investments (i.e., selling firms in this context) do ($\gamma_{buyer} = 0.154$, $p > 0.10$; $\gamma_{seller} = -0.080$, $p > 0.10$). Therefore, hypothesis 4 is not supported.

Hypothesis 6 and 7 compare between mutual-dependent and independent relationships, i.e., the case of multiple-group analysis. According to Byrne (1998), I consider two hypotheses: (a) that the number of factors is equivalent, and (b) that structural relations between independent and dependent variables are equivalent.

Testing that the model is best described by a four-factor structure for both mutual dependent and independent relationship groups is a logical starting point in tests for invariance using the LISREL approach (Byrne, 1998). Four factors are seller's specific investments, buyer's specific investments, formal contract, and solidarity norm. Reviewing the fit statistics for this initial model, I conclude that the overall fit is good fit ($\chi^2_{(141)} = 131.71$, P-value = 0.70057, RMSEA = 0.000, GFI = 0.749, CFI = 0.994). These results suggest that the model is most appropriately described by a four-factor model for both mutual-dependent and independent relationship groups.

I then tested for equality constraints related to the factor variances and covariances. In this model, the equality constraints of all factor loadings and entire variance/covariance matrix were tested for their equivalence across groups. Results from the estimation of this model yielded $\chi^2_{(150)} = 141.11$, P-value = 0.68611, RMSEA = 0.000, GFI = 0.733, CFI = 0.998. Because the difference in χ^2 values between this model and the above model ($\Delta \chi^2_{(9)} = 9.4$) was not statistically significant, the hypothesis of invariant factor variance and covariances was not rejected. This mean, I can compare between two groups.

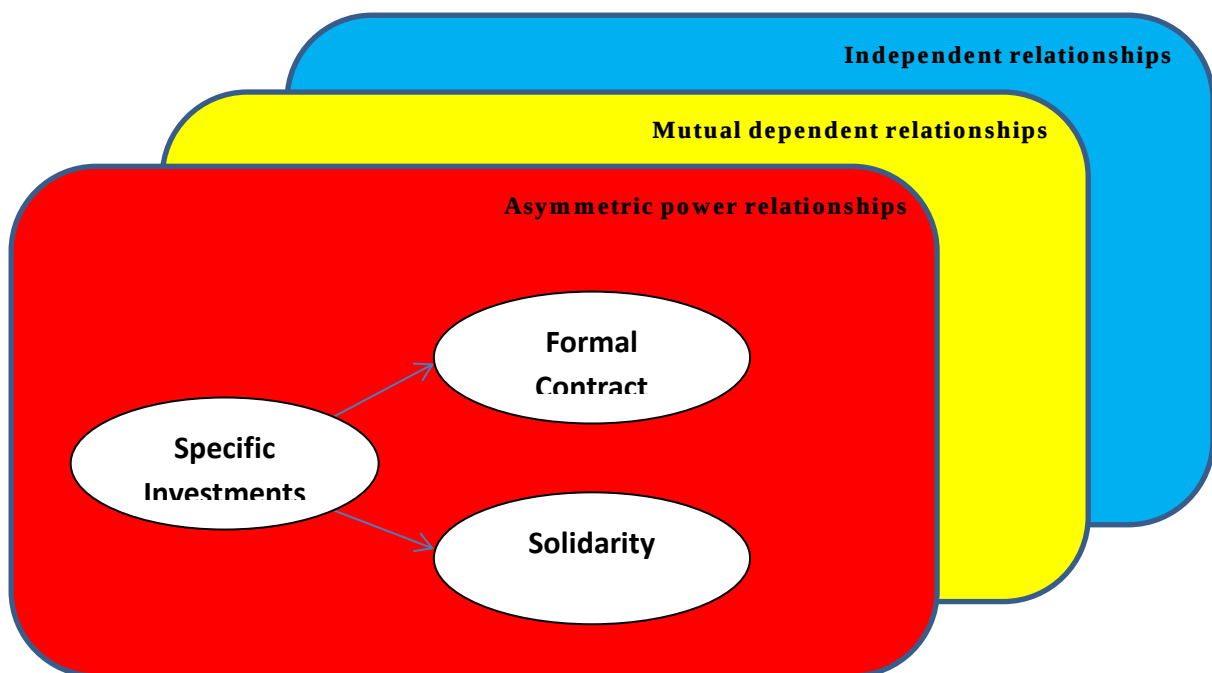
Hypothesis 5 was extended to 5a for comparing selling firms in mutual dependent relationships and selling firms in independent relationships. Similarly, hypothesis 5b is for buying firms. To test the hypothesis 5a, I made equality constraint to all paths between two groups except the path between specific investments and norm of solidarity. The model yielded $\chi^2_{(150)} = 140.88$, P-value = 0.69107, RMSEA = 0.000, GFI = 0.733, CFI = 0.998, suggesting good fit. As expected, the sellers' specific investments is more positively related to solidarity norm when firms have mutual-dependent relationships than when firms have independent relationships ($\gamma_{mutual} = 0.272$, $p > 0.10$; $\gamma_{independent} = 0.214$, $p > 0.10$). Therefore, hypothesis 5a is supported.

Regarding hypothesis 5b, all paths were equally constrained except the one between buyers' specific investments and solidarity norm. The model achieved $\chi^2_{(150)} = 141.190$, P-value = 0.684, RMSEA = 0.000, GFI = 0.732, CFI = 0.998, suggesting good fit. Contrary to hypothesis, the buyers' specific investments are more positively related to solidarity norm when firms have independent relationships ($\gamma_{mutual} = 0.204$, $p > 0.10$; $\gamma_{independent} = 0.246$, $p > 0.10$). Hypothesis 5b is not supported.

Hypothesis 6 was extended to hypothesis 6a and 6b. Hypothesis 6a is for selling firms and hypothesis 6b is for buying firms. To test this hypothesis 6a, all paths are equally constrained between two groups except the path between specific investments and formal contract. The model yielded $\chi^2_{(150)} = 141.233$, P-value = 0.68356, RMSEA = 0.000, GFI = 0.732, CFI = 1.000, suggesting good fit. As expected, sellers' specific investments have stronger effect on formal contract when firms are under independent relationships than under mutual dependent relationships ($\gamma_{mutual} = -0.288$, $p < 0.001$; $\gamma_{independent} = -0.003$, $p > 0.10$). Hypothesis 6a is supported.

Hypothesis 6b was tested by constraining all paths between two groups except the path from buyers' specific investments to formal contract. The model achieved $\chi^2_{(150)} = 140.052$, P-value = 0.70844, RMSEA = 0.000, GFI = 0.736, CFI = 1.000, suggesting good fit. Contrary to the hypothesis, buyers' specific investments have stronger effect on formal contract when buying firms have mutual dependent relationships than when they have independent relationships with their partners ($\gamma_{mutual} = 0.272$, $p < 0.10$; $\gamma_{independent} = 0.071$, $p > 0.10$). Hypothesis 6b is not supported.

Appendix

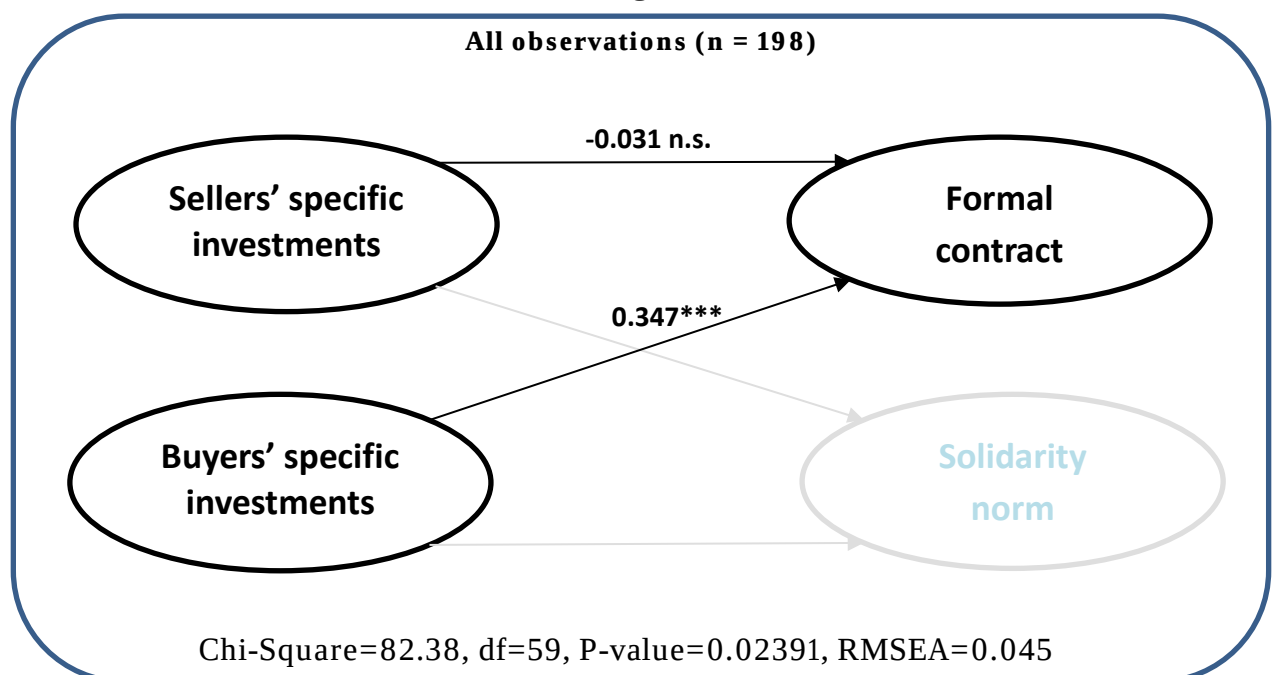


Context	n	X ²	Df	P-value	RMSE A	CFI	IFI	AGFI	RMR
All observations	198	85,30	59	0,01418	0,048	0,97	0,97	0,904	0,134
Buyer dominant relationship	93	67,84	59	0,20131	0,040	0,98	0,98	0,843	0,146
Seller dominant relationship	15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Mutual dependent relationship	57	48,16	59	0,84243	0,000	1,00	1,013	0,820	0,155
Independent relationship	33	56,44	59	0,57028	0,000	0,93	0,938	0,671	0,313

H1: The degree of *specific investments* is *positively* related to *formal contract*.

PARTIAL SUPPORT

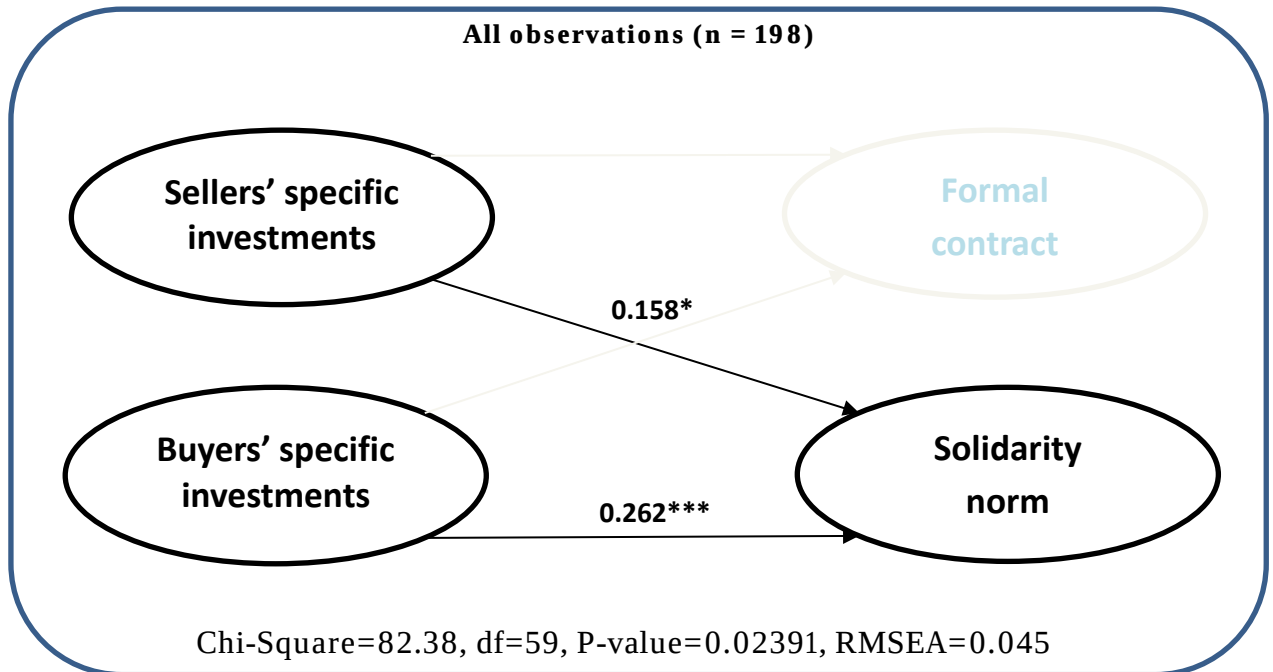
standardized numbers; n.s.: non sig.; * = 0.10, ** = 0.05, *** = 0.01



H2: The degree of *specific investments* is positively related to *norm of solidarity*.

SUPPORT

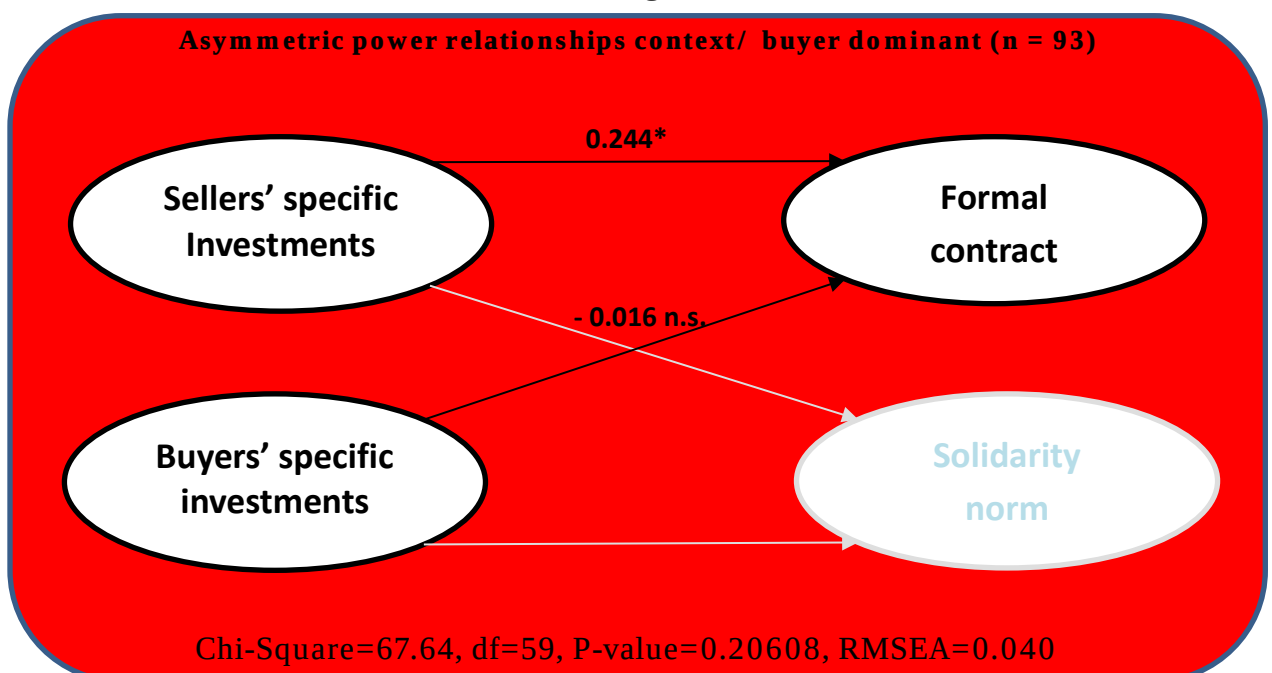
standardized numbers; n.s.: non sig.; * = 0.10, ** = 0.05, *** = 0.01



H3: Specific investments are *more* negatively related to *formal contract* when firms have *high power* than when firms have *low power*.

SUPPORT

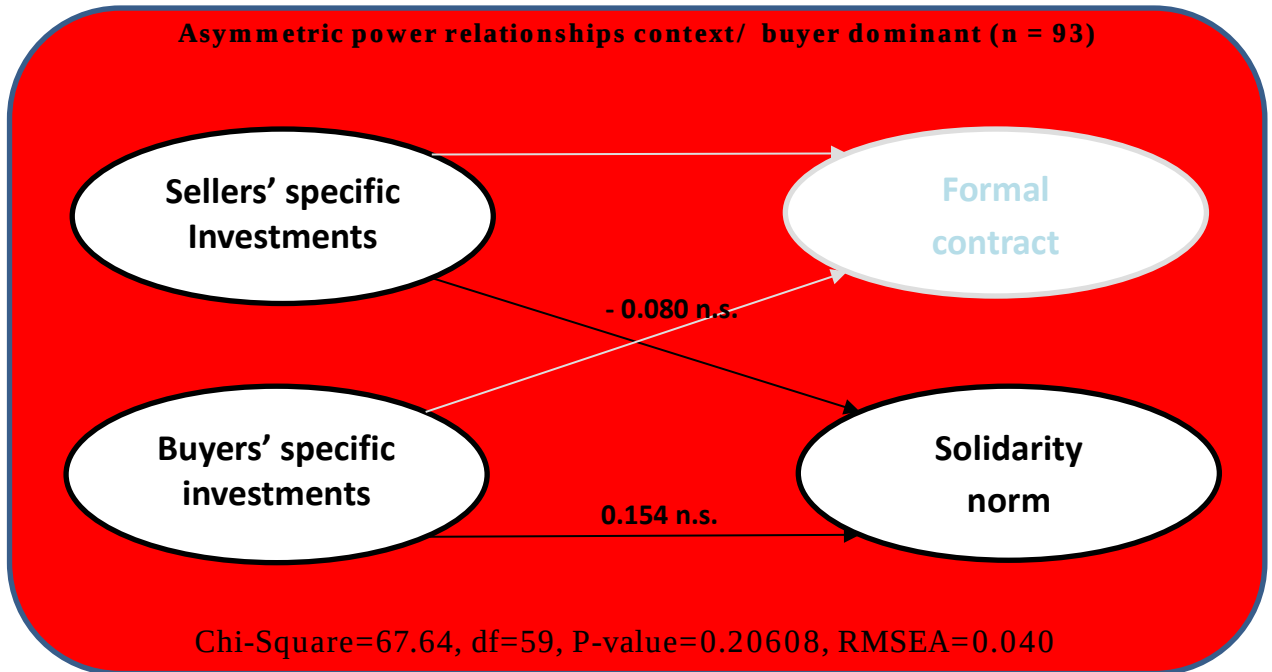
standardized numbers; n.s.: non sig.; * = 0.10, ** = 0.05, *** = 0.01



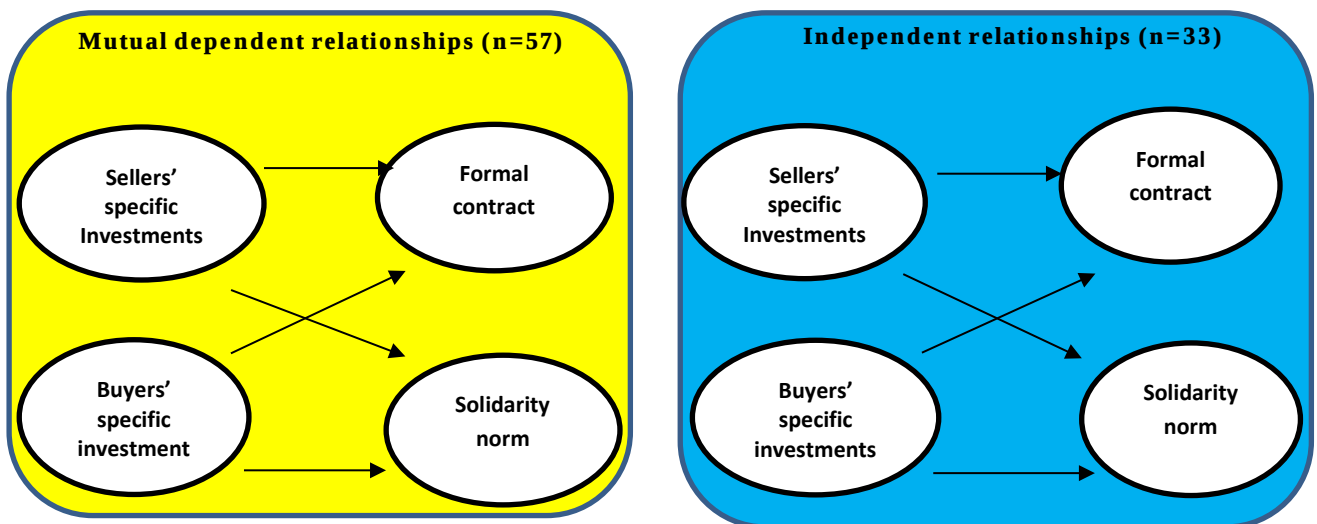
H4: Specific investments are **more** positively related to **norm of solidarity** when firms have **low power** than when firms have **high power**.

(WEAK) NOT SUPPORT

standardized numbers; n.s.: non sig.; * = 0.10, ** = 0.05, *** = 0.01



H5 and H6: comparing two groups: mutual dependent relationships and independent relationships



Testing for the validity of a four-factor model

- Model 1: Chi-Square = 131.71, df = 141, P-value = 0.70057, RMSEA = 0.000; GFI = 0.749; CFI = 0.994

Testing for invariant factor variance/covariance

- Model 1: Chi-Square = 141.11, df = 150, P-value = 0.68611, RMSEA = 0.000; GFI = 0.733; CFI = 0.998
 - Δ Chi-Square (9) = 9.4 : Not significantly different in Chi-square values, hypothesis of invariant held.

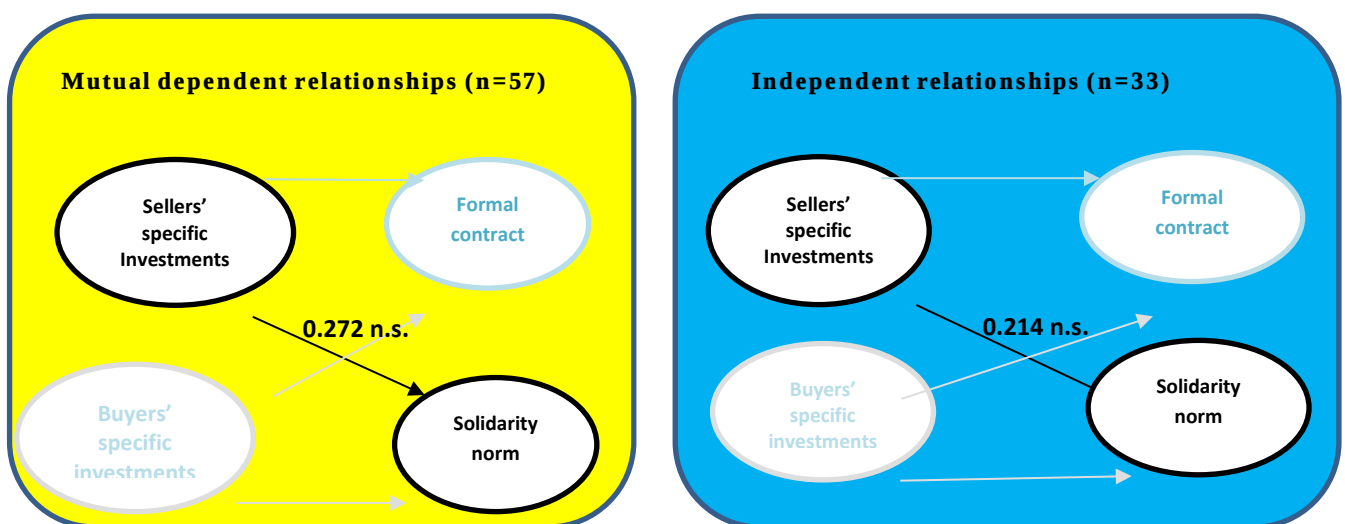
Not significantly different

H5: Specific investments are **more** positively related to **norm of solidarity** when firms have mutual dependent relationships **than** when firms have independent relationships.

H5a: Specific investments are **more** positively related to **norm of solidarity** when **selling firms** have **mutual dependent** relationships **than** when they have **independent** relationships with their partners.

WEAK SUPPORT

standardized numbers; n.s.: non sig.; * = 0.10, ** = 0.05, *** = 0.01



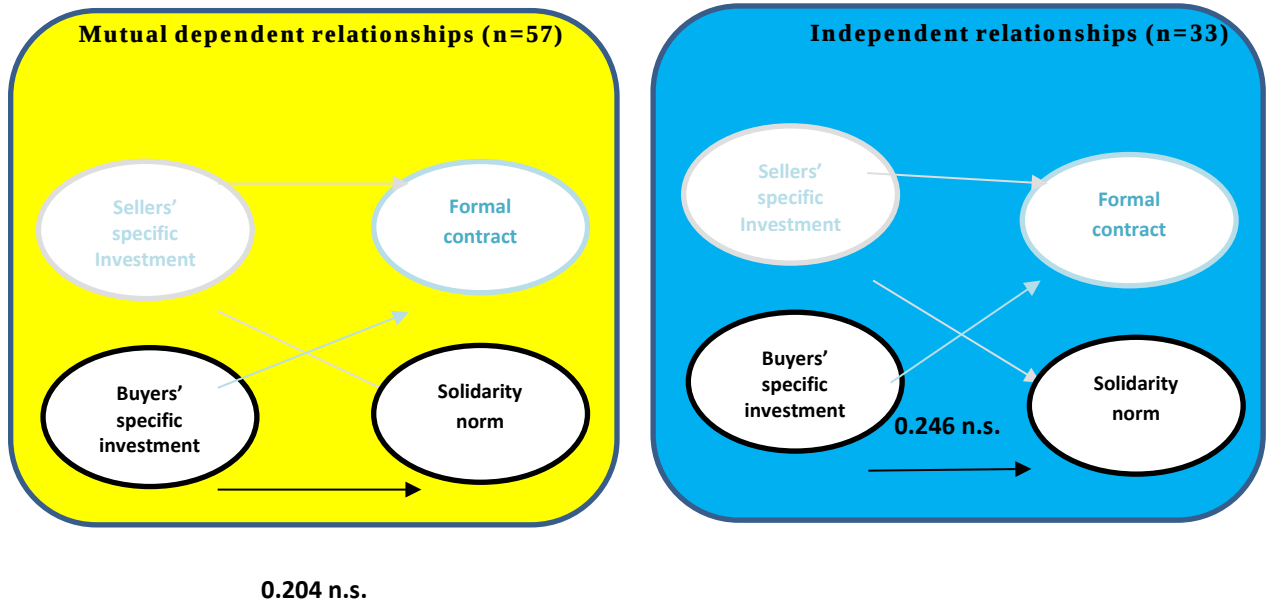
Global numbers: Chi-Square=140.88, df=150, P-value=0.69107, RMSEA=0.000

H5: Specific investments are **more** positively related to **norm of solidarity** when firms have mutual dependent relationships **than** when firms have independent relationships.

H5b: Specific investments are **more** positively related to **norm of solidarity** when **buying firms** have **mutual dependent** relationships **than** when they have **independent** relationships with their partners.

NOT SUPPORT (WEAK)

unstandardized numbers; n.s.: non sig.; * = 0.10, ** = 0.05, *** = 0.01

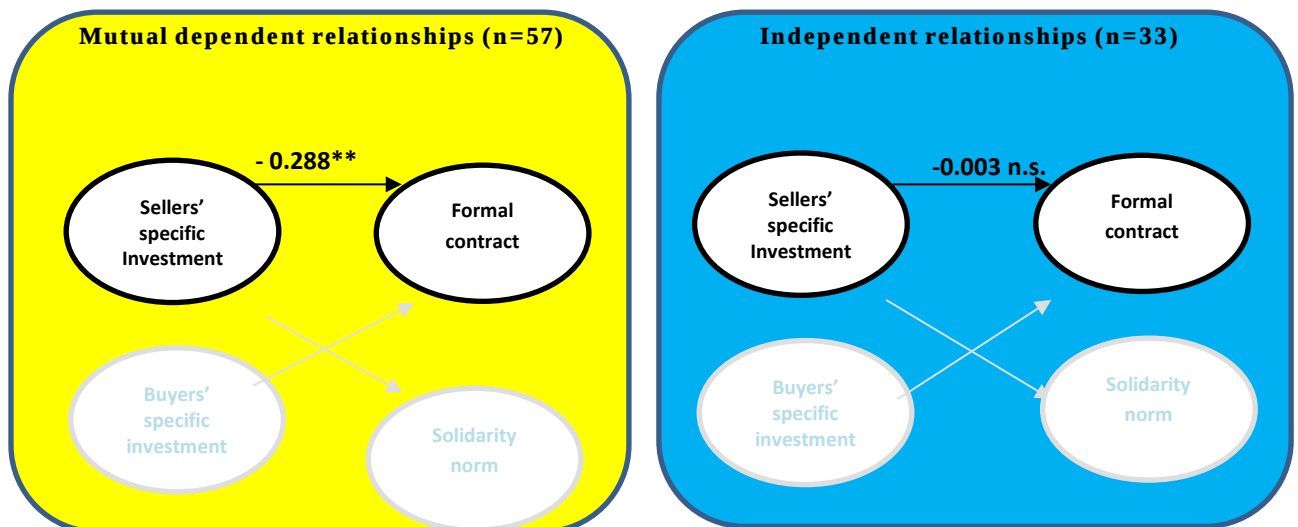


H6: Specific investments are **more** positively related to **formal contract** when firms have independent relationships **than** when firms have mutual dependent relationships.

H6a: Specific investments are **more** positively related to **formal contract** when **selling firms** have **independent** relationships **than** when they have **mutual dependent** relationships with their partners.

WEAK SUPPORT

standardized numbers; n.s.: non sig.; * = 0.10, ** = 0.05, *** = 0.01



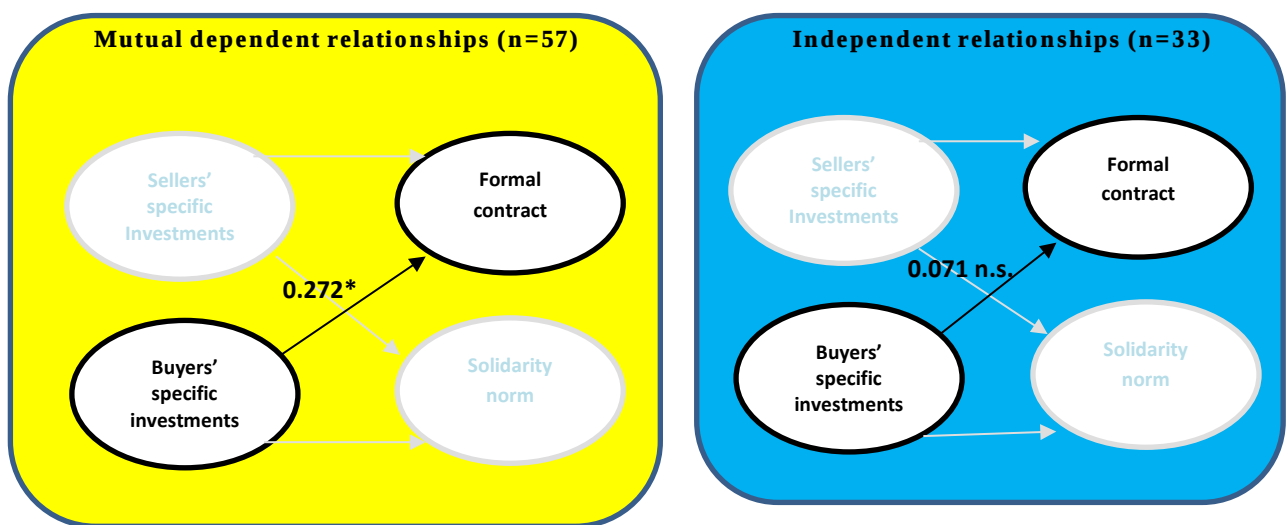
Global numbers: Chi-Square=141.23, df=150, P-value=0.68356, RMSEA=0.000

H6: Specific investments are **more** positively related to **formal contract** when firms have independent relationships **than** when firms have mutual dependent relationships.

H6b: Specific investments are **more** positively related to **formal contract** when **buying firms** have **independent** relationships **than** when they have **mutual dependent** relationships with their partners.

NOT SUPPORT

standardized numbers; n.s.: non sig.; * = 0.10, ** = 0.05, *** = 0.01



Global numbers: Chi-Square=140.05, df=150, P-value=0.70844, RMSEA=0.000

Summary of the findings in the model

H1	Specificity – Formal contract	Partial support
H2	Specificity – Solidarity norm	Support
H3	Stronger firm's specificity – Formal contract < Weaker firm's specificity – Formal contract	Support
H4	Stronger firm's specificity – Solidarity < Weaker firm's specificity – Solidarity	Weak Not support
H5a	Seller's specificity – Solidarity if mutual-dependent relationship > if independent relationship	Weak support
H5b	Buyer's specificity – Solidarity if mutual-dependent relationship > if independent relationship	Weak Not support
H6a	Seller's specificity – Formal contract if independent relationship > if mutual-dependent relationship	Weak support
H6b	Buyer's specificity – Formal contract if independent relationship > if mutual-dependent relationship	Not support

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ORGANIZATIONAL NETWORKING BEHAVIORS – CONCEPTUALIZATION AND OPERATIONALIZATION

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1. Introduction

Academics in both strategic management and economic sociology contend that organizational behaviors are embedded in the network of relations, and therefore, firm performance may be highly influenced by the embeddedness of the network. As the competition intensifies drastically, how to efficiently and effectively manage the inter-organizational network becomes a critical issue for firms operating in business-to-business markets (Miles and Snow, 1992). A firm's network could consist of numerous other organizations with which the firm interacts to seek resources and opportunities (Pfeffer and Salancik, 1978). The interconnectedness of these relationships means that managing the web of relationships is highly challenging due to the complexity and fluidity inherent in the network. It is suggested that firms' ability to utilize and capitalize on their business network is a source of competitive advantage, because the ability to cope with the social and economic complexity of the business network is difficult for competitors to imitate (Barney, 1991).

Despite this significance, currently research into how firms interact with their networked environment still remains relatively unexplored and untested compared to that of dyadic business relationships (Dyer and Hatch, 2006). Studies in economic sociology hold the view that a network can yield a greater economic outcome than the sum of the individual firms within it, due to the mechanism that promotes novel resource combinations (Uzzi, 1996). While being embedded in the web of relationships provides firms with possible access to rich resources, it also exposes them to the risks and constraints that are dispersed in the network. Although one single firm cannot control its network, it can, nevertheless, manage within its web of relationships in the network (Håkansson and Ford, 2002). How firms strategically interact with various counterparts to realize the opportunities and constraints afforded by the network is a subject that deserves more attention. Therefore, there exists the need to provide a deeper understanding of organizational behaviors in response to the wider network, given that the current literature is still short of concepts that capture the domain of a firm's embeddedness in networks and its resulting organizational responses. Furthermore, there is also the need to provide explicit implications for business-to-business practitioners to apply in their managerial decision-making when they are faced with issues of responding to complex multi-firm networks (Brennan and Turnbull, 2002).

This study asks two research questions. First, what kind of networking behaviors can be observed when firms interact with their direct and especially indirect counterparts in order to achieve their business aims? Secondly, what purposes do these networking behaviors serve?

2. Defining Organizational Networking Behaviors

The conceptualization and operationalization of how firms 'network' beyond their 'intentional networks' (i.e. a firm's web of direct relationships) is still lacking in the literature. Studies in network management focus on the management of firms' webs of direct relationships with 'business partners' (e.g. suppliers and customers). There exist three types of network management studies. First, network competence (Ritter, 1999) and network capabilities (Walter et al., 2006) are developed to capture the extent to which an organization is 'qualified' to manage the web of direct relationships. These two concepts predominately focus on firms' organizational activities of network management (of direct relationships). Secondly, networking capability (Mort and Weerawardena, 2006) and networking abilities (Äyväri and Jyrämä, 2007) look at how small entrepreneurial firms, which quite often consist of very few people, develop some sort of routines within their networks to mobilize resources in the immediate proximity of a focal firm. They are seen as entrepreneurial owners' political skills, hence remain at the inter-personal level of networking. Thirdly, the concepts of embeddedness (Granovetter, 1985; Uzzi, 1996) and connectedness (Anderson et al., 1994) focus primarily on the usage of well established relationships to facilitate the cooperation amongst network members in order to resolve problems and adapt to changes. Although strong relationships are important for information sharing and facilitating speedy problem solving, Granovetter (1985) stresses that it is the weak ties that bring about novel information and resources. He argues that a firm's network position is the key to get access to novel information and resources. Building on this argument, we contend that both types of relationships should be considered in the conceptualization of organizational networking behaviors.

Our view is that organizational networking behaviors need to be treated as actions towards direct and indirect counterparts at a collective organizational level. Such behaviors are derived from the anticipation of the goals (purposes) an organization endeavors to achieve, and thus these purposeful actions are planned and implemented based on collective organizational decision making. We are particularly interested in organizational networking behaviors that firms employ to serve specific purposes, the essence of which are different from the existing concepts in two ways. First, these networking behaviors are not characteristics or qualifications of a firm. Instead, they are routines/practices/activities that are developed strategically to utilize the web of direct and indirect relationships. Secondly, these networking behaviors are not solely for managing webs of relationships, nor reconfiguring resources. Instead, firms could utilize different types of relationships based on their network position to serve various purposes depending on their assessment of available or potential resources that are linked to their counterparts. Therefore, these purpose-led behaviors can be tentatively defined as the routines/practices/activities that firms employ to make sense of and capitalize on their networks of direct and indirect relationships.

Building upon already existing concepts in the literature and further expanding the scope of network management, this study aims to understand organizational networking behaviors by taking into account the interconnectedness of a firm's direct and indirect relationships. We combine the dynamic capabilities (Teece et al., 1997) and an interaction approach (see Håkansson, 1982) as the theoretical frameworks that guide this study. In agreement with previous research, we believe that these two approaches inform and complement each other, and therefore offer a fruitful way to better understand network management from an organizational perspective (Möller et al., 2005).

3. Research Design

The main objective of this study is to conceptualize the construct of organizational networking behaviors, which entails a qualitative and exploratory empirical research. This study uses a semi-structured interview method to understand the scope and content of networking behaviors. We briefly discuss the research design in the following subsections.

3.1 *Research context*

The manufacturing sector in the UK is chosen as the research setting. Given the strong challenge from emerging countries with a lower-cost labor offering, the manufacturing sector in the UK has shrunk dramatically in the last decade. As these emerging countries now are fast moving up the value chain by enhancing their technological capacity, manufacturers in the UK have to differentiate their offerings in order to compete in the global stage. Therefore, it is an appropriate and interesting setting for the research, given that these manufacturers need to constantly seek opportunities to innovate and expand (or maintain the same level of) their business scale by leveraging the resources embedded in their networks.

3.2 *Data collection*

Since organizational networking behaviors are a firm's collective actions towards direct and indirect counterparts, the key informants used in this study have to be those who have an overall vision of organizational strategic decisions towards their counterparts. Furthermore, this study calls for a multi-informant approach. Multiple interviews with managers from the same organization can be compared and cross-validated. We utilized a database of financial information on major public and private U.K. companies, and successfully recruited 31 director-level managers from 15 manufacturing firms (their number of employees ranges from 48 to 3,310) in different regions of the UK. With the exception of one participant company, at least two informants from each company were interviewed in order to get a wider perspective of how they capitalize on their network context.

There was one instance in which one interviewee provided a saturated view of their networking behaviors, and therefore no more interview was required of that organization.

There were also instances where the organization is part of an amalgamation of groups of companies, and therefore, it was necessary to have more than two interviews in order to understand the holistic picture of their networking behaviors. Depending on the position of the interviewees, different views can be obtained since they might be involved in different activities with their counterparts. Therefore, executive managers, such as managing directors or CEOs, marketing directors, sales directors and supply chain directors, were appropriate for taking part in this study.

3.3 *Data analysis*

All interviews were recorded and transcribed for subsequent data analysis. Content analysis was chosen for analyzing the data. This study employs a qualitative analytical software package, NVivo, to aid the accuracy of the data analysis. Coding is a key feature in content analysis. The researchers can give words, sentences, and paragraphs meaning and then codes the meaningful text into various categories or themes, which can be quantified as to how fre-

quently specific themes appear in a text (Kvale, 2007). The categorizations can be made before analyzing the data, or emerging categorizations can be created ad hoc. This provides a study in an under-developed research area with the advantage of being flexible in combining the existing developed concepts from the literature on the one hand, and the emerging concepts from the empirical work on the other hand.

Based on the working definition of organizational networking behaviors, we coded the texts by looking for activities/practices/routines that firms develop to interact with various relevant parties in order to sense and respond to the network dynamics.

4. Research Results

The themes identified are grouped into four sets of behaviors that firms employ to fulfill specific goals. They are information acquisition, opportunity enabling, strong-tie-approach, and weak-tie-approach resource mobilization. We did not confine ourselves to one school of thought when structuring these themes. Instead, the strong and weak tie argument resonates with an economic sociology perspective, and the interactive nature of networking in the interaction approach further provides the framework for analyzing the data. We believe that this approach has enabled us to broaden the scope of organizational networking behaviors identified in this study.

First, information acquisition is an important aspect of business development. Although it is not within the scope of this study to understand how firms utilize the information they obtained through networking behaviors, firms can, through proprietary information acquisition, make informed decision to realize opportunities before their competitors. Based on our empirical data, we found that firms are more openly sharing information in well-established relationships (the strong ties), but novel information very often comes about via different types of counterparts, with which firms do not necessarily have long established or trading relationships (the weak ties). This indicates the importance of identifying and keeping a wide range of 'information hubs' through constantly interacting with various counterparts, although it might not necessarily contribute to the sales directly.

Secondly, opportunity enabling behaviors are the way in which firms constantly have a strong desire to "go out there and speak to people", such as looking out for new technologies, potential customers and suppliers and lobbying, all of which require proactive interactions with various counterparts. In this category firms do not just interact with those that are trading with them. Instead, trade events, such as exhibitions, industry-specific seminars and meetings, are important sources for them to sense the market. As noted by several managers, the effectiveness of these networking events cannot be predicted easily, but the strong tendency to network with various counterparts is essential for firms that are constantly trying to sense and seize opportunities to help them drive their business forward. Not only do firms seek opportunities, but create them. By interacting with relevant counterparts (e.g. potential customers and important parties surrounding customers) firms can strategically disseminate their self-perceived network identity by signaling their strengths (e.g. resources) to others in the network (Håkansson and Johanson, 1988). This has important implications, as firms can benefit from their reputation in the industry (and possibly in other peripheral industries).

Thirdly, we also observed that the effectiveness of certain networking behaviors, particularly those in strong-tie-approach resource mobilization, heavily rely on the quality of the

relationships. These relationships often are characterized with high levels of trust. In other words, to be able to mobilize resources, which are connected to a focal relationship, requires high levels of trust and cooperation between the two parties (Zaefarian et al., 2012). This ability is critical for solving problems and improving offerings, particularly in technology-intensive situations. By mobilizing resources from different parties through a focal relationship, a focal firm's offerings can be more readily developed to increase its competitiveness. Without the backing of strong relationships, the mobilization of such 'sticky' resources to form joint problem-solving mechanisms would be difficult (Uzzi, 1996). Therefore, not only does a good relationship help sustain repeat transactions, but it also brings about rich resources associated with the focal relationship. However, it requires firms to sense and realize this potential opportunity and mobilize the resources to respond to the market and innovate faster, which increases competitiveness against their competitors.

Finally, weak-tie-approach resource mobilization has shown to be effective in some instances, particularly where firms need to penetrate a new market. Relationships that are at arm's length or newly formed could link firms to those indirect relationships, hence potentially a whole new set of resources. The novel information, technologies and business opportunities are embedded in the other side of this relationship, and through its linkage with its new counterpart, for example, a bridging relationship such as a referral, a firm is able to more quickly form new relationships with others. In some cases, this can be foreseen and instigated. Firms are able to assess, for instance, what kind of customer base a particular potential business partner holds to determine whether this firm is the right partner.

5. Discussion

We have identified four types of organizational networking behaviors through understanding how firms utilize their web of relationships to achieve different goals. These purposeful behaviors can be categorized into: information acquisition, opportunity enabling, strong-tie-approach, and weak-tie-approach resource mobilization. By adopting a network view, this study provides insights into how firms operating in business-to-business markets exploit their webs of relationships with a multitude of counterparts.

These networking behaviors are both passive and active. Firms need to network to sense the network dynamics in order to respond to the changes that might have a negative impact if not dealt with timely and appropriately or a positive impact if exploited. On the other hand, firms can proactively maneuver themselves into a position where they are able to capture the benefit of mobilizing certain desired resource through interacting with relevant counterparts (Mouzas and Naudé, 2007). Ford et al. (2003) suggest that networking helps firms cope with three network paradoxes, which are the constraints inherent in the network, and thereby managing the interactions with their counterparts, and control and influence via network management. Their framework emphasizes greatly the aspects of managing interactions in relationships, but it does not provide strategic implications of networking, as Ford et al. (2003) are reluctant to link networking activities to any outcome. From our interviewees' viewpoint, they network to achieve certain anticipated outcomes, and because of this instrumental view, we ascertain that these networking behaviors are conscious and purposeful. By categorizing them based on their purpose this study produces a more fine-grained system, which allows us to synthesize and contrast the findings with the wider network literature. This is by no means suggesting that these behaviors are causally linked to successful outcomes. Such inference

needs to be rigorously tested in further research.

This study has contributed in three ways. First, four types of purposeful organizational networking behaviors are identified, and differentiated from other network management constructs in the literature. Using Day's (1994) categorization of organizational capabilities to interpret our findings, we show that network management is not only about 'inside-out capabilities' (qualification practices), but also about 'outside-in capabilities' (strategizing practices). Secondly, this study demonstrates the applicability of the well-established strong and weak tie hypothesis in economic sociology from a firm's perspective. Although it is a well developed concept, a deeper understanding is needed to shed light on how these two different types of relationships can be utilized from a firm's perspective, as it was originally developed to capture personal relationships (Jack, 2005). We demonstrate that these two types of relationships do have different utility and purpose from a focal firm's perspective. Through interactions, these relationships can be utilized to achieve different organizational goals. Lastly, the four types of networking behaviors provide practitioners operating in business market a guideline for utilizing different types of relationships to achieve different outcomes.

We acknowledge that this study has its limitations, mainly related to the research setting.

We study organizational networking behaviors in the context of the UK manufacturing sector. Although we tried to cover as many industries as possible, the coverage is still limited. There is a possibility that other types of networking behaviors are not discovered due to this limitation. It is, therefore, possibly fertile to look at this issue in future research, and in other research settings. For instance, industries with high technology intensity may provide specific insights regarding how the networking behaviors differ from the ones we have identified. Furthermore, the service industry is arguably very different from the manufacturing industry, which makes it a possible interesting research setting to study contrasting firms' networking behaviors. The four types of networking behaviors we identified also provide a foundation for future research to further refine and operationalize the construct. It would be insightful and interesting to discover the extent to which they are related to other organizational behaviors and firm performance both qualitatively and quantitatively.

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BUSINESS ECOSYSTEM MODELS AND MANAGEMENT FRAMEWORKS

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EXTENDED ABSTRACT

Keywords: business ecosystem, business networks, review

Introduction

With regard to the worldwide economy, we can recognize a pervasive application of information and communication technology (ICT) in complex enterprise networks for value-creation activities.

These technologies also enable the so-called ‘Internet-of-Things’ (IoT), which describes the connection between the real and virtual world. This term was introduced by Ashton in 1999 (Ashton 1999) and contains a number of benefits for enterprises and consumers (Fleisch 2010). Especially in the research area of Supply Chain Management there exist a number of benefits which are realized by information services and Auto-Identification technologies (Auto-ID) (Bullinger/Ten Hompel 2007, Fleisch/Mattern 2005, Floerkemeier et al. 2008). Due to the large number of benefits, it is clear that firms cooperate to launch information services, yet the success of these businesses and networks still remains questionable (Fleisch 2010, Fleisch 2005, Kambil/Brooks 2002).

Following this approach, we assume that the application of these information services in the IoT market will only be successful if enterprises treat their business network as an ecosystem. Two promising examples of related business ecosystems are the ecosystem of Amazon and Cisco (Isckia 2009, Li 2009). Accordingly, our intention is to analyze networks in the IoT market and to devise an ecosystem model for said market, including an applicable management framework. Therefore, it is important to understand the ecosystem concept and the associated basic principles from an economic perspective.

In keeping with our research approach, we defined the following three research questions:

- 1) What are the fundamental ecosystem models in the literature?
- 2) What is the benefit of these models?
- 3) What are the development directions concerning these models?

In order to answer these questions, our extended abstract is divided into four sections. Following on from this introduction, the second section defines our research methodology, the third section consists of our findings and, finally, the fourth section is a discussion of our results.

Review Methodology

To approach the research questions of our project we used a two-step review methodology.

The first step consisted of the definition of the search terms, the databases and the search period.

Due to our focus being on ecosystems in the field of business and economics and not in the environmental research direction, we concentrated on the search terms ‘business’ and ‘ecosystem’. We used the following databases for a broad search: ScienceDirect, EBSCO, Emerald, JSTOR, ProQuest, Web of Knowledge and SpringerLink. Finally, we limited our search temporally to the time between January 1975 and August 2012. Given these search criteria, our initial search revealed 833 publications.

The second step of our methodology was to identify relevant publications from our first search. We used the concept of relevance sampling/content analysis (Krippendorff 2004) for selecting the relevant results. Our criteria for the relevance sampling were as follows: only English language publications, no book reviews, no article summaries, no workshop papers, no conference papers and no texts with an obvious environmental perspective. This content analysis was performed by examining titles, abstracts and keywords. After eliminating duplicates, this process resulted in 29 publications. To this selection we added six publications gained from cross-checking the referenced literature, resulting in a total of 35 publications - 32 articles and three books – for an in-depth analysis.

Results

Regarding our first research question, we identified three publications through an in depth examination which formulated a model of management strategies in regards to the business ecosystem based specifically on their own research and were mostly cited in the literature. The key criterion we used to identify this process was that the publications' authors devise their own models for the ecosystem, instead of creating their theories from the ideas of other researchers. In this manner we identified the following publications as essential for the business ecosystem theme: Moore (1996): “The Death Of Competition”, Iansiti/Levien (2004): “The Keystone Advantage” and Gawer/Cusumano (2002): “Platform Leadership”.

In order to answer our second research question, we focused on the publications mentioned above, as they were central to both our understanding and a further analysis of the ecosystem environment. The aim of our second question was to understand the description and benefit of the identified models within the publications. Accordingly, the following three criteria were defined to ensure a thorough examination: ‘original thought’, ‘definition of the ecosystem’ and ‘benefit of the management framework’. The purpose of this examination, with regards to our introductory comments, is to use these basic models to develop a suitable management framework within the IoT ecosystem topic. This future framework should allow for the supply of payable information services, taking into account a successful business model.

We begin the analysis with the work of Moore (1996) and his opinion regarding the business ecosystem. In terms of the criterion of ‘original thought’, he argues that the entire economy is marked by globalization and dynamic in all business processes. Furthermore, he states that it is the innovation and the creation of new markets that are important in ensuring a firm’s success. In this way Moore (1996) introduces the coevolution-concept, which highlights the cooperation with other companies, as well as the enhancement of everyone’s capabilities. Associated with this approach is the view for the whole environment (that is, the economic ecosys-

tem) around a certain company, instead of the common perspective which focuses on competitors and their products. Finally, this argumentation leads into “The Death of Competition” and the fact that “Strategy-making involves having an awareness of the big picture and finding ways to play a role in it.” (Moore 1996, p. 7).

In this instance, Moore (1996) gives a first definition for the term ‘business ecosystem’: ”An economic community supported by a foundation of interacting organizations and individuals – the organisms of the business world. This economic community produces goods and services of value to customers.” (Moore 1996, p. 26).

He then illustrates the basics for leading a business ecosystem by emphasizing the fact that it is now important to organize a community through a pervasive strategy for creating innovations. For that, Moore (1996) establishes a management framework for organizing and leading an ecosystem which is predominantly based on analogies to biological ecosystems. This framework contains seven dimensions of competitive advantage, the purpose of which is showing the variation of these dimensions over the lifespan of a business ecosystem. Furthermore, the framework includes core questions and management strategies for each stage. So this model offers a planning tool for the installation and management of an ecosystem through different stages.

The next part of our analysis is the business ecosystem by Iansiti/Levien (2004). Concerning their ‘original thoughts’, the authors recognized a very dynamic, complex and interconnected industry with successful and unsuccessful firms. Because of this, the authors wanted to understand this complex industry and the relationships in these business networks in particular. In searching for a way to investigate the networks, Iansiti/Levien (2004) used analogies from nature and company analyses to understand the circumstances and to gain important strategic information.

They define the business ecosystem in the following way: “[...] business ecosystems are formed by large, loosely connected networks of entities. Like species in biological ecosystems, firms interact with each other in complex ways and the health and performance of each firm is dependent on the health and performance of the whole.” (Iansiti/Levien 2004, p. 35). It becomes obvious that the authors view the concept of the business ecosystem as an appropriate metaphor for understanding and describing business networks.

Based on the analogies and their industry studies, Iansiti/Levien (2004) identified four roles which companies can adopt in a business ecosystem. These roles are keystone, dominator, hub landlord and niche player. To illustrate the behavior of the roles, the authors used industry examples with characteristic strategies. Furthermore, the model includes three foundations for competition in networked industries, which are architecture, integration and market-management. These foundations constitute a first management framework, by giving the members of an ecosystem the possibility to understand the circumstances and to define their own business strategy. In summary, this work offers an overview of different enterprise roles and a management framework that allows for the establishment of a business ecosystem.

The publication “Platform Leadership”, by Gawer/Cusumano (2002), contains a comprehensive study of leadership enterprises in the high-tech sector. During their studies, the authors recognized a high interdependence between the products and their mutual meaning for the innovation process. Therefore, Gawer/Cusumano (2002) emphasize that it is important to consider the whole supplier network which produces interdependent pieces of an entire product –

“[...] an evolving system made of interdependent pieces that can each be innovated upon.” (Gawer/Cusumano 2002, p. 2).

Based on this characteristic, the research subjects of Gawer/Cusumano (2002) were the role and strategy of enterprises which are responsible for a platform technology and its evolution with complementary products – the so-called platform leaders.

With regard to the criterion “definition of the business ecosystem”, Gawer/Cusumano (2002) focus on the platform leader role and regard the ecosystem as a networked environment of suppliers and customers in which this enterprise acts. “By definition, platform leaders who succeed can exert a strong influence over the direction of innovation in their industries and thus over the network of firms and customers – the “ecosystem” – that produces and uses complements.” (Gawer/Cusumano 2002, p. 245).

Based on their vast study, a framework with four ‘levers’ for developing a platform leadership strategy was devised. These four ‘levers’ represent the core components of such a strategy and are “Scope of the firm”, “Product technology”, “Relationships with external complementors” and “Internal organization” (Gawer/Cusumano 2002). The authors explain the components in the context of the analysis of platform leaders and, using different strategy examples, demonstrate important management strategies. In doing so, they design an applicable framework for strategy development, one which also comprises many management examples for the different ‘levers’.

In summary, we can see that all the mentioned publications emphasize the increasing significance of the environment for companies instead of simply concentrating on the value-creating activities in their common value chain.

Moreover, all conclusions are based on practical studies and analyses without any scientific support, with two of the three publications - Moore (1996) and Iansiti/Levien (2004) - also reinforcing their analyses and findings by drawing parallels to nature. The authors consider natural ecosystems as an analogical source for circumstances and roles in business ecosystems, but they do not justify the use of these analogies. In terms of the presented frameworks, the benefits of the developed frames do not differ at the base level. We can see that Iansiti/Levien (2004) and Gawer/Cusumano (2002) observe roles in ecosystems and identify appropriate strategies. Moore (1996) does not distinguish particular roles but he also gives implications for business ecosystem leadership.

The difference between the publications lies in the definition or view of an ecosystem. All the authors emphasize a clear network character - interdependence - but no homogeneous definition or perspective exists. For example, Moore (1996) focuses on the whole system, including all possible organizations, whereas the other two authors concentrate on business networks in particular. With regard to the different perspectives and the scope of the ecosystem concept, we are missing a homogeneous definition which includes all possible perspectives of an ecosystem.

In order to answer the third research question, we examined the remaining ecosystem contributions, with the aim of identifying shapes of the models which were discussed in the previous pages. In this process of identifying the shapes, six related forms were found. These are the “customer-centric business ecosystem” by Frigidis et al. (2007), “digital business ecosystem” by Marin et al. (2008), “information technology ecosystem” by Iansiti/Richards (2006), “innovation ecosystem” by Adner (2006), “knowledge-based ecosystem” by Borgh et al.

(2012) and “networking business ecosystem” by Perrone et al. (2010). Following our identification process, Fragidis et al. (2007), Marin et al. (2008) and Perrone et al. (2010) devise their thoughts on Moore’s (1996) ecosystem model. Both Iansiti/Richards (2006) and Borgh et al. (2012) mostly develop their thoughts on Iansiti/Levien (2004), as well as on Moore (1996). Only Adner (2006) regards the model of Iansiti/Levien (2004) and Gawer/Cusumano (2002) as important in his work.

In short, the model of Fragidis et al. (2007) emphasizes the consideration of customer participation in business ecosystems concerning the development and production processes. Their argumentation is based on the premise that customers deliver valuable information, e.g. needs, and that only “customer-centric business ecosystems” are able to satisfy those needs. Because of that, the authors devise a customer-centric model and mention some ICT-related implementation strategies.

Marin et al. (2008) present the development of a software architecture to support all aspects, e.g. networking and innovation management, of a business ecosystem. In connection with their information technology (IT) architecture, they focus on digital environments in the ecosystem context and define their “digital business ecosystem” as a software platform for supporting business ecosystem activities. In addition, the benefit of this publication is the explanation of the design, as well as the functionality of their software architecture, which supports the development of “digital business ecosystem” applications.

In their publication “The information technology ecosystem: Structure, health, and performance”, Iansiti/Richards (2006) regard the IT industry, emphasizing the increasing network character. They introduce the term “information technology ecosystem” which consists of the network of organizations delivering IT products or services. After describing the structure of IT ecosystems, the authors go on to illustrate a framework and industry examples for the assessment of health and performance of such an ecosystem. It should be noted that this contribution also has an economic character, exhibiting clear parallels to the publications by Iansiti/Levien (2004) and Gawer/Cusumano (2002).

Adner (2006) focused on innovation management in ecosystems. Based on industry studies, he realized the importance of collaboration between firms to combine their capabilities into valuable consumer products. This principle forms the foundation for the “innovation ecosystem” which should become a crucial element in strategy-making. Furthermore, when firms are acting in an ecosystem, the possible value through collaboration is enormous, yet this cooperation also entails certain risks. Due to this, enterprises should assess these risks, as they have a remarkable influence on a company’s strategy. With this in mind, Adner (2006) devised a framework with options to assess the risks and to adjust the innovation strategy to the ecosystem environment.

The contribution by Perrone et al. (2010) contains the model of a “networking business ecosystem” which is based on their findings about Small and Medium Enterprises (SME) in globalized economies. The authors emphasize that networking activities are crucial for improving the efficiency and effectiveness of SMEs in today’s business environment. In order to support the networking capabilities of SMEs, a “networking business ecosystem” with a methodology based on ICT is presented. This ecosystem entails an ICT platform with an intelligent system engine (ISE) and linked SMEs. Through this structure, the final purpose is to discover new networking opportunities and to improve the SMEs networking activities.

The field study of Borgh et al. (2012) examines the value-creation process of communities with knowledge-intensive firms. These companies are closely related and form a “knowledge-based ecosystem”. The aim of their examination was to investigate the motivation of firms for participation in such communities, as the authors have noted the absence of contributions about how ecosystems create value. Through case studies, a framework was devised which illustrates the value-creating process in ecosystems from a business model perspective. Beside this framework of mechanisms to endorse value-creation within ecosystems, the authors emphasize the important finding that the business models of the ecosystem and their members should be aligned in order to enhance the value-creation process.

Taking into account that five of six shapes consider the ecosystem findings of Moore (1996), and three of six shapes consider the ecosystem findings of Iansiti/Levien (2004), it can be concluded that these two models are important background constructs for developing a specialized model and management framework. Due to our focus on the IoT market, the considerations of Gawer/Cusumano (2002) are also crucial for an IoT ecosystem model because of the authors’ focus on platform technologies and information services.

Discussion

Regarding the interconnected markets and the increasing influence of ICT, our intention was to review the literature of the prospective concept ‘ecosystems’. In connection with a two-step review methodology, this extended abstract provides an overview of three models.

Furthermore, six shapes of the business ecosystem models were presented to discover development trends in the ecosystem topic.

The essential insight of all contributions is that companies should form their value-creation processes under consideration of other enterprises or complementors, with a view to the whole business environment. Moreover, the presented shapes of the business ecosystem models expand the knowledge about ecosystem management in different categories, e.g. innovation management, IT, customers, networking and value-creation.

In spite of the applicable management frameworks, it becomes obvious that all these models are based upon industry studies, interviews or industry experiences. So there is a lack of empirical confirmation for the devised frameworks.

Our review is limited mainly by the quality of the search-engines used, as well as the search terms themselves, because they determine the scope of the search results. Because of this, we do not claim that the presented research results are entirely comprehensive.

Further research could contain an analysis of the remaining publications and their classification into different value-creating activities. Given our IoT focus, Moore’s (1996) ecosystem stage model, the different company roles in an ecosystem (Iansiti/Levien 2004) and in particular, the management framework of Gawer/Cusumano (2002), are all a valuable basis for research activities on the topic of IoT ecosystem. Furthermore, possible IoT ecosystem models with related value-creating activities can be detailed by the contributions of the presented shapes and the remaining publications. Finally, an empirical examination should be attempted to validate practical applicability.

KEY ACCOUNT MANAGEMENT AND PROJECT BUSINESS MANAGEMENT COHABITATION

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Purpose of the Paper

In this work in progress, we are looking at « key account management » (KAM) and « project business management » (covering both aspects of “project management” - focusing on project *implementation* - and of “project marketing” focusing on project *transaction*) as two sets of companies’ customer management activities. The term “project” can be used in different situations. We are in this work considering “external projects” (Cova & Salle, 2002), “*for an external client (the owner) of the company that acts as a contractor (which is in charge of managing the client’s project)* » (Cova & Salle, 2002, p. 3). Both KAM and project business have received an important interest from the part of scholars these last decades. Nevertheless, few are the authors who are addressing the issue of how both activities cohabit within the same organization. Project business is concerned by temporary *organisations* (project management) and complex *transactions* (project marketing) (Cova & Salle, 2005). It is then characterized by “something” (whether it is an organization or a transaction) built for a customer with a precise beginning and a precise end in time. Key account management (Homburg et al., 2002; Workman et al, 2003) deals, as for it, with the on-going *relationships* developed with a customer. Of course, the idea of relationship is far from being absent of the business project logic. For instance, Cova and Salle (2005) show how project marketing has evolved from a focus on a “*specific project through a competitive bidding strategy, to multi-project focusing with the same customer* » (p. 355) and clearly aims at “*building and maintaining relationships in-between projects with key customers and stakeholders*” (p. 356). Similarly, project management is more and more concerned with both “*enhancing the relationship with the customer inside one project*” (Cova & Salle, 2005, p. 356) and the issue “*project portfolios management*” (Cova & Salle, 2005, p. 355). All these practices are of a nature to narrow business project management to KAM. This is making all the more crucial the question of a possible (desirable?) cohabitation of both managerial practices with a company. This is the question at the core of our current research.

Relevant Literature

Only a limited number of scholars have addressed the issue of “business project” and “key account” management cohabitation. Notable exception is, for instance, the work from Moller and Rajala (1999) already pointing to the issue coordination between the different units carrying out marketing activities. For Moller and Rajala (1999) both the account managers and projects managers are members of the “sales and service” domain. Projects managers are considered “*responsible for carrying out customer projects after the sales personnel have negotiated a project contract* » while the key account manager aims at “*establishing the coordination of customer contact*” (Moller & Rajala, 1999, p. 528).

Smith and Fytch (2009) in the case of construction projects have described the role of KAM as *«taking responsibility for all projects for a client»* and consequently *“bridging the corporate and the project levels”* (Smith and Fytch, 2009, p. 402). Storbacka et al. (2009) in their study of sales within different companies observe that *“one drawback to the project manager approach is where there are multiple project managers providing service for the largest customers. This can translate into uneven service levels and unsystematic sales and project delivery practices. To overcome this challenge, company A is developing strategic account management, structured sales processes and pre-defined offer concepts»* (Storbacka, Ryals, Davies & Nenonen, 2009, p. 896). The possible competition between both project business and key account views is for instance summarized by Artto et al. (2008) : *“the business unit manager or key account manager are more concerned about the success of the project business in the long-term, whereas the project manager’s interest is to ensure the short-term success of the single project at hand»* (Artto, Eloranta & Kujala, 2008, p. 111). Pernu (2010) analyses the case of a provider of process technologies for the mining and metals industry for which several projects are ongoing with a customer at the same time. She clearly shows the complementary roles of “key account manager” or “global account manager” (bringing *“more consistent handling of customers»*) (p. 8) and project managers. Mainela and Ulkinemi (2009) working on the same case insist as for them on the *“interesting issue where the customer relationship or key account management concretely intertwine with project management»*: the one of *«trouble shooting»* (Mainela and Ulkinemi, 2009, p. 8).

Methode

The empirical part of the research is an exploratory case study on three business settings. Several interviews have been carried out (and are still on-going) with various key informants in each setting. An analysis of secondary data from newspapers, websites, market surveys, internal presentations or memos, was also carried out so as to complete our view of these different managerial practices.

Findings

Preliminary analyses of our empirical data provide initial findings. First, it appears that the issue of how the two perspectives of customer management represented by “project business management” on the one hand and “key account management” may cohabitate is an important one for manager. Second, the existence of several levels of “customer management” largely relies on a “specialization logic”: a company today needs to be a “multi-expert” with a high rank expertise in different processes. Being an expert in project management on the one hand and in managing a relationship with a customer relies on different skills which cannot be possessed by the same person. Third, the existence of different “high expertise” entities within the same company raises the question of their integration. Our study reveals that in project-based firms not only the emergence of key account management reveals the need to take into account the management of relationship with the customer (external aspect of KAM) but also to integrate the different “high expertise” entities involved in this relationship (internal aspect of KAM).

Contributions

We think that our work may contribute to enrich the knowledge about how companies implement the interaction with their customers building on the idea that there are multiple points of contacts between a supplier and a customer. By building on both research stream of KAM and project business it contributes to both fields development.

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TRUST DYNAMICS IN UNIVERSITY-INDUSTRY

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Abstract

Despite prolific research into the success factors and evolution of university-industry relationships, our understanding of the differing nature of success factors across various evolutionary phases and their development throughout relationship evolution remains limited. Hence, this study investigates the interplay between different forms of trust and relevant outcome variables across three relationship phases, namely initiation, relationship development and ongoing maintenance phase. The results indicate a complex web of interactions, with trust in each phase impacting not only the relationship outcome in that phase but also the trust measure in the following phase. Similarly, the relationship outcome in each phase directly fosters the trust and outcome of the following phase. The paper concludes with limitations and future research directions.

Introduction

Prolific research in the area of relationship marketing over the last 30 years has helped gain an overall understanding of the nature, characteristics and drivers of relationships, with significant interest into constructs such as trust and commitment (Anderson & Weitz 1992; Doney and Cannon 1997; Morgan and Hunt 1994), uncertainty and dependence (Anderson and Coughlan 1987; Heide and John 1990; Mohr, Fisher, and Nevin 1996). Relationships are based around interaction, giving rise to the interaction approach, initially founded in inter-organisational and new institutional theories and then becoming an intrinsic element of network theory (Hakansson, 1982). By outlining the existence and interplay between individual episodes and the longer-term aspects of a relationship over a period of time, the dynamic nature of business relationships emerges.

The relationship marketing domain has captured the evolution of business-to-business relationships by stages and state theories. Founded in social exchange theory (Blau, 1968; Thibaut & Kelly, 1959), these theories are based on the notion that perceived outcomes of one episode determine future interactions, which foster relational success factors, such as trust (Lambe et al., 2011). Stages and states theories differ primarily on perspectives of linearity and flexibility in relationship evolution (Rao and Perry, 2002). While stages models describe a linear and irreversible approach of moving from one relational stage to the next (Dwyer et al., 1987; Grayson & Ambler, 1999), states theory suggests complexity and dynamism in relationship evolution (Tikkanen & Tuominen, 2000), thus proposing a non-linear approach.

Interestingly, however, the majority of research investigating relational success factors has been conducted at one point in time without consideration of the dynamic nature of the relationship and its characteristics moving through time.

In particular, few have empirically investigated the process of development between individual relationship characteristics and outcomes across several phases of relationship development or considered the likely differences in the nature of relationship characteristics at various stages of relationship evolution, with recent research calling for empirical work in this area (Goldring, 2010). Moreover, the interplay between different types of relationship characteristics relevant to distinct relationship phases is yet to be considered and tested. Hence, this study will investigate the interplay between different forms of trust and relevant outcome variables across three relationship phases, namely initiation, relationship development and ongoing maintenance phase. It is set in the context of university-industry relationships, which has been deemed appropriate as these linkages are not only instrumental to economic development (van Looy et al., 2003) but also believed to strongly rely on trust (Mora-Valentín, Montoro-Sánchez and Guerras-Martín, 2004; Plewa, 2009), defined here as “a willingness to rely on an exchange partner in whom one has confidence” (Moorman, Zaltman and Deshpande, 1992, p. 315).

Prolific research has confirmed trust as an important antecedent to relationship success, including two meta-analysis over the last 15 years substantiating its particularly strong effect on cooperation (Palmatier et al, 2006), satisfaction and long-term orientation (Geyskens, Steenkamp and Kumar, 1998), with the former study determining relationship duration not to influence relationship characteristics such as trust. A consensus with this literature in the business-to-business and channel settings can be found in the university-industry context (Plewa, 2009; Plewa et al. 2013). Given such consistency in the literature, we propose trust to impact relationship outcomes throughout all phases of relationship evolution.

H1: Trust is positively associated with relationship outcomes in the initiation phase (a), engagement phase (b) and the maintenance phase (c)

The temporal nature of trust is well understood (Walter and Gemünden, 2000). However, even without experience of dealing with the partner can trust be developed, for example by means of an individual's credibility and reputation (Larson, 1992). Such trust in the capabilities or expertise is likely to serve as a foundation for the confidence in, and reliance on, the individual that develops once engagement commences. Furthermore, it is expected that trust in the individual driving the relationship (engagement phase) builds a foundation for a broader trust base to develop over time, encompassing the overall relationship.

H2a: Trust in the initiation phase is positively associated with trust in the engagement phase

H2b: Trust in the engagement phase is positively associated with trust in the maintenance phase

Corresponding to the previous discussion about trust, the relationship outcome in one phase is expected to positively impact the outcome of the following phase. That means, a better defined the goals, timelines and responsibilities initially provides a solid foundation for the engagement of partners and the development of norms and behaviours, thus increasing the likelihood of project deliverables being achieved at the end of phase two. This satisfactory result then allows for partners to look beyond specific projects, opening opportunities for the creation of broader relationship value.

H3a: The relationship outcome in the initiation phase is positively associated with relationship outcome in the engagement phase.

H2b: The relationship outcome in the engagement phase is positively associated with the relationship outcome in the maintenance phase.

Finally, in line with research showing satisfaction (Selnes, 1998) and evidence of service quality (Coulter and Coulter, 2002) as a driver of trust, a positive outcome in one evolutionary phase is likely to foster the development of trust in the subsequent phase.

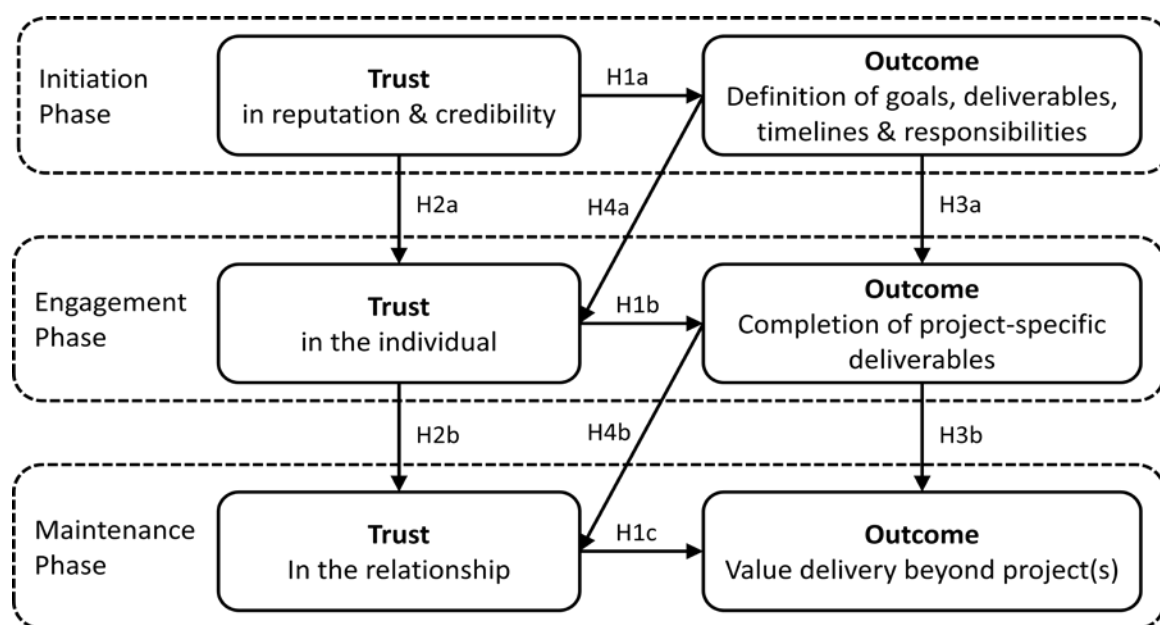
Specifically, the achievement of clearly defining project details in the initiation phase strengthens confidence in the individuals involved in the process. Furthermore, the actual achievement of project deliverables reinforces the perceived potential to rely, not only on the individual but in the relationship as a whole. Hence,

H4a: The relationship outcome in the initiation phase is positively associated with trust in the engagement phase.

H4b: The relationship outcome in the engagement phase is positively associated with trust in the maintenance phase.

The developed hypotheses are summarised in the framework exhibited in Figure 1:

Figure 1. Conceptual Framework



Method

Data was collected by means of an online survey, sent to researchers that were identified as working with at least one industry partner. The sample frame included 714 researchers who were reported as having received funding for collaboration with an industry partner through a national grant scheme for projects starting between 2002 and 2009 as well as 474 researchers identified by three universities in two Australian States as working with industry. It should be noted that a potential overlap could neither be avoided nor assessed. While 217 completed responses were recorded, only 132 were utilised in this study as the remaining responses were not able to report on three relationship phases.

Due to challenges of longitudinal data collection, particularly with small initial sample frames, respondents were asked to retrospectively assess their relationship by reporting on trust and outcomes for each relationship phase.

Limitations relating to such approach are acknowledged (Tikkanen and Tuominen, 2000), for example the potential for respondents to interpret previous occurrences through a current lens. To reduce this drawback, specific tenses were used where relevant and respondents were continuously reminded of the phase upon which they should focus.

The nature of relational factors, such as trust, is likely to differ depending on the phase in which the relationship is examined (Larson, 1992), so that measurement of trust was altered for each phase. Given limited personal experience with a potential partner, expertise or reputation are commonly engaged as a foundation for trust initially (Larson, 1992), with personal contact throughout the first project (engagement phase) allowing for interpersonal trust to development (Doz, 1996; Dwyer et al., 1987). Ongoing engagement, on the other hand, may lead to trust in the relationship of “trusted partners” (Larson, 1992, p. 90). Relationship outcomes specific to UILs were chosen, including the clear definition of project goals and deliverables in the initiation phase, the completion of project-specific deliverables during engagement and value delivery beyond specific projects for the maintenance phase. A qualitative pre-study was employed to confirm these conceptualisations and measurement items of trust as the most relevant ones for each phase in the given context (reported elsewhere). All constructs were shown to be reliable and valid (see Table 1) (Cronbach, 1951; Fornell and Larcker, 1981).

Table 1. Reliability, Convergent and Discriminant Validity Scores

Construct	No. items	α	ρ_{η}	AVE	Highest λ^2
Trust					
Initiation phase	4	.91	.90	.69	.37
Engagement phase	4	.93	.94	.79	.66
Maintenance phase	4	.94	.94	.83	.62
Outcome					
Initiation phase	4	.91	.91	.78	.45
Engagement phase	3	.83	.82	.60	.32
Maintenance phase	2	.89	.89	.80	.68

Results

Data analysis following Structural Equation Modelling principles using AMOS 19 showed a well-fitting model (χ^2 : $p > .05$, $\chi^2/df = 2.033$, GFI=.97, AGFI=.90, CFI=.98, RMSEA=.09, TLI=.94, NFI=.96). Due to moderate non-normality, analysis entails the Normed Fit Index (NFI), Comparative Fit Index (CFI) (Lei and Lomax, 2005) and the Bollen-Stine bootstrapping technique (Bollen and Long, 1993). Results are provided in Table 2 and discussed below.

All hypotheses except for one (H3b) were supported. In particular, as expected, trust was shown to positively impact outcomes, with trust in the reputation and credibility of the prospective partner fostering the definition of project goals and deliverables (initiation phase, H1a), trust in the individual driving the completion of project-specific deliverables (engagement phase, H1b) and trust in the partner advancing value-creation beyond specific projects (maintenance phase, H1c). Interestingly, by far the strongest association emerged for the engagement phase and thus for the time during which partners first actively engage together to deliver project outcomes, followed by the engagement phase.

These results indicate that while trust based on the potential partner's credibility and reputation significantly impacts outcomes in the initiation phase, trust based on direct experience with the partner, most commonly tested in the literature, provides significantly stronger effects.

As proposed, if a trusting relationship is reported early in the relationship, the likelihood of trust in later phases is higher. Hence, while trust in the credibility and reputation (initiation) positively impacts trust in the individual (engagement) (supporting H2a), a particularly strong link exists between the trust placed on the individual contact person and his/her actions (engagement) and the partner as a whole (maintenance) (H2b). Furthermore, as expected, the better the definition of project deliverables and goals, the more likely project outcomes are achieved in the engagement phase (H3a). However, no significant association between the completion of project-specific deliverables and the non-project specific value creation in the maintenance phase. Finally, the successful completion of one relationship phase significantly improves trust in the following phase. The initial determination of project specifics, which depends on the individuals involved in the negotiations thus fosters trust in the individual. Actual project outcomes, on the other hand, likely to depend on a team of individuals and a range of relational behaviours and norms, advances trust in the broader relationship/partner.

Table 2. Results of Path Analysis and Hypotheses Testing

Hyp	Independent variable	Dependent variable	Standard. effect	Critical Ratio	Support
H1a	Trust phase 1	Outcome phase 1	.19	2.26*	Yes
H1b	Trust phase 2	Outcome phase 2	.68	10.95***	Yes
H1c	Trust phase 3	Outcome phase 3	.47	4.91***	Yes
H2a	Trust phase 1	Trust phase 2	.30	3.66***	Yes
H2b	Trust phase 2	Trust phase 3	.62	7.61***	Yes
H3a	Outcome phase 1	Outcome phase 2	.15	2.36*	Yes
H3b	Outcome phase 2	Outcome phase 3	.05	.55 n.s.	No
H4a	Outcome phase 1	Trust phase 2	.18	2.17*	Yes
H4b	Outcome phase 2	Trust phase 3	.18	2.23*	Yes

*** = $p < .001$ initiation phase – phase 1
 ** = $p < .01$ engagement phase – phase 2
 * = $p < .05$ maintenance phase – phase 3

Conclusion

This study provides a valuable contribution to the relationship marketing literature by drawing on stages, states and interaction theories to uncover the dynamics among the different forms of trust and relationship outcomes in three relationship phases (initiation, engagement and maintenance) in the context of university-industry linkages. Besides the theoretical contribution, individuals engaged in the management or facilitation of university-industry relationships may benefit from these results, which not only provide an insight into the specific form trust may take at a particular relationship phase but also indicating the need to closely monitor specific trust and outcome measures due to their impact on subsequent development.

Due to limitations such as a small sample size, a specific context, and a limited number of relationship characteristics included in the model, future research should replicate and extend this study. Furthermore, modification indices indicated the potential for a significant direct impact of trust in phase one on relationship trust in phase three. While limiting parsimony in this model, such interplay between trust factors across phases should be further investigated in the future.

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APPENDIX. Measurement Items

Variable	Items used (all measured on 7-point Likert scales)
Trust	
Initiation Phase (Newell and Goldsmith, 2001)	The partner had extensive experience in their field
	The partner had great expertise
	The partner was skilled in what they do
	The partner did not have much experience (R)
Engagement Phase (Bansal et al., 2004)	I felt that I can trust our contact person at the partner organisation completely
	S/he was truly sincere in her/his promises
	S/he treated me fairly and justly
	I felt that s/he could be counted on to help me when I need it
Maintenance Phase (Ganesan, 1994; Doney and Cannon, 1997; Morgan and Hunt, 1994)	I feel that I can trust this partner completely
	I trust this partner to consider our best interests
	This partner can be counted on to act with integrity
Outcome	
Initiation Phase (Ayers et al., 1997)	Project goals and priorities were clearly defined
	Deliverables were clearly defined
	Timeline and/or milestones were clearly defined
	Responsibilities of all parties involved were clearly defined
Engagement Phase (Bansal et al., 2004)	We were satisfied in general with the project
	Project results covered the initial expectations
	The project results provided balanced results for partners
Maintenance Phase (Fink et al., 2008)	We routinely discuss issues which go beyond the project
	What we offer each other goes beyond our project(s)

R = reverse coded

MANAGING PORTFOLIOS OF INTERCONNECTED CUSTOMERS: EVIDENCE FROM RUSSIA

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ABSTRACT

The purpose of this paper is to broaden current view of customer portfolio management by including the notion of customer interconnectedness. The previous research in customer portfolio theory is reviewed in the article with special attention to customer interconnectedness. Customer interconnectedness as a criterion to build customer portfolios is studied on the example of large Russian b2b company. At first the results of participative inquiry research within the company are presented and after the insights from five in-depth interviews are described.

Findings suggest that the assumption of customer independence in a portfolio, on which most of customer portfolio models are based, may not fit certain markets and industries. This paper sheds the light to the specifics of customer portfolio building in Russian context and results in customer interconnectedness assumption. Additional research beyond the provided exploratory study is needed to quantitatively test the assumption and generalize the results. The main research implications relate to the new perspective on customer portfolio theory based on customer interconnectedness. The paper provides researchers and practitioners with the insights into customer portfolio models specifics existing in Russia. This knowledge can be also helpful for foreign companies entering Russian market.

The process of customer portfolio building in the Russian b2b markets has been addressed for the first time in b2b marketing research. The analysis of customer portfolio building in Russian b2b context shows that customer independence assumption is challenged and should be replaced with customer interconnectedness approach.

KEYWORDS: Relationship marketing, b2b markets, customer portfolio management, customer interconnectedness, Russia

1. Introduction

For years managers and researchers have been striving to find ways of developing business that would better correspond with customer needs and create a greater value for shareholders. In recent decades, managers have realised that customer focus is one of the few ways to win the battle against competitors, economic pressure and technological obsolescence.

Customer-orientation has become the new dominating logic for companies' operation both in the b2c and b2b sectors and has resulted in the development of customer portfolio models that have largely been related to business-to-business markets. This might be because of the small number of players in such markets (Zolkiewski and Turnbull, 2002) or because of the reason that a firm serving business markets is highly dependent on a small number of customers (Turnbull and Cunningham, 1981). Therefore, the addition or loss of a major customer or supplier can have dramatic effects on the company's turnover, profitability and its viability. In such circumstances, customer portfolio management can act as a very useful tool by identifying key strategic relationships (Zolkiewski and Turnbull, 2002).

Limited number of customers becomes even more crucial for Eastern European and Russian b2b companies whose customers belong to the smaller number of large corporate groups or holdings and, though partly independent in their buying behaviour, are in fact deeply interconnected with the parent company.

There are specific factors in Russian emerging economy, determining potential differences in establishing relationship marketing strategies, such as higher instability of relationships in the market, lack of reliable information about potential partners, low information disclosure, higher readiness for opportunistic behavior and higher time pressure (Jansson, Johanson, Ramström, 2007; Halinen, Salmi, 2001, Smirnova et al., 2011). The current culture of business relationships is combining newly acquired competences and rules, with the "part preference for network-based business relationship using old ties and informal activities" (Agios, 2004, p. 220) that also results in the customers interconnectedness through informal networks.

Surprisingly, some notions that are crucial for effective customer relationships and yet have to be uncovered by researchers are already present in daily practice. This paper aims to incorporate some evidence from Russian business practices – namely, the interconnection between customers in a portfolio – in the body of research on customer relationships, thereby addressing an important issue which is only superficially discussed in research literature.

In this approach, customer interconnectedness can be defined as the influence of one customer's opinion on the buying behaviour of another customer through the existence of subordinate relationship, vertical integration, horizontal contracts or managers relying on each other's recommendations. Customers can be interconnected by a number of ways, for example, belonging to corporate groups, holding structures, strategic alliances, vertical integration, industrial clusters and others.

Essentially, this condition is in place in many developing markets, including the CIS countries, Asia and the Middle East (by contrast, Western companies, for example, Shell, and Vinci, have fewer connections: even divisions within one corporation may have separate purchasing departments with their own policies). The concepts of "wasta" in the Middle East

and “guanxi” in China are the examples of interconnectedness culture. Although research literature usually uses these concepts in connection with individual level processes such as hiring employees (Smith et al., 2012; El-Said and Harrigan, 2009) and vertical relationships such as buyer-supplier dyads (Perks et al., 2009), there is support for the impact of such phenomena on procurement and the information exchange between organizations (Wang and Song, 2011).

To achieve the goal stated above, existing portfolio models dealing with initiation/termination of relationships are analysed followed by the discussion of their underlying assumptions. In the next step the new customer portfolio perspective based on the customer interconnectedness assumption is developed and some practical implications and directions for further research are suggested.

2. An overview of existing customer portfolio management models

Existing research on relationship marketing includes a number of different perspectives concerning appropriate forms of relationships between buyers and suppliers. Some researcher like Grönroos (2011), Christopher et al. (2002), Sawhney and Zabin (2002) argue for moving from individual transactions to closer cooperation. Webster (1992) and Snow et al. (1992) regard the changes in relationships not as a move from single transactions to close interaction, but as a transition to a wide array of relationship forms appropriate under certain conditions. Extensive research is dedicated to institutional perspective on relationships and is related to power and rent distribution (Dyer et al., 2008; Dyer and Sigh, 1998). One of significant streams of research is based on customer lifetime value, in early models representing the sum of net discounted revenues generated by a customer (Gupta and Lehmann, 2006; Lemon and Mark, 2006), and later extended to a broader range of customer- related benefits (Ryals, 2008). A great proportion of papers lies in the field of network approach to relationships (Snow et al., 1992; Möller and Rajala, 2007; Håkansson and Snehota, 2006). The definition of customer relationship management that goes in line with our research was proposed by Gronroos (Gronroos, 2007: 275 in Gronroos, 2011: 245):

marketing is defined as the process of establishing, maintaining and enhancing, and when necessary terminating relationships with customers, for the benefit of all involved parties, through a process of making and keeping promises

Significant contribution to relationship marketing research is provided by customer portfolio management (CPM) approach, offering models for choosing and developing relationships with the most valuable customers with regard to multiple criteria. Developed by Markowitz in early 1950s (Markowitz, 1952), the portfolio approach was initially used in financial management for selection of security portfolio based on risk and return. Then the concept was adopted as a tool for corporate strategists (see BCG matrix; Hedley, 1977), and later – for customer management (Fiocca, 1982).

Significant research has been done in the field of customer portfolio management, resulting in a number of models as well as different approaches to the problem. The main focus of portfolio approach is to enable managers to refocus from a product orientation towards a relationship focus and thus to invest their resources in the most efficient and effective way (Zolkiewski and Turnbull 2002).

Advocates of existing CPM models generally follow a standard rule. At first they present an appealing notion that is either new or contains model verification/development,

then reflect it and define matrix axes and steps necessary to formalize the model and finally outline the resulting conclusions and/or recommendations on the basis of their findings as well as directions for future research. This algorithm allows classifying most of researches according to their underlying assumptions by looking into properties of matrices suggested.

With this criterion applied, all of the customer portfolio models addressing the notions of establishment, development and cessation of relationships, to the best knowledge of this work, fall into four broad categories: that have no matrix at all (hereafter referred to as “non-matrix studies”), that have matrices of potential and current benefits (“attractiveness/benefits’ models”), that have attractiveness and current competitive position for axes (“attractiveness/attainability models”) and approaches that evaluate benefits and cost-to-serve (“benefits/costs models”). A significant stream of research is focused on the factors that determine members’ position in a relationship once it has been established (“power balance models”) (Bensaou, 1991; Dwyer et al., 1987; Krapfel et al., 1991), but as these models do not elaborate on selection or divestment of customers, they are not discussed here. These groups are quite diffused in the sense that they have no strict borders. Although clearly distinguishable between matrix-based approaches, they sometimes overlap with non-CPM streams and even totally different disciplines, e.g. attractiveness/benefits’ position models strongly resemble the renowned BCG matrix (current performance and growth potential of a business unit). It should also be noted that some multi-step models such as (Fiocca, 1982) may be a combination of approaches and are reviewed separately.

The results of the research are briefly summarised in Table 1. The following overview gives a broader analysis of models considered and allows to understand the rationale behind the analysis.

Attractiveness/attainability models

This perspective is the earliest to be developed in the stream of CPM and has many similarities with product/business portfolio models. A great deal of research has been conducted in this area in early 1980s, but no evidence of significant follow-up efforts has been found. The approach rests on two works that are described further – (Campbell and Cunningham, 1983) and (Dickson, 1983).

The model of Campbell and Cunningham (1983) is probably one of the most extensive models in the field of customer portfolio management. In its first step, it classifies customers according to their life cycle – yesterday’s customers, today’s regular customers, today’s special customers, tomorrow’s customers, each customer group characterised by typical properties (sales volume, age of relationship, profitability, suppliers’ share in customer’s procurement) and a certain resource allocation policy. The second step involves analysis of customer attractiveness and potential. The main tool for this estimation is a chart with growth rate of primary demand and customer’s share of primary market, as well as the total purchased volume and its distribution between suppliers. Once the most promising customers have been identified, they are evaluated once again, this time on the basis of primary market growth rate and supplier’s relative competitive position. Thereby, the whole work is based on a single instrument – the extent of present attractiveness and future potential, first applied to the supplier’s portfolio of customers, then to the customers’ position in the primary market and then once again to the supplier’s portfolio of selected customers.

The theory put forward in (Dickson, 1983) is somewhat similar to the third step of Campbell and Cunningham's analysis. It considers customers' growth rate and suppliers' share of customers' purchases through the adoption of a two-axis chart. The circles also indicate customer size, however, this is no longer the purchase size, but the costs attached to the respective customer with a breakdown by source. The model also allows for some additional tools such as a dependency matrix which can illustrate the share of a manufacturer's products bought by one customer and the share of a customer's further sales coming from one manufacturer, which is in essence the representation of buyer of supplier power in the dyad.

Attractiveness/benefits models

The first model researching potential and present attractiveness is suggested in (Dubinsky and Ingram, 1984). In this model customers are sorted according to their present and potential profit contribution to form the categories of undesirable, developed, desirable and undeveloped. This model has one noteworthy property – it elaborates on organisations' actions that affect customer migration and the factors that lead to certain customer selection strategies, thereby supporting the perspective of active portfolio management, which is a step from the pure "natural customer migration" point outlined in a number of other works.

A more sophisticated position is developed by Zolkiewski and Turnbull (2002). Instead of focusing on profits and customer purchase shares they take customer value as the main determinant of its portfolio position. The major contribution of this model appears to be in what they considered as an object of analysis – not an isolated dyad relationship, but a dyad relationship with respect to any potential effect on a broader network it can have. This particular notion will be closely researched further in the paper.

Benefits/costs models

The development of these models took place in late 1980s-early 1990s as a result of increased attention to costs in business literature and has much in common with the financial perspective of benefits (in the form of return) and costs (in the form of risk) (Ryals et al., 2007; Ryals, 2002).

The simplest theory modelling customer position between the revenue and cost-to-serve axes is that of Shapiro et al. (1987). It suggests a breakdown by net price and cost-to-serve resulting in four types of customers – bargain basement, passive, aggressive and carriage trade, and a set of actions leading to higher profitability. In spite of a rather prescriptive nature, the article assumes a natural pattern of customer migration and provides possible explanations of customers' position in a matrix, such as dependence on the product and business conditions.

One more model, suggested in (Yorke and Wallace, 1986), considers individual customers and customer segments, viewing revenues and risk as general properties. The significant contribution of this model is the employment of Pareto frontier as a basis of customer selection strategy and the incorporation of risk in the list of cost-incurring factors in a relationship. Further research in this area (Yorke and Droussiotis, 1994) brings forward a number of variables for customer assessment – account potential, capacity development, links to export, account prestige, competitor dependence, payment delays, claims, buying

behaviour. A recent article by Tarasi et al. (2011) has further developed the risk-reward dimension in customer selection.

Non-matrix studies

Non-matrix studies appear largely to be a result of researchers' attempts to address the shortcomings of matrix models of customer management, such as a limited number of factors in a model or the difficulty in obtaining data for model application in business. In general, they date back to mid-to-late 2000s, when considerable attention started being paid to the actual viability of approaches developed. Though providing some insight on customer management, they represent a completely different way of modeling customer portfolios.

The criticism of matrix models was well presented by Terho and Halinen (2007). They argue that there is no one right portfolio approach, rather different approaches may be appropriate in different contexts, but explicitly state two major factors affecting the choice of a model – market/network environment (benefits sought by customers, relationship inclinations) and complexity of exchange (number, complexity of transactions, industry type).

Another perspective addresses customer relationships as a portfolio, but argues against the use charts of matrix tools (Talwar et al., 2008). The authors contend that matrix approaches are too narrow for practical use and suggest a profile-based classification that includes five factors impacting a customer's position in a portfolio – profitability, strategic importance, business complexity, interaction preferences, and the existence of mutual dependence between the buyer and the supplier. These factors are viewed as influencing customer's position between core value seekers and added value seekers.

Some models incorporate more than one of the above mentioned approaches. The work by Fiocca (1982) presents a combination of a benefits/costs and attractiveness/present position models. It suggests a two-step analysis of an organisation's account portfolio. The first step divides the whole customer base in four subcategories according to the strategic importance and the difficulty of managing customers. The resulting groups – nonkey difficult, nonkey easy, key difficult and key easy – are subject to further analysis. Key accounts are evaluated on the basis of relationship strength and the attractiveness of customer's business and checked with additional factors such as the degree of trust between a buyer and a supplier or the age of the relationship.

Another model dealing with revenues and costs is put forward in (Rangan et al., 1992). The analysis highlights two extreme examples of customers – “no frills” and value-sensitive customers. Drawing from the microeconomics theory of producer's and customer surplus, the authors add two more axes showing the distribution of value between the buyer and the seller and point at the categories of high price, low cost and low price, high cost as those where the surplus goes either to the manufacturer or to the customer.

The final piece of research to explore in relation with combined approaches is the model offered in (Olsen and Ellram, 1997). By analysing the importance of purchase and the difficulty of purchasing it first establishes four types of purchases (non-critical, leverage, bottleneck and strategic) and then reviews them from the power balance perspective. Though describing not customers but suppliers, this paper serves as a starting point for a number of customer portfolio models and provides valuable insight in the management of relationships.

3. Models discussion

Quite long period of research (29 years) resulted in a number of competing approaches. Three main perspectives to portfolio models are attractiveness/attainability, benefits/costs and attractiveness/benefits, however, some authors combine these approaches and some argue that portfolios should be defined without the use of matrices/charts. The cited portfolio models are summarised in the following table (Table 1).

General criticism of customer portfolio management models outlined by some authors relates to the limited number of criteria that can be used in the model and leads to its narrowness, subjectivity of dimensions and their interpretation, difficulty in obtaining data, and lack of practical testing and practical recommendations (Terho and Halinen, 2007; Zolkiewski and Turnbull 2002). These remarks are reasonable, but they are focus on the limitations of the portfolio approach rather than on their underlying assumptions. On the other hand, the assumptions themselves are not fully consistent with business practice. This paper contributes to the development of CPM models by addressing primarily the assumptions the models reviewed are based on:

- independence of customers in a portfolio;
- customer acquisition, exclusion and migration along matrix or chart axes (either as a natural course or as a result of seller-applied effort).

According to customer independence assumption, every customer can be easily acquired, moved along axes or totally removed from the portfolio without any serious consequences for other customers – an assumption that is clearly a heritage of financial portfolio models that preceded CPM. A good illustration of such dependence is the model developed by Yorke and Wallace: customers in a portfolio are managed to align the portfolio to a Pareto frontier (Yorke and Wallace, 1986). Each time a customer becomes not profitable for the organisation, demarketing of the unprofitable customer takes place (Shapiro et al., 1987). Some researchers suggest portfolio approach based on customer profitability and customer loyalty and mention that loyal customers can attract large groups of new buyers through their social connections (Sherrel and Collier, 2008) or that customers can perceive feel that they can be divested after earlier “demarketing” of some segments (Mittal et al., 2008).

Table 1. The aggregation of customer portfolio models

Model	Steps, axes	Customer connection	Type
Campbell and Cunningham (1983) Matrix (4x4) Chart (slow/rapid, %, size) Matrix (4x3, size)	Life cycle Growth rate of primary market, customer's share in primary market Growth rate of primary market, competitive position	Unrelated customers	Attractiveness/attainability
Dickson (1983) Chart (%, size)	Distributor's growth rate, company's share of distributor's sales, cost structure	Unrelated customers	
Dubinsky and Ingram (1984) Matrix (2x2)	Present profit contribution, potential profit contribution	Unrelated customers	Attractiveness/benefits
Zolkiewski and Turnbull (2002) 3 matrices (2x2x2)	Profitability, cost, potential value Connections within portfolios Connections between portfolios	Customers connected to other stakeholders	
Yorke and Wallace (1986) Description	Revenue, risk	Unrelated customers	Benefits/costs
Shapiro et al. (1987) Matrix (2x2)	Net price, cost to serve	Unrelated customers	
Fiocca (1982) Matrix (2x2) Matrix (3x3, size)	Customer importance, difficulty of managing the customer Relative relationship strength, primary market attractiveness	Unrelated customers	Benefits/costs Attractiveness/attainability
Rangan et al. (1992) Chart (high, low, power axis, equity axis)	Price, cost to serve	Unrelated customers	Benefits/costs Power balance
Olsen and Ellram (1997) Supplier portfolios Matrix (2x2) Matrix (3x3)	Difficulty of purchase, importance of purchase Supplier attractiveness, strength of relationship	Unrelated suppliers (restriction)	Benefits/costs Attractiveness/attainability
Talwar et al. (2008) Continuum	profitability, strategic importance, business complexity, interaction preferences, mutual dependence	Unrelated customers	Non-matrix

Analysis of existing research literature leads to the finding, that there have been very limited research efforts in the field of relationship portfolio building regarding Russian context (Uldasheva, Ivanov, 2004; Kouchtch, 2006). Existing research provides only one empirical paper about customer portfolio analysis (Kouchth, Rebiazina, 2011). The results of the empirical study conducted in 2008 on the sample of 223 Russian b2b companies show that Russian companies operating in b2b markets use a range of different criteria for customer portfolio building at the same time (Table 2).

Table 2

Criteria for customer portfolio building used by Russian b2b companies

Criterion	Share of companies (%)
Sale volume	90,1
Relationship value	72,4
Customer strategic importance	70,0
Price	67,0
Increase of the demand for customer products	63,1
Cost to serve	55,7
Relationship strength	52,7
Compatibility of the partners' objectives	43,3
Opportunities for joint New Product Development	40,4
Lack of alternative suppliers	23,2

Source: Kouchtch, Rebiazina, 2011, p. 67.

The table shows that in general quantitative criteria dominate for Russian b2b companies (sale volume, price, increase of the demand for customer products and cost to serve) but among the qualitative metrics relationship value and customer strategic importance are of the most importance. It is interesting to mention that the criteria “strategic importance” includes the notion of customer connections as the companies that can give proper references to influence the choice of the supplier are considered to be more important in Russian context. But although some authors recognize that customers are not as independent as the models assume, little has been done to model customer portfolio with the customer’s interconnectedness assumption. This article challenges this research gap.

4. Customer interconnectedness: analysis of existing research

The problem of interconnectedness of actors has been in sight of relationship marketing researchers for quite a while (Håkansson, Östberg, 1975). But from the very beginning it was widely addressed by the advocates of network approach to relationship marketing who usually take a broader perspective than in account management. Although network and portfolio approaches are adjacent in the relationship marketing discipline, the actual incorporation of network perspective into portfolio models has only seen limited efforts, and the interconnectedness of customers in portfolio models is a relatively recent notion.

The first customer portfolio model directly indicating that customers/suppliers depend on each other (or on other stakeholders) is that of Olsen and Ellram (1997). A substantial step towards the merger of two viewpoints is taken by Zolkiewski and Turnbull (2002). The authors highlight the lack of synergies between the network and the portfolio perspectives and approach the interconnectedness through a closer look at units of analysis and different types of interactions (buyer interactions, supplier interactions, indirect interactions, e.g. interactions with competitors). The suggestion of the model is to view relationships as an interconnection of customers within portfolios and of the three portfolios, where some customers could at the same time be suppliers of other products or purchase from competitors. As a part of portfolio management, an organization is supposed to manage these relationships and facilitate or block them when necessary. A similar perspective is presented by Ritter (2000) who shows the reasons that constitute the need for managing customers as interconnected. According to the study, there can be a number of effects between suppliers or customers in a portfolio, ranging from neutral to substantial positive or negative (e.g. neutrality, assistance, synergy, initiation, hindrance, lack, competition or hierarchy). The importance of network impact leads to a necessity of managing the mutual influence of organizations in the portfolio. Further, Terho and Halinen (2007) mention customer interconnectedness as a part of their summary on CPM models, but refer to this as a limitation rather than an assumption.

Research based on European practice, such as surveys and longitudinal studies of customer relationships (Terho, 2009), shows that customer interconnectedness is recognized by practitioners, but this recognition has an intuitive form and hasn't been subject to formalisation. It is clear, however, that decisions made about one customer are closely watched by others and can lead to unanticipated changes in the whole portfolio (Bocconcelli et al., 2006), investigating the outcomes of post-acquisition supplier and customer policy changes).

As McCarthy and Puffer state (2002) Russian b2b markets provide challenges in particular to foreign investors and describe them as “three Russian cultural tradition”: circumventing laws and directives; low trust and personal networks. Personal networks and customer connections can lead to high level of customer interconnectedness in b2b markets. Hence the ability to develop transactionally focused market relations is restricted due to the institutional infrastructure (Wagner, 2005, p. 202).

To sum up, the question of interconnectedness is highly visible and emphasized in Russian business context making it highly fruitful context for a study. The following section illustrates the notion of interconnected customers in supplier portfolio based on the example of Russian b2b company.

5. Portfolio of interconnected customers: evidence from Russian b2b market

Customer interconnectedness as a criterion to build customer portfolios is studied on the example of large Russian b2b company. This particular company (according to the agreement with the company its name cannot be disclosed) was chosen as the object of the research devoted to customer interconnectedness because of several reasons: it is a large successful innovative industrial company with Russian origin operating in b2b production market in Russia and abroad; its customers in Russia include a lot of corporate groups as the company produces equipment for oil and gas construction industry; in Russia this industry is widely known to consist of a set corporate groups and vertically integrated oil companies with lots of subsidiaries (for example, Surgutneftegas, Gazprom, Lukoil, Rosneft, Sibneft, Transneft and a lot of others).

The company investigated is one of Russia's largest manufacturers and exporters of equipment for oil and gas construction industry. The company has production plants in Russia and abroad competing mostly on the CIS market with limited presence overseas. The company is approved as an official supplier by 47 Russian and foreign world- leading oil and gas companies.

The high quality of the products manufactured enables the company to play a successful role in the implementation of many large-scale Russian and international projects in the oil and gas construction sector. The company has gained the reputation of a reliable supplier while successfully implementing a lot of construction projects in the oil and gas industry.

Methodology

The methodology of the research includes two successive approaches: at first the participative inquiry research within the company was conducted to observe the customer interconnectedness phenomenon from inside of the company and to understand how it results on the day-to-day customer portfolio management; and after five in-depth interviews with managers of the company were conducted to gain a deeper understanding of customer interconnectedness.

Participative inquiry research as an a recognized form of experimental research that focuses on the effects of the researcher's direct observation of practice within the company was chosen as a main method to investigate the problem of customer interconnectedness. It had lasted for two months in March and April, 2011 and resulted in set of author observations of daily customer management routine.

The company sells the equipment through a separate sales division which is responsible for account management and related functions such as formulation of customer policies. It coordinates sales of the products to the clients and has about 5000 regular clients. Customers are managed through sales departments working with a specific product, such as equipment for oil and gas transportation or stainless steel products for oil and gas construction industry. 20 people are working within the sales department dealing with oil and gas construction products as full-time employees. The author was involved in its day-to-day practice and customer management operations.

Results from the participative inquiry research

The results gained from the participative inquiry research can be presented in two parts: the general overview of the sales activities and the specifics of customer interconnectedness observed.

Customer base of the company is highly diversified and includes big oil and gas producers as well as small businesses. Despite a significant number of customers, sales are highly concentrated, top five accounts contribute to about 45% of sales. This leads to the creation of substantial power on the part of key accounts because of their relationship power and subsequent necessity of special attention to them. This includes close monitoring of current situation with orders as well as frequent meetings with the customers to anticipate potential changes in equipment needs. Smaller customers fall into two groups: they are either served on a single purchase basis without additional customer service provided or enjoy a level of customer service similar to the big customers receive depending on their role in the customer base. This issue was observed on a constant basis and had no logical explanation at first sight as small businesses treated with high level of service in fact ordered in small amount both in volume and in money.

Observation of sales representatives' behaviour and the internal documents also showed that sometimes high emphasis was placed on relatively small buyers. A more detailed observation allowed to make a supposition that the company did not regard customers as independent, but viewed them in the context of their corporate group network and the ability to impact buying decisions of current and prospective buyers. Further observation got an insight that this small buyers treated as key accounts belong to huge corporate groups where they are interconnected with another companies from the group. Involvement in the day-to-day business practice of the sales department resulted in the number of facts and notices about the benefits the interconnected customers could gain:

- the orders coming from the interconnected customers received priority treatment as interconnected customers were the first in the waiting list for manufacturing and shipment;
- all negotiations about the orders were held faster and they could negotiate better prices;
 - even when volume of order was significantly below than of some independent customers, interconnected customers enjoyed a better level of customer service and had an access to an assigned account manager;
- the conflicts were resolved in a shorter manner and could go to the level of the head of the sales department if the key account manager could not find a solution;
- some discounts offered to small interconnected accounts were similar to volume discounts offered to high-value but independent customers.

To develop deeper understanding of the customer management practices in case of customer interconnectedness in-depth qualitative research was needed. Five semi-structured interviews were conducted with the representatives of the company's sales division: with the vice-CEO, with the heads of sales departments and with two key account managers. The interviews took place within two week of May 2011 and took up to 40-50 minutes each. Respondents were asked to describe how they and their subordinates defined high-value customers, how customer portfolio was built and more precisely about the customer interconnectedness approach.

Results from in-depth interviews

The major variable impacting the strategic importance of the customer as mentioned by all the respondents is the annual revenue, depending on the volume of production or transportation. Both current and potential production is used as the main forecast of revenues from the customer. The second important factor is cost-to-serve criterion which is calculated in working hours dedicated to negotiating the sales, treating complaints and the frequency of travelling to the customers' facilities. Although no exact calculations are available for the heads of departments, they have an approximate estimation of which customers are "easy" and which are "difficult".

All respondents indicate that they do not perceive customers as independent buyers and try to identify their position within a customer base. Respondents mention that «When a small customer turns out to be closely connected to a bigger one, it is automatically assigned to the big customer's "affiliates"». Respondents also state that every enterprise in a similar position should be included in the customer portfolio and managed with regard to its position in relation with the rest of the holding. For instance, a small subsidiary or a unit of a big buyer is supported by the same key account manager and usually receives similar customer service level and discounts from the seller if it is known to have some impact on the parent company buying decisions, while an affiliated enterprise that is less influential in its corporate group will be in the responsibility of the same account manager, but can receive less support and attention. There is no general rule on how these connections are identified, but each head of the department indicates that the experience of their sales representatives and their personal knowledge allows to spot substantial changes in the network of major accounts.

Therefore, the policy of the corporation was built around two major lines: the first was the customer's individual profit margin while the second was its position in a network and interconnectedness.

Although there is a number of ways in which customers can be connected (belonging to corporate groups, holding structures, strategic alliances, vertical integration, industrial clusters, others), the present model addresses the most common situation in Russian upstream industry – the interconnectedness through belonging to the same corporate group. This doesn't mean vertical governance and intervention in units' procurement and operations, but it is important to note that in the majority of situations businesses remain related on the management personal level even if they are not forced to this connection. The tools for managing relationships are context-specific, so the study doesn't explicitly state which CPM approach should be used. The model describing a portfolio of interrelated customers can be similar to those mentioned above, the difference is in the change of its configuration. The model includes two steps of analysis.

Step 1. Identify customer's connectedness with a corporate group

In its first step, the model should specify subsidiaries' places in the business portfolio of a customer according to their present and potential importance in the corporate group. It has long been recognised that business-to-business purchasing decisions are heavily influenced by a number of actors, part of which can reside outside the buyer organisation (Gummesson, 1987). Therefore, it is important for the seller to understand what affects the buying behaviour of a customer that is a part of a broader corporate group. For the Company studied the major variables were production volume and the relative importance of the

customer within its own network. A more general approach to defining customer unit importance can be through estimation of its profit contribution to the combined earnings of the group. The necessary data can be obtained during customer meetings or found in annual reports and business press.

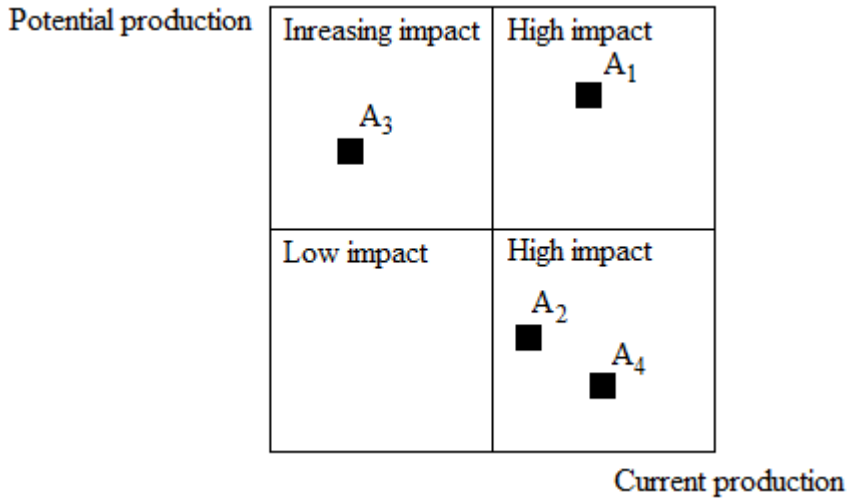


Figure 1. Buyer’s corporate group portfolio

Step 2. Map the portfolio

Having identified the relative position of customers in a customer group, the seller should specify their places in a buyer portfolio using one of the existing portfolio models. For this example, the matrix of purchase value and cost-to-serve will be used as the one preferred by the actual organisation salespeople.

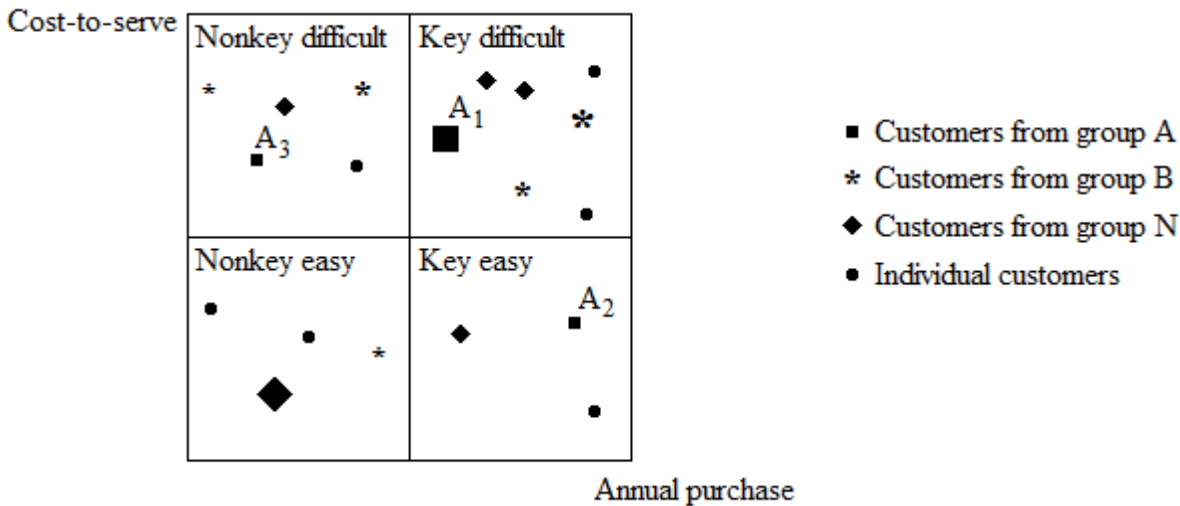


Figure 2. Seller’s portfolio of buyers

The horizontal axis represents annual inflation-adjusted value of purchase by a customer as if it were separate. It can be calculated in local currency or any other type of estimates convenient for the seller. It is preferable to estimate the purchase in value rather than in volume as key accounts usually pay less per unit because of discounts and special

offers, and the supplies can include products with different prices. The cost-to-serve displayed by the vertical axis is more difficult to measure due to non-financial components of sales and marketing costs. The general recommendation here would be to adopt context-specific measures or use the measurements already suggested in the literature (for example, (Ryals, 2006), (Yorke and Droussiotis, 1994)). To visually facilitate the matrix, customers from different groups can be indicated using different icons or different colours. The size of customer icon in the matrix represents the impact this particular customer has on its corporate group. For instance, subsidiary A_1 that has the highest impact in the customer group makes big purchases, customer A_2 being less influential still buys a lot, A_3 is gaining importance in the customer group and already demands a lot from the seller, and A_4 is not the seller's customer and buys from a competitor. If a seller comes across a small, but demanding customer with a substantial impact in its corporate group, there is no opportunity for it to get rid of the unprofitable account, so it should try to reduce the costs associated with the customer to the lowest possible while keeping the customer just above the line that separates the comfort zone from the dissatisfaction. From a financial perspective it would mean using local profit maximum instead of an absolute profit maximum (if profit is a function of revenues and costs, in a basic model the function will look like $F = \sum (P_i * Q_i - TC_i) \rightarrow \max$, resulting in zero values for some variables, e.g. zero sales to some customers, while in the interconnected customers model the profit function is $F \sum (P_i * Q_i - TC_i) \rightarrow \max$, subject to restrictions: $Q_i \geq 0$ for some customers), in line with some insights from other developing markets. The evidence from Chinese businesses shows that network-based customer treatment "... has a positive impact on sales growth rather than on profit growth" (Wang and Song, 2011, p. 29). Local profit maximum is likely to be lower than the absolute profit maximum in the short run, but it will help retain the account in the long run (this type of cost is referred to as relationship maintenance cost – (Möller, Halinen, 1999)).

6. Discussion and recommendations

The suggested model has a number of theoretical and practical implications. It contributes theoretically to the customer management, specifically, the portfolio approach by developing new perspective of customer interconnectedness. Earlier articles stated that this assumption of customer independence is a restriction to the portfolio models. This paper goes further in suggesting how this restriction can be avoided.

The first and the most substantial practical finding of this article is that in Russia marketers believe that customers have an impact on each other's purchasing behaviour, and treat them accordingly. Publications on other developing markets [Wang and Song, 2011] also highlight the existence of network-connection effect in business. This is particularly important for foreign companies while entering Russian market. Though viewing customers as unrelated is possible in some markets, it is useful to analyse the interconnected customers' approach while developing a marketing model for Russian market. Instead of perceiving customers as having no connection with each other it should recognise that such connections exist and include the buyer's internal business unit portfolio in the customer analysis. Otherwise, sellers can miss important business opportunities or appear "disrespectful" to the local customers.

Another implication relates to potential positive results of such management – word- of-mouth and recommendations one subsidiary can provide to others are noticed to increase the amount of products purchased from the vendor. This effect has received the definition of customer referral value (Kumar et al., 2010, p. 1) and is already closely researched in B2C relationship marketing.

One more reason is related to the negative results of overlooking small connected customers, such as customer revenge (Grégoire et al., 2009). Some users can view this model as a tool for reducing risks – by creating good relationships with a number of customers in the group it can prepare for big customer order failures or even the internal power shifts in the buyer corporate groups. Usage the suggested approach in practice is quite difficult. It requires deep knowledge of key customers and full understanding of the processes that happen both inside the customer groups and between the customer and the market. But practical evidence supports the assumption that such management techniques are possible – the number of key accounts is usually limited and modern software assists in keeping and renewing their information.

The experience of the Company studied in this article shows that taking into consideration customer position in a broader context helps to create a sustainable competitive advantage for the company operating in emerging economy.

7. Conclusion

The model discussed above presents a new approach to account management – the matrix axes can remain similar to earlier models, but the assumption of customer isolation is changed for that of customer interconnectedness. The management of such customers can be done through two steps, the first step intended to define relative account impact on its customer group and thereby – on other accounts' buying behaviour, and the second step – using this perspective to evaluate the seller's portfolio of customers. The identification of connections between customers can help to facilitate positive word-of-mouth and minimise customer complaints, establish relationships with “question marks” of customer groups before they gain significant impact thereby directing future cash flows in the seller's way, carefully manage customer base during acquisitions.

As this is a paper in a relatively early stage of research, much needs to be tested and formalised. For instance, little is known about customer migration patterns both within their customer groups and in the seller's portfolio and the ways for the seller to impact this migration. Another important issue is the seller dependence on buyers' connections and what is the right balance between having an unprofitable, but well-connected customer and not having such a customer and associated profitable buyers. Additional studies can help to reduce the potential context-specific errors inherent in a single company research. Finally, other situations for customer connections, such as dependence in network and clusters can be considered as a subject of further research.

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INTEGRATING BUSINESS SUSTAINABILITY EDUCATION INTO THE BUSINESS CURRICULUM: A SURVEY OF ACADEMICS

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Abstract

This study examines the integration of business sustainability education (BSE) into the business curriculum by conducting a survey of academics worldwide. Results, based on the examination of a sample of 45 BSE course syllabi and responses from 87 academics, indicate that the demand for and interest in BSE has increased. More universities throughout the world are planning to provide BSE education and many BSE topics are considered important for integration into the business curriculum. Results regarding the importance, delivery and topical content of BSE should be useful to universities and business colleges that are, or are considering integrating business sustainability into their curricula. More than 3000 global companies are now issuing sustainability reports and thus the BSE issues addressed in this study should help business schools redesign their curricula in response to the ever-increasing demand for disclosure of business sustainability information. Results provide policy and educational implications for policymakers, accreditation standard-setters, business schools, and researchers when considering how to respond to the increasing demand for sustainability practice and education.

WHAT IS THE OUTCOME OF SELLING IN BUSINESS RELATIONSHIPS?

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Abstract

In a B2B context, interactions between buyers and sellers typically involve more than the transaction as firms develop business relationships of different kinds before, during and beyond the transactions. Beyond loosely coupled firms and weak ties, firms often take a relational approach to their customers and develop structural bonds. The inherent complexities of business relationships pose a major challenge for selling as such relationships can be considered an extra task for sales executives to deal with – and an extra investment for firms that try to develop business with new customers. In this conceptual paper, we isolate “selling” from “relating” and discuss theoretical and managerial implications of these two different but highly connected processes.

Keywords: selling, relating, interacting, relationship value, relationship structure

Introduction

Many different aspects of business relationships and business networks have been studied over the past decades (e.g. Håkansson, 1982; Axelsson & Easton, 1992; Håkansson & Snehota, 1995; Ford et al., 2003; Andersen, Narus & Narayandas, 2009). Many of these studies highlight the fact that suppliers invest substantial resources in building business relationships with customers. These activities have been described as “customer relationship management”. While the focus on building relationships is relevant, there is a lack of focus on a substantial task of any business: selling its offerings. Selling offerings secures turnover and is a necessary activity but only loosely integrated into the relationship literature.

This paper contributes with an integration of selling into the relationship literature.

The paper is organized as follows: We will shortly review the relationship value literature and connect value to selling. Then, we develop the dimensions of relationship structure and connect structure to relating. Finally, we discuss managerial implications and conclusions.

RELATIONSHIP VALUE

The *raison d'être* of any business relationship is to provide value. Without the credible promise of value creation, the relationship will not be established and the selling process will be unsuccessful. Several authors have theorized about relationship value (e.g., Grönroos, 1997; Raval & Grönroos, 1996; Wilson, 1995; Wilson & Jantrainia, 1994; for a review, see Lindgreen & Wynstra, 2005). Baxter (2009, p. 22) points out that the term “has quite different meanings”. One main difference lies in the level of analysis on which product value (focus on the exchange object) and relationship value (holistic focus on interaction) can be distinguished (Lindgreen & Wynstra, 2005). Anderson, Jain, and Chintagunta (1992) define value in business markets as “the worth in monetary terms of the economic, technical, service and social benefits a customer receives in exchange for the price it pays for the market offering”. Relationship value is separate and distinct from product value – the former includes the additional benefits and sacrifices arising from the interaction between customers and suppliers that are beyond product-related issues.

Recently, the argumentation of value creation in relationships has changed towards an understanding of relationships as mechanisms for exchanging “value creation potential” (e.g. Grönroos, 2011). The notion is that only the actor itself can create value but that the value creation process is enabled by resources exchanged with suppliers. From that perspective, all firms are value potential providers, also seen as “service providers” (Vargo & Lusch, 2004).

Suppliers can contribute to customers’ value creation processes in different ways. Ritter and Walter (2012) define eight relationship functions with which an actor may contribute to another actor’s value creation (figure 1). The eight functions are divided into two groups, where one group of functions is related to operations and the other group to change (Walter, Ritter and Gemünden, 2001; Walter et al., 2003; for alternative conceptualizations of relationship value, see e.g. Ulaga & Eggert, 2006b; for a review, see Lindgreen & Wynstra, 2004).

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Selling

Selling is the process of convincing a customer to buy. This process has been described as AIDA (attention, interest, desire, action), i.e. a process in which the customer moves from knowing the supplier towards being convinced of its offerings as the best option. Selling is thus the (interactive) development and communication of relevant, convincing value propositions while at the same time ensuring value for the supplier.

Relationship Structure

In addition to the value creation potential, a business relationship is defined by various structural elements.

If we are to understand business relationships and manage them, we need a fundamental understanding of what such a relationship consists of. However, this seemingly simple question of “what is a business relationship?” is difficult to answer. Our review of the extent literature reveals four different dimensions of relationship structure: criticality, distance, interface, and climate.

Criticality

Criticality of relationships is the degree to which a given business relationship has an impact on a firm’s success, to which degree the firm depends on that relationship. Criticality has an internal and an external dimension. The internal dimension is the degree to which the firm depends on a given input regardless of the supplier. The external dimension is the degree to which a given supplier is replaceable. The external dimension has been labelled “dependence” or “availability of alternatives”.

Distance

The resources of the seller and the buyer which are tied together through a relationship are subject to different types of distances (Ford, 1980):

- Geographical distance refers to the “physical distance between the two companies’ locations” (Ford, 1980 p. 343). This type of distance has an impact on the costs and inconveniences of communication (e.g. time zone differences) as well as logistical costs of transferring resources between the parties. While each firm has its postal address as a resource (sometimes referred to as “location advantage”) and can manage this unilaterally by establishing itself, the relational characteristic is the difference between the two geographical positions, i.e. the geographical distance.
- Cultural distance, also called psychic distance, is defined as “the degree to which the norms, values or working methods between two companies differ because of their separate national characteristics” (Ford, 1980 p. 343). Given globalization and internationalization of firms, the increasing movement of employees across national (cultural) boundaries, a long track record of research in organizational culture, and our interest in business relationships, we redefine cultural distance as the degree to which the two firms differ in their norms, values and ways of working. As such, we replace a national view with an organizational view. Organizations have corporate values and beliefs, policies and strategies (Webster and Wind, 1972) which drive their working behavior and their decisions. While firms can decide about their values etc., the relationship is characterized by the compatibility of the organizational cultures, i.e. the cultural distance.
- Technological distance describes the “differences between the two companies’ product and process technologies” (Ford, 1980 p. 343). Hereby, a low distance

indicates ease of integration and a large distance would indicate challenges and costs in tying the resources together. Again, it is the individual firm's domain to decide on their technologies while the relationship is influenced by the relative difference of the resources.

- We refer to timing distance as the difference between the two organizations' business cycle, i.e. their planning and delivery horizons. Different firms and different industries have different planning horizons. While retailers may change product preferences rapidly based on consumer responses (e.g. changing from red wine to white wine), the growers cannot change that fast because their planning rhythm is in years, not months. This understanding of timing difference is slightly different from an understanding of time difference as time gaps in the exchange process (e.g. time between ordering and receiving a product (see e.g. Ford, 1980)). Beyond natural restrictions (as in the wine example), firms can choose their planning cycles. Some have yearly processes, others prefer five year cycles. Likewise, firms can invest in production equipment to enable shorter cycles. For a relationship, the difference between the cycles is a key criterion.

Interface

The third dimension of relationship structure is the interface between the two actors, i.e. the interaction pattern between individuals from both firms. The interactions between the two organizations constitute an anchoring of the relationship within the two respective organizations. Even though we talk about business relationships, business relationships are not carried out by businesses or by organizations but by people employed at these institutions. In each organization, human resources are allocated to a given relationship (Campbell and Cunningham, 1985). These human resources can be described by their overall number (e.g. as full-time equivalents), by their hierarchical and functional position (i.e. their position in the organization chart) and their qualifications, backgrounds, personality, and the like.

As more people are involved on either side of the business relationship complexity increases and it is not simply a matter of reducing the importance of the single individual. Different people will typically be responsible for different aspects of the business relationships and this means that interpersonal relationships within the two organizations will come into play as well. People will have different roles and responsibilities in their organisations which will influence the way they view a given relationship. A relationship may be view as very positive and actively supported by say a purchasing assistant if the supplier is easy to deal with and provide the expected discounts. That same relationship could be viewed very differently by a production manager if the products delivered cause problems in the production line.

Also the different responsibilities of people may cause them to view relationships differently. A purchasing manager's responsibility and level of authority is different from a purchasing assistant's and they are therefore likely to value different aspects of a business relationship differently.

Business relationships are likely to comprise a variety of people with different perceptions and therefore the relationship will contain promoters and opponents of various degrees

(Walter & Gemünden, 2000). At the same time those promoters and opponents will hold different importance for the relationship because their roles and responsibilities are different.

So to understand the relationship we need to understand the constellation of roles of different people, their influence or potential influence on the relationship, which may be connected to organizational position, and the degree to which those people are promoters or opponents of the relationship.

Also related to the interface dimension is the interaction frequency and pattern. How often do interactions take place? Relationships may have different level of interaction at different points in time exhibiting different patterns.

Overall, the interface can be described by position (hierarchy and function of involved people), frequency (of interaction), and attitude towards relationship.

Climate

The relationship climate dimension describes the nature of the interactions between the two actors. Relationships can be more or less confrontational, adversarial and arm's-length or cooperative (Day, 2000; Wilson, 1995). This has led to conceptualizations of interaction modes (Campbell, 1985) and governance modes (Heide, 1994), hereby distinguishing between hierarchical modes (based on power and dependence), partnership modes (based on joint collaboration), and arm's length modes (based on short-term interests). Wilkinson & Young (1994) describe how elements of cooperation and competition form the basis of "business dancing". At any given point in time the actors in a relationship will simultaneously compete with each other for control and resources, and cooperate to achieve better solutions –win/win situations. Thus four different types of relationship climate can be identified: high cooperation/high competition, high cooperation/low competition, low cooperation/high competition, low cooperation/low competition.

Relationships may display different levels of conflict depending on how congruent the actors' goals are. Likewise, different degrees of uncertainty and ambiguity (Geersbro & Ritter, 2010) have an impact on the climate in the relationship.

Relating

We define relating as the process of changing the structure of a business relationship. This is different from selling as selling might be done within an existing business relationship structure. Relating is concerned with maintaining or changing the structure of a business relationship.

Application of the Selling-relating Distinction

The overall conceptualization is illustrated in Figure 2. A firm's customer relationship management process can be divided into a selling and a relating process, each with its own outcome, value and structure respectively.

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Insert figure 2 about here

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From a change perspective, the two processes offer a 2x2 matrix as illustrated in Figure 3. If neither selling nor relating is done, the business relationship remains in its current form – it is static. This can be the case with long-term contracts which are fulfilled according to the agreement. In cases of only relating, the firms explore options. Often, business in Asia is described in a way that relationships need to be built first, and only after selling may be performed. In contrast, purely selling relationships exploit an existing relationship structure to get contracts.

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Based on figure 3, we can also discuss different organizational set-ups to run selling and relating. In some business, the selling is confined in a Sales department – and other departments might be involved in relating. This is typical for firms where delivery and fulfillment is done by Operations without any direct involvement of Sales. Alternatively, selling and relating is jointly vested in a department. This configuration is often found in business consulting where consultants involved in selling are also part of the fulfillment process and thus also participate in relating along the project period.

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Conclusion

To answer the initial question: the outcome of selling is an agreement, often a contract. The agreement specifies the mutual value propositions, the value proposition of the supplier to the customer and the value proposition of the customer to the supplier. The two interconnected value propositions specify the platform for fulfillment, i.e. the delivery of the propositions.

Based on this conceptualization, the outcome of selling is not a business relationship. Business relationships are built (or un-built) by relating, the processes of establishing, blocking, maintaining, developing, and terminating. All these processes share their impact on

the business relationship, and changes or stability can be measured along the described relationship structure dimensions.

Distinguishing selling and relating is an important issue, both in academia and practice. For academia, the strong focus on relationships and their management have in part obstructed the view for the essential purpose of any given business relationships: to support business. Selling has not disregarded, or placed at the transactional end of the relationship structure continuum. The proposed conceptualization helps re-focusing on sales and bridging the relationship-marketing-sales divide.

For business practice, the suggested division of selling and relating offers various insights and tools for analysis. As discussed above, firms have to deal with both tasks but organize these in various ways. The explicit distinction offers new possibilities to analyze and optimize customer-facing processes.

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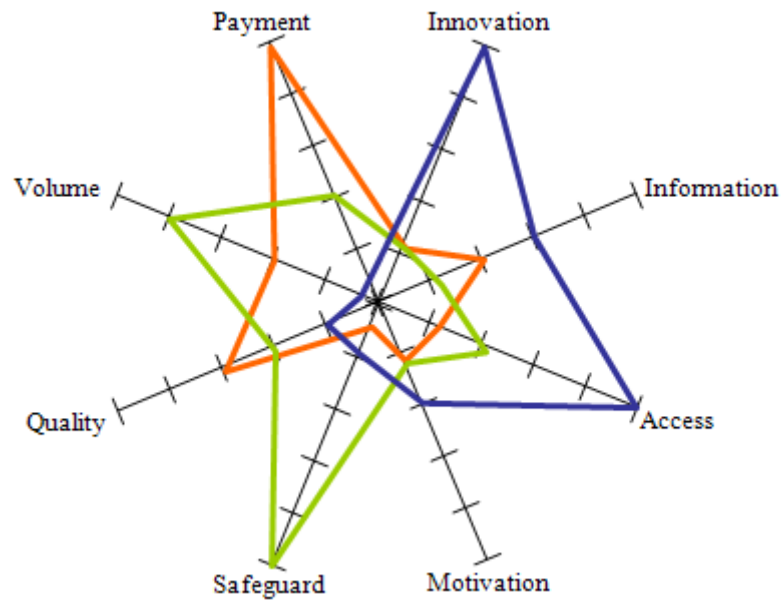


Figure 1: Radar chart for relationship value estimation (Ritter & Walter, 2012)

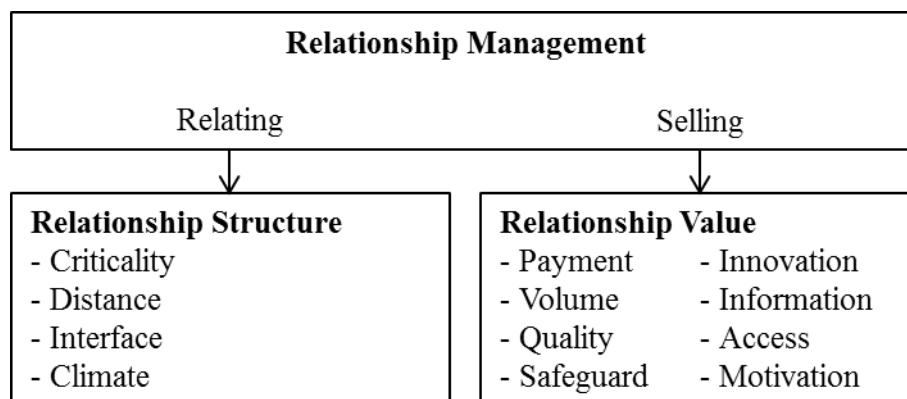


Figure 2: Conceptualization of relationship management as relating and selling

Selling	yes	Exploit	Both
	no	Sleep/Static	Explore
		no	yes
		Relating	

Figure 3: Different relationship management situations

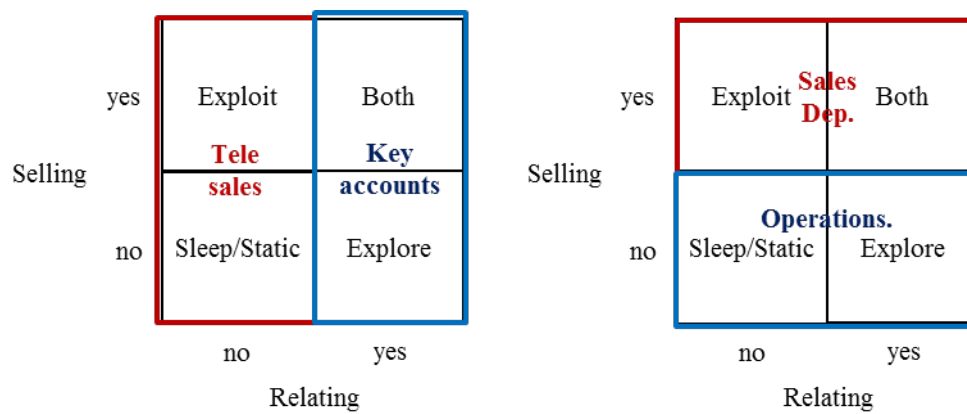


Figure 4: Different organizational set-ups for selling and relating

TOTAL COST OF OWNERSHIP ANALYSIS AS AN INDUSTRIAL MARKETING TOOL

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Abstract

This paper explores whether total cost of ownership (TCO) analysis can be used by industrial suppliers to demonstrate the superiority of their offering to customers. Existing scholarly literature addressing this question is shown to be very limited and even contradictory. An embedded case study comprising a focal machinery supplier and six customer companies is conducted to understand the issue at depth. Altogether twenty-two interviews are conducted with sellers and buyers to identify antecedents and obstacles to sell-side TCO analysis. Based on six obstacles identified and in light of the existing literature, it is proposed that TCO analysis is inapplicable as an industrial marketing tool. In its place, a less comprehensive differential cost approach is suggested. Semantically distinguishing between differential cost and TCO reconciles the contradictory literature, and also allows a conceptual framework to be constructed where the notions of differential cost and TCO are considered subcases of differential value and total value of ownership respectively.

Keywords: Total cost of ownership (TCO), value quantification, industrial marketing, industrial machinery

Introduction

Over the last decades, capital equipment manufacturers with expanding installed bases have increasingly turned to service provision as their core products have faced commoditization and demand stagnation (Gebauer et al. 2012; Jacob & Ulaga 2008; Davies 2004; Wise & Baumgartner 1999). In the machine manufacturing industry, the basic after-sales offering is geared towards putting the original equipment through its useful life by providing MRO supplies (maintenance, repair and operations items such as spare parts and consumables), along with intangible services such as maintenance and tech support (Oliva & Kallenberg 2003). In this installed base market, original equipment manufacturers (OEMs) compete not only with each other, but also with third party service providers and specialized spare part manufacturers. To succeed in differentiating themselves from the competition, it is critical for machinery OEMs and parts suppliers to understand how their customers value and select aftermarket product-service bundles for maintaining their capital equipment. Like other business marketers, machinery suppliers need to be able to calculate, demonstrate and document the value of their offering, including services (Kindström 2010; Lilien et al. 2010; Anderson et al. 2007).

From a procurement perspective, industrial buyers of MRO supplies and services should, ideally aim to buy in such a way that total cost of ownership (TCO) is minimized, rather than just buying on a low price basis (Wouters et al. 2005; Ellram 1995). Accordingly, aftermarket suppliers need to be able to demonstrate the extent to which their products and services lower the lifecycle costs of the customer's capital equipment.

Consequently, some authors have suggested that TCO analysis can be used by suppliers as a powerful selling tool (Piscopo et al. 2008; Brown 1979), whereas others have argued that

using the methodology in industrial marketing is unpractical (Anderson et al. 2007, p.8). While buy-side TCO analysis is a well-known concept (e.g. Ferrin & Plank 2002; Ellram 1995), almost nothing has been published on sell-side use of the methodology. Moreover, the little that has been published appears to be conflicting with regard to the applicability of TCO analysis as an industrial marketing tool.

The purpose of this study is to explore whether and how total cost of ownership analysis can be used by MRO and other industrial suppliers to demonstrate the superiority of their offering to the customer. This is done through an embedded case study in paper machine MRO market—comprising a focal supplier (a multinational machinery manufacturer) and six of its large customers (pulp and paper companies). Three research questions guide the inquiry:

- (1) What empirical evidence is there in the academic literature that proves sell-side TCO analysis has been successfully applied in an industrial context?
- (2) Why would a MRO supplier attempt to use TCO analysis as an industrial marketing tool?
- (3) What are the main obstacles to sell-side use of TCO analysis?

By investigating these questions, the following three contributions are made to the existing academic literature. First, no systematic overview has been conducted of the literature dealing with TCO analysis in industrial marketing and sales. Piscopo et al. (2008) did cite much of the available research in support of their study, but this paper provides an assessment of the totality of evidence. Second, while TCO initiatives and adoption in procurement has been studied (e.g. Wouters et al. 2005), there are no published descriptions of the driving forces behind TCO initiatives in industrial marketing and sales. This gap is filled herein by describing three antecedent circumstances that led the machinery manufacturer to engage in such an initiative. Third and finally, while the obstacles to buy-side TCO analysis are well known (e.g. Ellram 1994), almost nothing has been published regarding the obstacles characteristic of sell-side TCO analysis. This study establishes six such obstacles in their business context by turning to the machinery manufacturer's customers for their views on the topic.

Based on the absence of evidence in the existing literature, along with the identified antecedents and obstacles in the case study, it is proposed that TCO analysis is inapplicable as an industrial marketing tool. In place of TCO, the study suggests sellers should adopt a simpler differential cost approach that only quantifies some cost drivers.

Methodology

Literature search strategy

For the literature review, the bulk of articles were found primarily through comprehensive keyword search in the search engines Google Scholar and Web of Science, which generated articles from databases such as ABI/Inform, Business Source Complete, Emerald, and ScienceDirect. The main topical keywords used were “total cost” and “total cost of ownership”, along with similar concepts such as “life cycle cost” and “life cycle costing”. These were in combined in various ways with and without contextual keywords such as “industrial”, “industrial marketing”, “business marketing”, “manufacturing” and “MRO”. Together, this search strategy yielded scientific articles and other scholarly publications that were relevant both in terms of topic and in terms of business context. Hundreds of abstracts,

articles and a few books were scrutinized for in-text discussion on TCO and equivalent concepts in conjunction with industrial marketing and sales. Then, from key contributions identified, forward and backward citation analysis was performed to find additional relevant material that had slipped through the keyword search.

Altogether, only five articles and two books were found that discussed the use of total cost of ownership analysis in the sales context, however briefly. This is not surprising, as TCO analysis has traditionally been the domain of procurement and supply chain management. The lack of research on the topic made it unnecessary to use bibliometric analyses to establish and assess the current state of the literature. Rather, a simple tabulation and labeling sufficed.

Case study method

In accordance with a suggestion by Ellram (1994), this study relied on the case research method to explore the research questions on sell-side TCO analysis. This was an appropriate approach, because little was known a priori about the phenomenon, and a proper examination required delving into real field conditions (McCutcheon & Meredith 1993).

As sales and procurement are counterpart activities, merely studying the supplier was not enough to generate a complete picture of an inter-firm activity. Sell-side use of total cost of ownership analysis entails a supplier understanding customers' costs, rather than merely a customer understanding their own costs. Consequently, the case in this study encompassed both a focal supplier and multiple of that supplier's customers, which fulfilled the recommended minimum number of firm layers for studies on supply chain phenomena (Seuring 2008, p.128). Because the customers were examined in isolation as well (not strictly in relation to the focal supplier), this study is best described as an embedded case study, as it contains more than one sub-unit of analysis (Yin 2003, pp.42–43).

The focal supplier selected for this study was Metso Corporation—one of the two main manufacturers of paper production lines in the world. At the time of empirical data collection, one of Metso's business units was conceptualizing a sell-side TCO initiative related to their paper machine MRO offering for pulp and paper companies. More specifically, the initiative was about developing new TCO-based sales models for paper machine consumables (also called consumable parts or wear parts), which are core process machinery spare parts that gradually and visibly wear out due to friction.

Analogously to car tires, the demand for machine consumables is quite steady and predictable, because they have to be replaced on schedule when the process has been running for a certain time (Suomala et al. 2004). They thus differ from non-consumable spare parts such as hydraulic pumps and bearings, which may break down unless properly maintained, but whose remaining life is difficult to ascertain (except statistically in aggregate).

This setting provided a unique view into why a supplier of MRO goods and services would attempt to use total cost of ownership as an industrial marketing tool. Qualitative research interviews were used to secure a view into the business problems driving the initiative. The free-form discourse was generated through a total of 15 hours of unstructured interviews with twelve sales and general managers responsible for the paper machine consumables business at Metso. Old MRO contracts, sales pitch presentations and other documents were collected to triangulate the findings from the interviews. Additionally, three paper mill visits were conducted to better understand field conditions.

The findings from the focal supplier case were used to inform the formulation of an open-

ended interview protocol (see Appendix) for subsequent semi-structured customer interviews. The purpose of the customer case study was to identify obstacles to sell-side use of TCO analysis, by exploring the business context of Metso's TCO initiative from the company's customers' perspective. Six customer companies were selected using purposeful sampling (Patton 1990, pp.182–183), to arrive at a reasonably variant but accessible set in terms of size, location and procurement orientation. The customer informants listed in Table 1 include MRO decision-makers from central procurement, mill operating staff, and mill management—all purposefully selected to provide mutually complementary views.

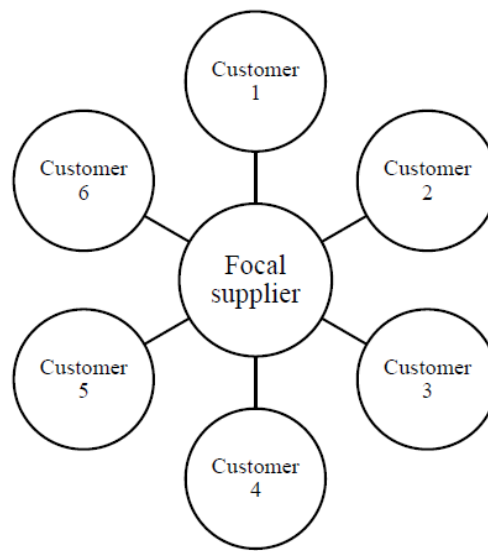


Figure 2: Case study units of analysis

Ten semi-structured interviews were conducted, some of which had more than one interviewee present. In the interviews, documents and spreadsheets were exchanged to clarify and corroborate data, and some interviews were followed-up for further elaboration. As new information was obtained, the interviews gradually became a way of testing the internal validity of the conclusions of this study. The total of 22½ hours of customer interviews were transcribed word-for-word into a 150 000 word compendium, which allowed for accurate recollection and facilitated writing the customer case discourse in a rigorous fashion. The qualitative data was analyzed by grouping themes, aggregating similar arguments and juxtaposing differing points of views.

Throughout this paper, all interviewees and company documents are cited using shorthand superscript notation to reduce clutter, e.g. (Z1) or (U3; S2). The focal supplier interviews at Metso are designated M1 to M12 in chronological order, while the customer interviews are denoted as listed in Table 1. Internal company documents from Metso (see page 43) are cited as D1 to D10, in no particular order.

<i>Company</i>	<i>Position</i>	<i>Location</i>	<i>Interview number</i>
Boise	Purchasing director	Corporate	B1
	Category manager	Corporate	B1
M-real	Supply manager	Corporate	R1
	Production manager	Mill	R1
	Operating engineer	Mill	R1
Papierfabrik Palm	Managing director	Mill / Corporate	P1
Stora Enso	Purchasing manager	Corporate	S1
	Production manager	Mill	S2
UPM-Kymmene	Supply manager	Corporate	U1
	Category manager	Corporate	U2
	Production director	Mill	U3
	Operating engineer	Mill	U3
Zeta (alias)	Purchasing manager	Corporate	Z1
	Buyer	Corporate	Z1
	Buyer	Corporate	Z1
	Buyer	Regional	Z2

Table 1: Customer company interviewees

Scope

A strict product-service scope was imposed to obtain sufficient contextual depth and to facilitate cross-firm comparisons. In terms of products, the scope of this study was ex ante limited to the three major consumables of a paper machine in terms of long-run replacement costs:

- (1) Roll covers—rubber or synthetic coatings that are affixed to paper machine rolls
- (2) Paper machine clothing—woven textile belts that drain water and transport the sheet of paper through the paper machine (also collectively called “fabrics”; with subtypes “felts” and “wire”)
- (3) Doctor blades—long and thin blades that continuously clean the paper machine rolls of water and contaminants

For each type of consumable, there are several different positions of use in the paper machine. One such position is illustrated in Figure 3. Apart from cost-importance, a reason for including only these three items in the scope is that they are interdependent with regard to process performance. With these limitations, a few other big-item paper machine consumables elsewhere in the paper production line were left out, such as application rods for the size press and screen plates for the pulper. Henceforth, the word “consumables” only refers to the consumables in the scope of this study.

In terms of services, the focus was placed on supplementary services for a core offering consisting of consumables. Such supplementary services can include e.g. inventory management, process audits and process improvements. Of less emphasis were full-service contracts,

which may include a supply of consumables. A border-line case was the overlap between paper machine roll cover supply contracts, roll mechanical maintenance, and roll surface grinding services. These were also de-emphasized to keep the number of different services manageable.

Finally, in geographic terms, the scope of this study is restricted to Europe and North America, because these comprise the main market for paper machine consumables.

Structure

This paper is structured as follows. Next, the theory on total cost of ownership is reviewed and a systematic overview is conducted of the academic literature dealing with TCO analysis specifically in industrial marketing and sales. As the body of work turned out to be small, a simple tabulation is used to summarize the findings.

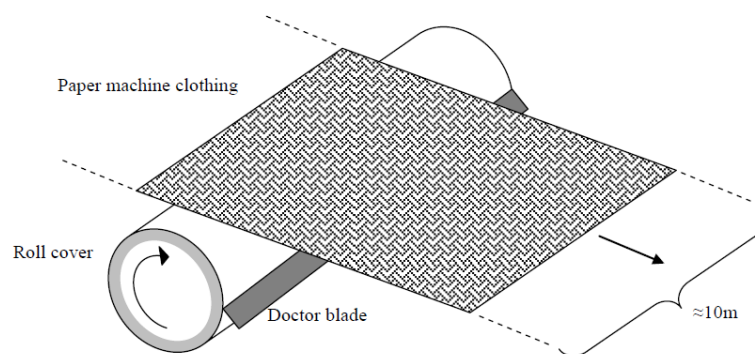


Figure 3: Simple representation of the “big three” paper machine consumables

The literature review is followed by the focal supplier case study, where Metso's position in the paper machine consumables business is described, along with the challenges faced by the company. Based on this narrative, three antecedent circumstances that drove Metso's sell-side TCO initiative are identified. Then, in the customer case study, the paper companies' current methods of procuring machine consumables are described, along with other circumstances pertinent to sell-side TCO. These findings are concurrently analyzed and presented through a theory-building structure (Yin 2003, p.154) where each of the sections culminate in the inference of an obstacle to sell-side TCO-analysis. The customer case study is followed by a discussion and synthesis of the antecedents and obstacles identified, leading to the proposition that TCO analysis is inapplicable as an industrial marketing tool. The implications of this proposition are discussed with regard to prior theory and management practice, laying the foundation for a new framework for distinguishing TCO analysis from other closely related methods.

Finally, the paper concludes with a concise summary of the methods, findings and implications.

Literature review

Historically, the term ‘total cost of ownership’ is predated by ‘life cycle costing’ (LCC), which appears in technical reports and literature as early as the 1960’s. One of the earliest available articles discussing the subject is a study solicited by the U.S. Department of Defense, which re-ports that life cycle costing was a common sense approach for procurement used by many large industrial companies in the 1960’s and earlier (Logistics Management Institute 1967). Industrial engineers and operating staff used the method for equipment acquisition analysis, evaluating bids of potential suppliers, lease-or- buy decisions, and sometimes for pricing the cost of warranties on their own products. The methodology consisted of projecting the costs related to a particular resource over its useful life and comparing this to the expected revenue generated. Analysts accounted costs such as corrective and preventative maintenance, inventory management, training, manpower, fuel, utilities, taxes, marketing costs, downtime, and other operational costs. In the 1970’s, energy prices soared, which gave greater weight to post-purchase costs estimates relative to acquisition costs and thus led to a surge of interest in life cycle costing among buyers of industrial products (Brown 1979). The term ‘total cost of ownership’ appears to have come into use at this time as a synonym for ‘life cycle cost’ (ibid.), although the term was also concurrently used in financial literature to de- scribe the added cost incurred by owning an asset instead of renting it (Miller & Upton 1976). In engineering and industrial marketing, ‘life cycle cost’ remained the preferred term (e.g. Asiedu & Gu 1998; Anderson et al. 1993; Forbis & Mehta 1981), while in supply chain management and logistics, the established nomenclature became ‘total cost of ownership’ (Ellram 1993) or simply ‘total cost’ (Smytka & Clemens 1993; Cavinato 1992; Monczka & Trecha 1988). While definitions may vary somewhat depending on academic field, there is no well-established distinction between life cycle costing, total cost of ownership, total cost and other equivalent concepts advocating the comprehensive monetary quantification of hidden costs associated with products and services.

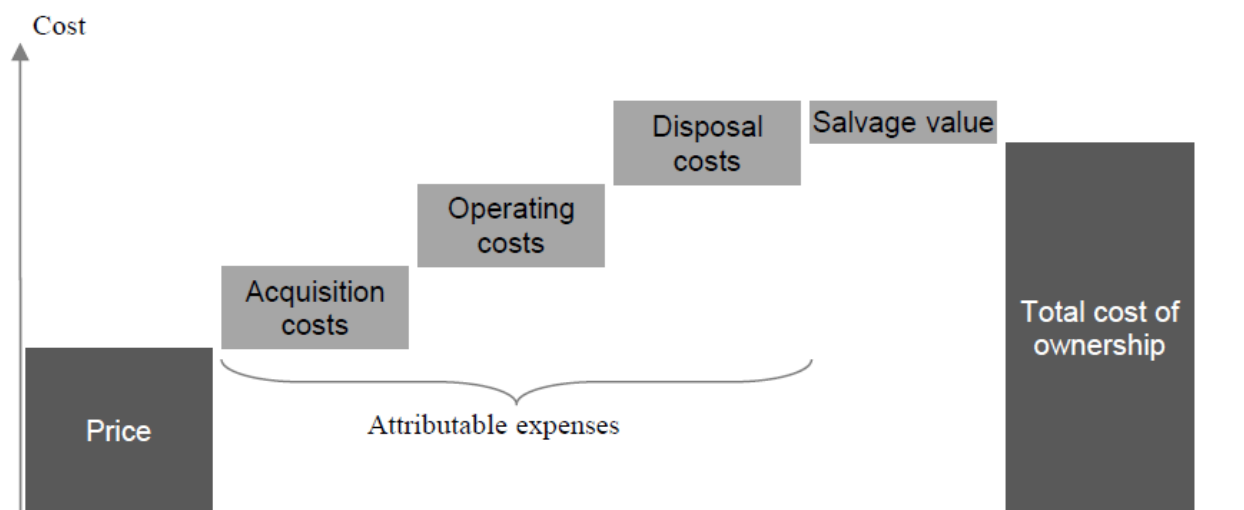


Figure 4: Conceptual illustration of total cost of ownership

What is total cost of ownership?

All goods and services bought as an input to a firm causes the firm to incur costs, of which the most conspicuous is the price. All purchases induce other types of costs as well, because it is necessary for the buying firm to spend additional resources on acquiring, using, and ending the use of the product or service. Such costs can be added on top of the price to better compare different alternatives. For instance, by adding delivery costs to price, the buyer can compute the landed cost of an item (Cavinato 1992). Similarly, the price can be extended to account for suppliers' non-performance, such as the indirect costs of dealing with quality defects and late deliveries (Monczka & Trecha 1988). By the same logic, it is possible to sum up every cost associated with particular purchase from a particular supplier, and thereby arrive at a figure for the true cost induced by that purchase (Degraeve & Roodhooft 1999b; Ellram 1995). This figure—the total cost of ownership—is a quantification of all costs associated with the purchasing process throughout the entire value chain of the firm (Degraeve et al. 2000), or at least an approximation by including only the most significant cost elements (Ellram 1995). Throughout this paper, we use Anderson & Narus' (2003, p.98) pragmatic definition of total cost of ownership as “the sum of the purchase price plus all [attributable] expenses incurred during the productive lifetime of a product or service minus its salvage or resale price” (Anderson & Narus 2003, p.98).¹ This definition is operationalized in Equation 1 and is illustrated graphically in Figure 4.

$$\text{TCO} = \text{purchase price} \\ + \sum \text{attributable expenses} \\ - \text{salvage price}$$

(Eq. 1)

The method of calculating this monetary figure is called TCO analysis², and it is an application of activity-based costing (ABC) to procurement (Wouters et al. 2005; Degraeve & Roodhooft 1999). Traditionally, activity-based costing was used to solve the issue with simplistic overhead allocations causing inaccurate profitability estimates for the company's own products (Cooper & Kaplan 1988). The essence of ABC was to first allocate factory overhead, corporate overhead and other organizational resources to activities performed by the organization and then make allocations to products on the basis of the products' demand for activities (ibid.). In TCO analysis on the other hand, costs are allocated to purchases on the basis of the activities that the purchases impact (Roodhooft & Konings 1997).

¹ The attributable expenses and the salvage value may be incurred years after purchase, and should thus be discounted to their present value (Forbis & Mehta 1981). Also, the “price” here means the pocket price after various discounts (Marn & Rosiello 1992).

² To avoid ambiguity, this paper uses the term “TCO analysis” for the methodology, whilst plain “TCO” or “total cost” refers to the numerical cost estimate that is the output of the TCO analysis; a distinction not made by most academic authors on the subject.

	<i>Supplier A</i>	<i>Supplier B</i>	<i>Supplier C</i>
Purchase price (€)	23.83	20.95	14.08
Time-to-market for new windows (€)	0.11	0.04	0.80
Quality confirmation for new window types (€)	0.00	0.00	0.11
Random quality checks for inbound shipments (€)	0.01	0.01	0.01
Costs of returning defective shipments (€)	0.35	0.52	0.20
Delivery failure (€)	23.75	27.90	25.89
Warehousing (€)	0.64	0.62	0.60
Payment terms (€)	0.07	0.04	0.02
Supplier monitoring cost (€)	0.05	0.02	0.05
TCO (€)	48.81	50.10	41.76

Table 2: Example of a buy-side total cost of ownership (TCO) analysis at Carglass, for the procurement of car windows (Hurkens et al. 2006, p.34, modified for clarity)

Such activities may occur on hierarchically on the supplier level, order level, batch level and unit level (Degraeve & Roodhooft 1999). Every purchase is followed up by supplier and item, thereby making it possible to compare the total costs brought about by different items from different suppliers (Wouters et al. 2005). To put it briefly, while traditional ABC allocates overhead to individual products, TCO analysis allocates overhead to individual factors of production.

Consider the following real case example from the automotive aftermarket industry, originally described in full detail by Hurkens et al. (2006). A car window repair company Carglass (part of Belron) buys replacement car windows from different aftermarket manufacturers and installs them as a service for their customers. Carglass has implemented a spreadsheet-based TCO model for quantifying the total cost of procured windows—a central factor of Carglass' service production.

Table 2 illustrates the final output of the analysis for a particular window type. Based on the analysis, Carglass should buy from Supplier C, because it has the lowest TCO per window. To calculate the TCO, all major additional expenses attributable that supplier have been *added* to the purchase price. The salvage price of the windows has been ignored since they are given away by Carglass as part of the service. All cost drivers are quantified using simple formulae with data from Carglass' ERP and accounting systems. The use of activity-based costing is illustrated by e.g. the supplier monitoring cost, where the total labor costs due to monitoring activity have been allocated to suppliers in proportion to the time spent on monitoring each of them in the past (rather than allocating on a more arbitrary basis, such as volume).

Advantages and limitations of TCO analysis

The main goal with TCO analysis is to make better purchasing decisions by considering cost issues beyond price (Ellram & Siferd 1993). Apart from improved supplier selection and volume-allocation, TCO analysis can also be used for supplier performance evaluation, driving major process improvements and to provide data for negotiations (Ellram 1995). In comparison with widespread supplier selection models such as ratings models and linear weighting models (Weber et al. 1991), the theoretical advantage of TCO analysis is that it makes different criteria comparable in monetary terms without resorting to subjective valuations³ (Degraeve et al. 2000). The comprehensiveness of a TCO analysis may however range from simply trying to capture the most significant cost elements using the Pareto principle (Ellram 1994), to sophisticated models based on mathematical programming (Degraeve & Roodhooft 1999; Degraeve et al. 2000; 2004; 2005).

While TCO analysis is a theoretically sound approach to procurement, empirical studies have shown limited use of method in practice.

Ellram & Siferd (1993) queried 103 purchasing managers and reported that only 18 % of used a formal TCO model, 24 % didn't use TCO at all, while the remaining 58 % used some kind of informal model. For MRO items, Ferrin & Plank (2002) reported a meager 10 % TCO analysis usage rate in 274 manufacturing companies. And even in companies where TCO has been used, managers have indicated that the systems are vague, inaccurate or otherwise untrustworthy (Milligan 1999). The primary reason for the low rates of TCO usage appears to be the lack of readily available data (Hurkens et al. 2006), which stems from a lack of good computer systems, along with the labor-intensity of collecting and inputting cross-departmental data (Milligan 1999). Note that TCO is not appropriate for all buys, because the modeling itself can take hours or weeks to conduct (Ellram & Siferd 1998). The main theoretical limitation of using TCO analysis to understand the economic impact of supplier's offerings is that the analysis focuses on costs only (although possibly including straightforward opportunity costs), while ignoring harder-to-estimate revenue effects downstream from the purchasing firm (Wouters et al. 2005). For instance, plant maintenance services may affect both end product quality and lead times, which in turn will affect pricing and quantities demanded of the end product in an unforeseeable way (Sherwin 2000). This means that in cases where the revenue-side effects are significant, TCO analysis by itself is *not* sufficient for evaluating the economic impact of a sourcing decision. Ahl-

³ Ellram (1995) refers to TCO models based on performance category scoring as "value-based TCO models" as opposed to "dollar-based TCO models" which are based on ABC costing. In this paper, "TCO" strictly means the latter type, because the former "value-based TCO models" are similar to regular ratings models in that weightings are subjectively determined; the only difference being a rather arbitrary conversion of a score into a monetary figure.

mann (2002) suggested “life cycle profit”⁴ as the correct method, but this concept appears to be more of a theoretical proposition than a tool that could be applied in practice. Wouters et al. (2005) have called for academics to expand total cost of ownership into a “total value of ownership” concept—which would recognize that higher priced offerings may generate revenue improvements rather than cost savings—but no such all-encompassing analytical concepts have emerged to date.

The issue with downstream revenue effects is however not usually a problem in MRO items, because they generally do not affect the performance of the market offering, as perceived by the customer (Wouters et al. 2005). As an example, consider that even particularly high-quality doctor blades installed optimally cannot improve the quality of the final paper beyond what the papermaking process is designed for.

Rather, a high-quality blade can only reduce the cost of running the process, e.g. by reducing energy consumption through efficient water removal. This is not the same as saying that it is impossible for a doctor blade to affect the quality of the end product. A damaged doctor blade may cause indentures on the roll cover, which in turn will cause streaks or other printing defects on the paper.

Such paper does not conform to quality specifications and will be re-pulped rather than sold at a discount, thus incurring additional expenses rather than causing non-realized revenue. Consequently, TCO may be an excellent performance metric for MRO items such as paper machine consumables.

Can TCO analysis be used as a sales tool?

While TCO analysis is an established procurement methodology, it does not automatically follow that the method can be successfully applied on the opposite end of the negotiating table. Sell-side use of TCO does not appear to be widespread, as is indicated by Ellram & Siferd’s (1998) study, which identified 21 uses for TCO analysis in 11 industrial companies, none of which was using TCO analysis as a sales tool.

Table 4 below contains an overview of all academic literature found discussing sell-side TCO analysis. Only seven scholarly publications were found mentioning the use of TCO analysis in the context of industrial marketing and sales. Brown (1979) argued that life cycle costing is useful in the marketing of higher-priced industrial products that provide long run

Life cycle profit (LCP) can be defined as:

$$\text{LCP} = \int_0^T (\text{Revenue}(t) - \text{Cost}(t))e^{-rt} dt + \text{Residual}(T) \cdot e^{-rT} - \text{Investment}$$

where T = lifetime of the asset, r = the cost of capital (adopted from Ahlmann 2002). This definition of LCP is equivalent to calculating the net present value (using exponential discounting) of an economic asset that demands an initial investment, generates revenues and costs over time, and has a residual value at the end of its life. Compare with Eq. 1.

⁴ Compare with Eq. 1.

cost savings. Similarly, Stremersch (2001) briefly suggested that maintenance firms need to develop TCO calculators to sell full-service maintenance contracts. Other authors were more inquisitive in their approach. Plank & Ferrin (2002) concluded their article by asking how sales people should be trained to change the buyer's valuation system from price-orientation to TCO. Zachariassen

& Arlbjørn (2011) saw an avenue for future research in determining the effects of negotiating situations where sellers have more TCO data than the buyers.

None of the above authors provided any empirical evidence in favor of sell-side use of TCO analysis. In fact, the only peer-reviewed article providing any kind of empirical evidence on the matter is Piscopo et al. (2008), who conjecture that TCO can be a powerful tool for business marketers based on a single sales case. In the case, a sales engineer from Rockwell Automation—a supplier of industrial electric motors and parts—successfully uses a TCO approach to support the sale of a bearing lubrication system to a manufacturer in the food and beverage industry. The engineer meets key experts and collects specific data at the customer site and makes a rudimentary TCO spreadsheet calculation (Table 3 below) to demonstrate the lower TCO of the new bearing lubrication system compared to the current one.

The use of TCO in sales is not without its detractors. Anderson et al. (2007, p. 8) contend that TCO analysis is “unworkable in practice”, because customers have limited patience in co-operating with suppliers and only a limited willingness to share data. They further argue that efforts to calculate TCO regardless of these limitations leads to “filling out forms, guessing, and recycling opinions—in place of actually gathering data” (ibid.). In an earlier book however, Anderson & Narus (2003, p. 339-341) did recognize Rockwell Automation's “TCO-toolbox” as best-practice consultative selling. The reason for this discrepancy appears to be that Rockwell's approach does not normally drill down into all the costs and steps in the customer's entire production process (Anderson et al. 2007, p. 123), thus implying that Rockwell's normal sales efforts using the TCO-toolbox software solution is not a fully-fledged TCO analysis. A comprehensive analysis is only done if the customer requires or asks for it, and in that case, Rockwell uses specialized internal consultants rather than salespeople to conduct the analysis (ibid.).

The cost of using consultants will, depending on agreement, either be borne by the customer or by Rockwell's sales and product marketing unit (ibid.).

To conclude the literature review, little research on TCO in sales has been conducted, and scholarly opinions are either inquisitive or offer contradictory opinion on whether it works or not. There is almost no empirical evidence in the academic literature that proves sell-side TCO analysis has been successfully applied in an industrial context. The single successful case described in the literature is one where the buyer collaborated with the seller to conduct a partial TCO analysis only. In business, the absence of evidence is, more often than not, evidence of absence. Nevertheless, based on Rockwell's success case, it may be possible to use TCO analysis on a case-by-case basis to compare the supplier's suggested solution with the existing one. This will require a very cooperative customer and may require the use of internal or external consultants to conduct the analysis.

Table 3: Example of a sell-side TCO analysis from Rockwell Automation (Piscopo et al. 2008).

	<i>Current scenario: No lubrication system</i>	<i>Proposed solution: Lubrication system</i>
Initial purchase price		\$5 000
Bearing replacements during system lifetime	10	4
Bearing unit cost	\$500	\$500
Replacement part cost	\$5 000	\$2 000
Replacement time per bearing (h)	6	6
Labor rate (\$/h)	\$150	\$150
Replacement labor cost	\$9 000	\$3 600
Downtime (h)	6	6
Downtime cost per hour	\$600	\$600
Total downtime cost	\$36 000	\$14 000
TCO	\$50 000	\$25 000

Table 4: Summary of the findings from the literature review on sell-side TCO analysis

<i>Author</i>	<i>Quote</i>	<i>Stance on TCO as a sales tool</i>	<i>Empirical evidence provided</i>
Brown (1979, p.109)	Life-cycle costing is a method of calculating the total cost of ownership over the lifespan of the industrial product. It can be especially useful in the marketing of industrial products that sell for high initial prices, but which provide long-run cost savings.	Positive	None
Stremersch et al. (2001, p.9)	The findings concerning the decision-making process have important implications for marketing full-service offerings as compared with more traditional, single service, offerings. Maintenance companies (and OEMers) will have to broaden their marketing and sales approach [...] Maintenance firms also will have to be prepared for the longer decision-making process and develop specific tools, for instance to calculate "total cost of ownership," for specific phases throughout the extended buying process.	Positive	None
Plank & Ferrin (2002, p.464)	[...] what kinds of training best equip a salesperson to move a potential buyer from short-term direct price valuation to TCO valuation? This research equips industrial marketers to ask whether different sales skills are necessary to sell to buyers using price-oriented valuation schemas versus buyers using a TCO, supply chain or noneconomic valuation logic.	Inquisitive	None
Anderson & Narus (2003, p. 339-341)	[To structure cost implication questioning.] sales representatives often turn to the total cost of ownership (TCO) analyses [...] Through these TCO assessments, reps and purchasing managers jointly identify and quantify major "points of pain" or cost drivers for the prospect company that might not otherwise be apparent.	Positive	Case Rockwell Automation
Anderson et al. (2007, p. 8)	Approaches to assessing customer value that are cumbersome in practice or that require statistics experts will be met with resistance, especially from the sales force and customers. Total cost of ownership, for example, is hard to argue with as a concept. The problem is that it proves to be unworkable in practice. Customers have limited patience in cooperating with suppliers because customer managers have greater responsibility and increasing demands on their time.	Negative	None
Piscopo et al. (2008, p.205)	Sellers can use TCO models to measure, document, and communicate the value that their offering represents to a customer in the way of lower costs relative to the next best alternative. TCO analysis can be a powerful selling tool to demonstrate concrete customer value creation for alternatives that deliver comparable benefits.	Positive	Case Rockwell Automation
Zachariassen & Arlbjorn (2011, p.459)	[...] our empirical data supports the claim that the use of TCO in different dyadic supply chain relations can indeed become inexpedient. Buyers would present cost data that were used for manipulative purposes, and suppliers reactively responded to. As a result, a reverse situation in which suppliers have more information than the buyer and therefore more power in the negotiation setting could lead to a similar escalation of manipulative tendencies [...], however, the empirical data do not support [nor deny] such a logical conclusion. Future research should address this issue.	Inquisitive	None

Focal supplier case studie

As established in the literature review, the use of TCO analysis as an industrial marketing tool is a rare phenomenon that lacks a track record of successful implementations. Yet some companies, like Metso Corporation, decide to pursue uncertain sell-side TCO initiatives anyway. It is not known how many of such initiatives actually succeed, but merely their existence points to a need for some suppliers to demonstrate their impact on their customers' total costs.

The purpose of the focal supplier case was to establish reasons as to why a supplier of MRO goods and services would attempt to use total cost of ownership analysis as an industrial marketing tool. Understanding the drivers of sell-side TCO initiatives is necessary to fully understand the subsequent obstacles to its implementation as well. At the time the focal supplier interviews were conducted, Metso's TCO initiative was in the conceptualization phase. Managers were searching for information on TCO and brainstorming ideas on its use in the sale of paper machine consumables. No pilot tests had been conducted however, and existing customers were unaware of the initiative. This section is structured as follows. First, Metso Corporation is introduced and the market for paper machine consumables is described. It is then briefly narrated how low-cost niche consumables manufacturers have put pressure on prices, and how Metso has attempted to change its sales strategy and demonstrate the value of its higher-priced offering. Thereafter, Metso's sell-side total cost of ownership initiative is discussed, along with the antecedent circumstances that drove the initiative. Finally, on the basis of the focal supplier case, three generic antecedents are suggested that may explain as to why a MRO supplier would attempt to use TCO analysis as an industrial marketing tool.

Introduction in to Metso corporation

Metso Corporation is a global supplier of industrial machinery and related services to process industries such as mining, construction, power generation, oil and gas, recycling, as well as pulp and paper. At the end of 2010, the company had 28 600 employees, most of which were located in Finland, China, the US, Sweden and Brazil. Metso's annual net sales were 5.6 billion euro, of which 45 % pertained to service business, 35 % to projects and 20 % to products. Similarly to other Finnish capital equipment manufacturers such as Kone and Wärtsilä (Salonen 2011), Metso's corporate strategy revolves around a strong development of the service business, which comprises spare parts and consumables, maintenance, repairs, rebuilds, and various process analyses and optimizations. The company's goal is to expand the service business so that it will account for over 60 % of the corporate net sales at the bottom of a business cycle and at least 40 % at the peak. This growth should be readily attainable by increasing their share of the potential service business stemming from their installed base. Metso has estimated that this market is worth 18 billion euros annually, and that they only have 15–20 % market share. A significant part of this market consists of maintenance and repair activities performed by the process industry companies themselves rather than Metso's competitors. (Metso 2010) Metso's Paper and Fiber Technology is one of the company's three business segments. The segment is divided into three business lines: Paper, Fiber, and Services. Contrary to popular perception, the Metso Paper business line does not produce paper, but rather manufactures paper, board and tissue machines out of steel structures and components sourced from subcontractors. The Fiber business line on the other hand mainly focuses on engineering and project delivery management for the pulp industry, while the actual machinery is mostly manufactured by subcontractors. The

Service business line serves customers in the pulp and paper industries with spare and consumables, maintenance and other services. The service business generated 677 million euros in revenue in 2010, out of which 70 % came from the sale of spare and consumables. (Metso 2010)

Competitive landscape in the market for paper machine consumables

In 2011, there were 8538 paper machines⁵ in the world, with a total capacity of producing 450 million tons of paper, paperboard and paper tissue annually (D1). When weighted according to production output, the average paper machine had a technical age⁵ of 18 years in 2006 and produced 165 000 tons of paper annually (Diesen 2007, p.111). New machines were being built mainly in China, while capital investments in Europe and North America tended to be mostly machine section rebuilds (Metso 2010). A greenfield pulp and paper mill is roughly a 400–500 million euro investment for a pulp and paper company (M3). The paper production line accounts for 100–200 million of the total investment, while the paper machine itself costs about 30–100 million euros (M3).

In the market for new paper machines, there are two main suppliers, both of which are large multinational industrial machinery manufacturers: Metso Group, with a global market share⁶ of 31.3 %, and Voith Group with a market share of 30.9 % (D2). All other suppliers have less than a 5 % market share each (D2). In partial production line deliveries such as machine section rebuilds (≈10 million euro investments), Metso competes with globally operating companies such as Andritz and GLV and more regionally focused companies such as Finnish Vaahto, Taiwanese Yue Li, German Bellmer and PMT Italia (M2; M7; M12) (Metso 2010).

A study by Metso indicated that single paper machines have an average service business potential of up to 10 million euros annually, out of which Metso only has a 0–10 % share (M2; M12). The paper machine related service business consists of MRO services, process improvements, and the sale of spare parts and consumables. Spare parts and consumables are not strictly “services”, but are nevertheless included in the notion of industrial service, which comprises all after-market support and parts for industrial goods (Johansson & Olhager 2004).

The competitive landscape in consumables is different from spare parts. Spare parts are mainly provided for the machinery supplied (M2) (Metso 2010), because, like other original equipment manufacturers (OEMs), Metso and its subcontractors are the only ones with the necessary design specifics (M2). With regard to consumables however, Metso sells parts for machinery installed by both Metso and by its competitors. A considerable portion of the consumables market has been captured by a number of both medium-sized and large companies specializing in manufacturing specific types of consumables (M11). An example is Xerium Technologies, which mainly produces two types of paper machine consumables: machine clothing and roll covers (M2; M7; M12). The reason for the success of the specialized companies in the consumables market is arguably threefold. First and foremost, the same non-proprietary technologies can be

⁵ The technical age of a rebuilt machine is the age of an equivalent machine that has not been rebuilt (Diesen 2007, p.111).

⁶ The market share figures provided are the share of machine capacity (in tons of paper per annum) for new machines built between 2006 and 2011. (D2)

utilized in manufacturing consumables for large ranges of machine designs (M2). Second, for any given paper machine, the long-term costs associated with consumables far exceeds that of spare parts, thereby making consumables a high-volume business worth specializing in (M8; M11). Third, consumables have to be continuously replaced for the paper machine to keep running, thereby leading to a stable and predictable demand.

For Metso as an OEM, the most difficult competitors in each segment of the consumables market are the multitude of specialized manufacturers rather than other OEMs (M2; M6; M8). These niche competitors can be as advanced technologically and may have the ability to imitate and further develop OEM-manufactured consumables (M2). The combination of increased competition and increased imitation has led to a trend of increasing commoditization of the consumables used in paper machines (M5). This means that it becomes increasingly difficult to effectively differentiate original consumables from non-OEM consumables (M2). As offerings have become more similar, buyers have been able to drive prices down through simple requests for quotation (M11), thereby making the consumables aftermarket business far less lucrative for the OEMs (M12).

More than just margins have eroded for the OEMs. The OEMs have lost a considerable share of the consumable market to the niche competitors, because, while buyers have become increasingly price sensitive due to the commoditization of the consumables (M2), the niche competitors have been able to sustain significantly lower prices. Although their manufacturing costs are similar, the reason the niche competitors can compete on price is that they have lower overhead (M2; M6; M10; M1), partially due to them being able to free-ride on the OEMs' heavy R&D through spin-outs and employee attrition (E1; P1). As an example of the pricing differences, consider doctor blades. Doctor blade suppliers are typically selected by paper companies on the basis of simple requests for quotation (RFQs), with the selection criteria being price per meter of blade (M10). Niche competitors sporting lower overhead are able to profitably sell some types of doctor blades for, say, 200 euros per meter of blade, while Metso's best offer would be priced 15–20 % higher at 230–240 euros per meter (M10). With such a price discrepancy, buyers will be strongly incentivized to select the non-OEM offering, regardless of the reputational advantage Metso holds as an OEM (M5). In some blade types in Europe, Metso has lost up to 90 % of tenders in this way; and even buyers who previously bought doctor blades from Metso have switched to lower cost suppliers (M2; M5).

Metso's sales strategy for paper machine consumables

One of Metso's ultimate business development goals is to get pulp and paper companies to outsource the upkeep of the entire production line to Metso (M8). In other words, Metso would like to eventually provide integrated solutions (Davies 2004) for keeping customers' paper lines up-and-running. This market is very attractive for machinery suppliers (M2), as full-service industrial maintenance contracts have less price transparency and sales margins up to 10 %, which is very high in comparison to the traditional, hourly rate maintenance market with margins as low as 0.5 % (Stremersch et al. 2001). A further step downstream would be to actually operate the machines on a daily basis. Such an arrangement could be a type of performance contracting, since it would make sense to pay the operator on the basis of actual paper production

rather than using traditional cost plus or fixed price arrangements (Kim et al. 2007). So far, e.g. Metso has not functioned as such a “performance provider” in any paper mills (M2), and the concept remains more of an OEM’s dinner table envisagement than an actual business proposition similarly to other manufactures of capital equipment (Oliva & Kallenberg 2003). A strategic repositioning towards service business has been difficult and sluggish, because Metso has traditionally been a product-focused technology company, where “90 % of development efforts are spent on polishing products” (M2; M8). Another major hurdle is that paper mills currently have little if anything to gain by committing to a single machinery OEM for after-market services (M2; M11). In the meantime, Metso has placed developmental focus on trying to secure single supplier contracts in high-volume machine consumables (M2; M4; M5; M12). This means competing head-on with niche manufacturers, to whom Metso will generally lose on a price basis.

In line with the corporate strategy emphasizing service business expansion, Metso has, with limited success so far, tried to differentiate their consumables offering from the niche competitors and motivate their price premium by including free supplementary services such as tech support, inventory management and regular process audits in contracts (M5; M10; M11). By bundling the core product with supplementary services in this way, they try to differentiate and market themselves as a “solution provider” that helps customers improve their productivity, efficiency and quality (M2; M10). The rationale behind this move is that Metso, as an OEM, has deep machine and process know-how that can be used to improve customers’ paper production processes beyond what they could accomplish by themselves (M2; M6; M11), while niche competitors aren’t able to provide such services at the same level (M5). This strategy for beating commoditization is called a value-added strategy by Rangan & Bowman (1992), who contend that it is a feasible strategy where “the purpose is to pamper the customer with a lot of services, thus enabling the supplier to earn a price premium over competition”. However, there is a risk that the free services superficially disguise (rather than solve) low product profitability (M5)—a typical issue when the value chain includes services as well (Wise & Baumgartner 1999).

Another differentiation avenue that was being explored by Metso is the bundling of multiple types of consumables into the same contracts. This would mean an all-in-one supplier contract comprising roll covers, paper machine clothing and doctor blades. Niche competitors cannot offer such a bundle, because they are only capable of manufacturing one or two of the three parts (M2). For such a bundle to make sense from a buyer’s perspective, it must confer some added advantage over buying the parts separately at lower prices from specialist suppliers. The rationale behind the bundling is that the parts are in direct physical interaction in the paper machine, and it might be possible to lengthen their lifespans or improve process performance by optimizing the compatibility of the consumables as a system at the design stage, rather than retrofitting parts from different manufacturers (M5; M7; M10; M11).

Struggle to demonstrate value

Metso’s competitive position in paper machine consumables is one of higher price and higher value—which stems from delivering bleeding-edge OEM technology and providing free supplementary services. To convince customers that Metso’s offering is worth the higher price, sales

people tend to rely on slideshows with qualitative bulleted lists of benefits, e.g. using statements such as “we provide process support to reduce paper sheet breaks” (D8). These types of sales pitch tactics were however considered rudimentary by managers, who contended that they should somehow be able to quantify the benefits of the offering in monetary terms, but had failed to do so because of a lack of good metrics and calculation methodology (M2; M4; M5). For instance, a doctor blade might have a slightly lower coefficient of friction than competitors’ blades (other things being equal), but the energy savings are not normally verifiable through power use readings on the customers’ site, because the effect is too small to detect on a multi-megawatt machine drive (P1). Similarly, it is not straightforward to determine how supplementary services like process audits impact the customer’s bottom line. As Metso has been unable to unequivocally demonstrate the value of their high-price offering, they are in a disadvantageous position when customers put consumables contracts out to tender. The reason is that differences in value are difficult to ascertain whereas differences in price are not (Anderson et al. 2000). When the buyers are professional purchasers in a central purchasing unit (rather than local mill management), this effect is exacerbated by an incentive problem called “green money vs. gray money” (Anderson et al. 2007, p.4). Green money refers to cost savings for which purchasing managers can readily get credit, whereas gray money are cost savings that are difficult for purchasing managers to claim. Purchasing managers are thus incentivized to favor green money over gray money when making sourcing decisions. When purchasing consumables, an example of green money is volume discounts, because these are directly attributable to the negotiating prowess of the purchasing manager. This is demonstrated in cases where purchasing managers have explicitly asked Metso’s salespeople to first state higher list prices and then lower the price by 20 %, just so that the manager could report to his or her superior that a 20 % discount was negotiated (M9). Gray money on the other hand includes cost savings generated through e.g. increased machine reliability, which is hard to measure in aggregate and even harder to attribute to a particular consumables contract. As product specifications become more similar and price competition increases, it makes sense to motivate a higher price by emphasizing any technological edge available and bundling the core product with supplementary services designed to lower the customer’s overall costs. The odds are nevertheless stacked against a MRO supplier taking this route, because procurement managers are focused on securing tangible price savings rather than guessing the benefit of cutting-edge product characteristics or bundled services. Total cost of ownership analysis can even the playing field vis-à-vis low-price suppliers, because the method entails objectively quantifying the total costs associated with an offering, and thus turning “gray money” to “green money”.

Trigger of the sell-side TCO initiative

In 2010, the central procurement of one of Metso’s largest customers issued an A4-sized paper termed “Total cost of ownership (TCO) business opportunities” (D4). This paper was a simple bulleted list of various ways that MRO suppliers could reduce the total costs for the customer (D4). For instance, the customer noted that total life cycle costs related to consumables and spare parts could be reduced through energy savings, productivity programs, and product life extension (D4). This was quickly recognized by Metso’s sales managers as a list of ways to differentiate their consumables offering from the niche competitors, and the “TCO” acronym subsequently caught on at Metso (M2; M3; M5; M8; M11). Inspiration was drawn from Sweden’s bearings

manufacturer SKF, which used total cost of ownership as a metric in its “Documented Solutions Program”—a systematic effort to document the value added delivered to the company’s customers (Snelgrove 2008). SKF’s freely available sales materials were circulated internally at Metso, with the aim of adopting concepts already known to work.

Paraphrased from Finnish

« We need to conceptualize the consumables business so that it stops being a business where somebody sits by the fax machine awaiting orders. We continuously get calls or e-mails from customers where they list specifications of what they need and then ask for the price tag. Do the customers really want to buy stuff from each product group on a different occasion every week or month? Couldn’t they instead commit to a single supplier contract with Metso where added value comes from consignment inventories and training? We need to create an attractive offer. TCO offers a great way of doing this. »

~ Director, Roll Covers

The next year, in 2011, Metso launched a TCO business development initiative. Unlike ordinary buy-side TCO initiatives (Wouters et al. 2005), Metso’s initiative was occurring sell-side. Talk and rudimentary development started on “TCO models” (i.e. spreadsheet calculators of life cycle cost savings), “TCO elements” (i.e. supplementary services designed to lower the customers total costs) and “TCO contracts” (i.e. supplier agreements that include multiple “TCO elements” and whose pricing or sales argument is based on a “TCO model”) (M5; M8; M10). Some old ideas were renamed in terms of this terminology, e.g. a pay-by-use pricing scheme for paper machine clothing was referred to as a “TCO concept” (D5). This flurry of activity led to semantic confusion among sales and general managers regarding the meaning of the term “TCO” and how it related to existing notions of “package deals”, “solutions” and “supply contracts” (M10), in addition to the “classic” mix-up with value-based pricing (Liozu et al. 2012). Nevertheless, this appeared of little concern as a business unit manager shrugged it off saying “we enjoy 3-letter abbreviations” (PR5).

Although the three letter “TCO” acronym had become an ambiguous buzzword in the company, the logic behind its use was clear to the few managers familiar with the formal definitions for total cost of ownership (as discussed in Section 0 on page 6). They reasoned that Metso, as a paper machine OEM, understands the total costs associated with machine consumables better than the paper companies buying them, because paper companies are focused on what comes out of the paper machine rather than what goes on inside the machine (M2; M7; M11). At Metso, managers believed that the customers’ lesser understanding of the total costs, particularly among non-technical purchasing professionals, biased the customers towards buying low priced consumables and not sufficiently accounting for indirect cost elements such as energy costs (M5; M10). None of Metso’s customers were known to utilize formal TCO analysis for selecting MRO suppliers; not even the large customer that originally suggested opportunities to reduce total costs. Yet the implicit view among Metso’s employees was that if the customers were to do such calculations in a rigorous fashion, they would find that Metso’s higher priced consumables offering would in fact have the lowest TCO among all consumable suppliers. There-

fore, the argument goes, Metso could argue that it is the best supplier by performing the TCO calculations proactively for the customer (M2) and thereby getting customers to focus on total costs in the long run instead of just looking at the sticker price (M5; M10; M11).

Antecedents to the sell-side TCO initiative

This section's discourse on Metso Corporation described the background to the company's burgeoning sell-side TCO initiative in paper machine consumables. From the company's managers' perspective, the logic behind the initiative was the following: First, Metso's OEM-level prices were consistently undercut by niche competitors specializing in manufacturing certain consumables, and customers were happy to select the lower priced substitutes. Second, Metso's managers believed (or wanted to believe) that paper companies were making suboptimal procurement decisions because of their focus on acquisition price, and that Metso's offerings were more economical when taking into account cost savings from better technology and bundled services. Third and finally, a major customer had designated total cost of ownership considerations as a business opportunity. Although this is only a single case, we can infer, through the force of example (Flyvbjerg 2006), that three antecedents may lead a MRO supplier to attempt to use TCO analysis as an industrial marketing tool:

Antecedent 1: The supplier is higher priced, but the incremental value over low-price substitutes is contestable.

Antecedent 2: The supplier believes that all things considered, its offering is the most economical for the customer.

Antecedent 3: There is some explicit customer interest in total cost of ownership.

This concludes the focal supplier case study. Next, we take the customer's perspective to find out obstacles the supplier would face in trying to implement TCO analysis as an industrial marketing tool.

Customer case study

The purpose of the customer case study was to explore the business context of Metso's TCO initiative from a customer perspective and thus identify obstacles to the sell-side use of TCO analysis. This was done by aggregating and comparing six embedded subcases—one for each of the surveyed customer companies in the pulp and paper industry. Each subcase consisted of at least one (group) interview, for a total of ten semi-structured interviews with a total of 16 interviewees (as listed in Table 1 on page 4). Through these interviews, altogether six obstacles to sell-side TCO analysis were identified. This section is structured so as to substantiate and accentuate each obstacle identified. First, a general introduction to paper industry MRO sourcing is provided,

along with a description of the decision making unit (DMU) for corporate-level framework agreements for paper machine consumables. Then, corporate-level and mill-level supplier selection methods and criteria are separately discussed. Thereafter, a real buy-side TCO analysis is examined, and a few key cost drivers missing from the analysis are considered. Finally, some alternative notions of “TCO” are scrutinized.

Introduction to procurement of paper machine consumables

Pulp and paper companies manufacture paper by grinding and dissolving wood and recycled paper into pulp, which is pressed and dried in a paper machine to become paper. The paper produced is sold in large batches to publishers, converters and printers, who subsequently process the bulk paper into end products. In Europe and North America, the industry has been characterized by low profitability since the late 1990's, which has led to mill shutdowns, workforce reductions and other cost cutting initiatives (Uronen 2010, p.68; Diesen 2007, pp.15, 118–119). While some functions such as maintenance have been partly outsourced to OEM's and third parties, the daily operation of the production lines has universally been designated a core competence (Z1; U1; S1; B1; E1; P1). To achieve economies of scale and scope, the pulp and paper industry has become increasingly consolidated through mergers and acquisitions (Diesen 2007, p.121). As business functions have been centralized, the nature of individual paper mills has changed from being independent profit centers into cost centers responsible for production only (Z1; U3; B1). Paper mills are no longer evaluated based on profit, because regional sales offices have taken over the responsibility for the sale and marketing of paper (U3). Instead, the key metrics for mills are tons of paper produced, costs per ton of paper produced, production schedule compliance⁷ and paper quality (U1; U2; U3; B1). Thus, when schedules and quality standards are being met, mill management will be concerned with optimizing the trade-off between minimizing costs and maximizing the production of paper. A considerable cost element for paper mills are MRO supplies and services. In a newsprint mill, for instance, MRO may account for roughly 10% of variable costs (Diesen 2007, p.150). This figure excludes considerable amounts of in-house maintenance labor, which is a fixed cost in the short term. Generally speaking, paper companies tend to involve maintenance contractors only during outages and in emergencies (Z1; U1; S1; B1; P1), despite such full service maintenance being offered by OEMs and qualified third party maintenance companies.

« [You need] own expertise in your home, in your house, and in your organization. [...] If you would outsource [all] maintenance for example, you will lose [that] expertise. [...] [Then] you [will not] have the people who are able to discuss on the same level with the supplier. I [would] have to believe everything the supplier proposes to me. And, therefore, most people I know in the German paper industry are not so keen to go that way, [which] makes it so difficult for Metso or for Voith to find paper companies to go together with them this way. »

~ Managing director, Papierfabrik Palm

⁷ Production schedule compliance is a monthly metric of how well the mill is complying with the corporate-level master production schedule containing the exact grades and quantities of paper that need be produced. (P1)

Like the procurement function in general, MRO procurement has become increasingly (although not fully) centralized over time (U1). Broadly speaking, the procurement function in large paper companies is organized in two different processes. On the corporate level, there is a central (world-wide) and/or multiple regional (continent or country) buying organization(s) responsible for negotiating and administering multi-year framework agreements in various high-cost MRO categories such as paper machine clothing and roll covers (Z1; Z2; U1; U3; S1; B1). This allows the company to save on transaction costs (B1) and achieve a stronger negotiating position versus suppliers (Arnold 1999) and thus bargain for lower prices and better terms on warranties, delivery and payment (U1; S1). The framework agreements typically either recommend or dictate certain volume distributions among preferred suppliers, based on aggregated opinions from the company's paper mills (Z2; U2; U3; S1). On the mill level, local purchasing agents such as material planners carry out day-to-day purchase order requests based on local needs, mainly by referring to existing framework agreements, but sometimes through mill-specific contracts of their own making (Z1; Z2; U1; U3; S1; B1). Although central procurement may have formal authority in approving procurement decisions, in practice the decision ultimately rests with mill management and operative personnel because they may have cogent technical and logistical reasons for using a particular supplier (U1; U2; S2; P1). As a rule however, mills tend to have high framework agreement compliance rates, because they are supposed to honor corporate-level decisions (U1; U2; U3; Z2), so suppliers obtain the sales volumes (if any) promised in the framework agreements (S1). This can however lead to added costs in some mills, because changing suppliers in accordance with new framework agreements may inadvertently induce considerable switching costs. For instance, a production director noted that changing felt suppliers may necessitate doubling the felt replacement frequency (and thus direct costs) for six months until the optimal fabric from the new supplier is identified (U3).

From a MRO supplier's point of view it is critical to succeed in the framework agreement negotiations, because this is where the deal is made and volumes are allocated. Being selected as a preferred supplier and allocated high volume does not entail merely persuading commercially oriented corporate buyers of the superiority of the supplier's offering, but also convincing the technical paper mill staff that central procurement is reliant upon for product and service evaluations. Confusing these two by making a technical presentation for a corporate buyer will not yield the desired results. As a purchasing director accounted:

« A supplier's sales person and his boss came over to us [a while ago].

Seller: "With this new [forming] wire, you will be getting less markings on your paper. Look at this graph. This is how much markings you had before, and now you'd only have this much markings."

Buyer: "Oh, how much for the wire then?"

Seller: "Well, it's just 5 percent more [than you're paying now]"

Buyer: "Do I get more money for the paper I'm selling then?"

Seller: "No"

Buyer: "Can I produce more then?"

Seller: “No”

Buyer: “Then why should I buy it?”

The guy didn’t have a good answer to this question. If they come and show me, “now we’re weaving [the fabric] this way, so that the threads are laid out like this”, then it’s a waste of my time because I am not interested in how the fabric is produced, only in its cost versus its performance. However, if they show this to the production manager or operating engineer, they might find it useful and might help the supplier getting a trial.»

~ Purchasing director, Stora Enso

The ensemble of people involved in any given procurement decision in the customer company is the decision making unit (DMU) for that decision (Robinson et al. 1967). Every member of the DMU has a particular role, such as the initiator who suggests the deal, the influencer who has a say on what to buy, the decider who says yes or no, and the user who ends up using the item bought (Bonoma 2006). Table 5 shows these roles for the decision to establish a framework agreement for paper machine consumables. This generalization applies across all large paper companies surveyed and to all consumables within the scope of this study (Z1; U1; U2; U3; S1; B1; E1). A slight deviation is that roll covers additionally involves maintenance staff as initiators and users, because paper machine rolls are maintained through cover grinding and e.g. vibration analysis (U1). All in all, the DMU can contain anything from several to tens of people a finding consistent with research on the buying of fullservice industrial maintenance contracts (Stremersch et al. 2001). Note that the DMU does not contain the mills’ local purchasing agents in a buyer role, because the operational process of purchasing consumables in mills is subordinate to the corporate-level process of deciding framework agreements. Machine consumables are straight rebuys for mills, as they need to be regularly replaced in the paper machine, oftentimes within weeks. Consequently, mills tend to handle replenishment through multi-year annual requirements arrangements, in which “a supplier agrees to supply all or a portion of the buyers requirements for a specific item for a given year at an agreed upon price”(Webster 1995, p.62). A doctor blade supply agreement, for example, may be worth anywhere from 50 000 to 300 000 euros annually per paper machine (D6; D9). Such contracts must abide by existing framework agreements, thus making the mill purchasing process largely a clerical routine where inventory is replenished through submission of simple re-lease forms to suppliers. All consumables are paid from the mill cost centers. Budgets are either set by central procurement and rolled out to the mills (as in UPM), or the mills independently make their own budgets (as in Stora Enso) (U2; S1). Doctor blades and paper machine clothing are generally paid for from mills’ operational budgets, while roll covers are paid from the maintenance budget (Z1; U1; U3; E1). Major modifications of the consumables and their fitting (e.g. blade and rod holders) in a machine may be considered capital investments, in which case they are paid out of a separate mill capital budget (Z1; U3; B1; E1). At UPM, for instance, single investments over 30 000 euros were classified as capital expenditures and required a pay-back time of less than a year (U3).

Corporate-level purchasing strategies for paper machine consumables

All paper companies surveyed wanted to reduce the price of their paper machine consumables by driving down suppliers' margins. The companies did this to a large extent by employing a competitive negotiation strategy (Janda & Seshadri 2001), which entails creating an atmosphere of aggressive price competition through competitive bidding and threats of substituting existing suppliers (Z1; U1; S1; B1; E1; P1). To increase price transparency, the paper companies used other pricing metrics in addition to or in lieu of euros per item. For doctor blades, the standard was euros per meter, whereas machine clothing was commoditized using €/m², €/kg or €/t-count (number of threads per cm²) (U1; U2; S1; E1). The payment terms (cash in advance or deferred payment) were in some companies converted directly into to a monetary value based on the company's cost of capital (U1).

In the large paper companies, this strategy was leveraged by issuing RFQs (requests for quotation) and RFPs (requests for proposal) to establish framework contracts for product categories across multiple mills, which would increase suppliers' incentives to undercut normal prices in the hopes of winning a big contract. A supply manager at Stora Enso noted that using this strategy for machine clothing, they had been able drive down suppliers' margins to an estimated 7–8 % during the last few years, and expected that margins could only be squeezed by a further 2–3 percentage points in the long term (S1). The competitive negotiation strategy was further emphasized in some companies by providing procurement professionals with financial incentives to come out on top in negotiations. For example, UPM used some performance-based pay for its central sourcing staff, based upon year-on-year price reductions and other clear-cut savings (U1). On the other hand, a buyer at Zeta argued that such incentive systems are dangerous, stating that “we get no bonuses for performance we get to come back and work here the next day” (Z1). The existence of performancebased pay possibly exacerbates the “green money vs. gray money” problem discussed on page 14, because it places focus on easily measurable proxies for value, e.g. price.

<i>Initiator</i>	<i>Influencer</i>	<i>Decider</i>	<i>User</i>
MRO buyer(s) responsible for the particular category of consumables	Mills' production managers and operating engineers (and maintenance manager for roll covers). Support functions such as finance may be involved.	Category team consisting of MRO buyer(s) and a few select production managers and operating engineers from mills. Major deals in machine clothing may involve mill managers and corporate vice presidents	Mills' operating staff (and maintenance staff for roll covers)

Table 5: DMU member's roles in the decision to establish a corporate or regional framework agreements for a paper machine consumable

Through the competitive bidding processes, the paper companies usually selected three (sometimes two) preferred suppliers in each category and ranked them based on their performance in the bid (U1; S1; S2; B1; P1). Volumes, if allocated, were typically set using a fixed

distribution, commonly e.g. 60–30–10, where the smallest supplier had a backup or trial status (S1; S2; B1; P1). The limitation on the number of suppliers can be seen as part of a supply base rationalization strategy. UPM, for instance, had an explicit strategic goal of reducing the number of suppliers downwards from 20 000 (U1). Even though rationalizing the supply base can enhance customer-supplier relationships and reduce transaction costs (Cousins 1999), none of the surveyed paper companies mentioned having sole supplier framework agreements for the studied machine consumables, although Stora Enso was planning on making single supplier contracts for multiple consumables on a few old and optimized cash cow machines in Sweden (S2). The reasons why buyers generally favored multiple rather than single suppliers were threefold: (1) it reduces the buyer's risk by having a sure-fire alternative in case the primary supplier fails to deliver (Z2; U2; S2); (2) the buyer is more quickly informed of technological developments as suppliers strive to increase their volume (Z2; U3; S1; S2; B1; P1); and (3) the threat of other field tested suppliers increases the buyer's bargaining power when contracts expire (B1; P1).

Table 6 below contains the surveyed companies' selection methods and criteria for selecting the primary preferred supplier (and subsequent suppliers) in framework agreements for paper machine consumables. All companies used one of the following two basic methods: (a) pick the supplier with the lowest bid price among a set of qualified suppliers, where the pre-qualification is based on mills' subjective experience and technical assessments; or (b) pick the supplier with the highest overall score in a (linear) weighted point plan (Z1; U1; U2; S1; S2; B1; E1)—a method which entails subjectively assigning weights to different qualitative and quantitative criteria, ranking suppliers on those criteria, and finally multiplying the rankings and weights to arrive at the overall score. None of the buyers reported using more sophisticated supplier selection methods, such as total cost of ownership analysis, mathematical programming or statistical models (de Boer et al. 2001).

Even though none of the paper companies reported formally using total cost of ownership analysis in procurement, the notion of total cost was nevertheless well understood. A production director at Stora Enso noted that "TCO is what matters to me. If I'd have a TCO breakdown in euros for every supplier in every machine position, then it would be very easy for me to distribute volumes among suppliers [...] But I don't think you can have a huge fancy Excel model [to do this, so I] rather use gut feeling and common sense" (S1). This type of total cost thinking was implicit in how all DMU members considered sourcing decisions. All interviewees demonstrated awareness of important hidden costs drivers associated with machine consumables, including machine downtime (U1), paper broke (quality defects) (U1; S1), energy use (S1) and lifecycle length (U3; S1; B1). But because of the considerable effort involved, such hidden costs were rarely quantified and almost never combined to produce a total cost figure (U1; B1).

Consider a MRO supplier whose value proposition is based on the premise that their offering has the lowest TCO. To substantiate the claim, such a supplier would have to present believable total cost calculations for potential customers during framework agreement negotiations. Customers however, do not base their final decision on TCO, but rather on price or a weighted score of subjective factors. This would put the supplier in a position where they would have to make the customers change their supplier selection method. Considering the multiple difficult steps necessary to implement systematic use of TCO in procurement (Wouters et al. 2005), it is implausible that a MRO supplier could impose TCO as the buying metric of choice into the cus-

customer's central procurement organization. Thus we note a generic obstacle to sell-side use of TCO analysis:

Obstacle 1: Customers do not use TCO analysis for supplier selection

<i>Company</i>	<i>Selection method</i>	<i>Selection criteria</i>
Boise	Weighted point plan	The main determinant was the cost of the product fully delivered, i.e. the total cost of acquisition (but not use). Other determinants included supplier technology and reliability, warranties & technical support, payment terms and effects on machine efficiency and cost of maintenance and inventory. For roll covers they looked specifically at lifetime, repair cycle time and repair shop proximity; for clothing it was lifetime and drainage.
M-real	Lowest price among qualified suppliers	Quality, lifetime and energy issues were accounted for on a case-by-case basis. Machine clothing suppliers in different machine positions had been evaluated a few times through a mill survey, where each supplier had been scored on a 1–5 Likert scale in six areas: price, quality, reliability, experience, service, communication and flexibility. The supplier with the highest average could sometimes be selected over the lowest price bidder.
Papierfabrik Palm	Lowest price among qualified suppliers	Price was the primary determinant. They sought contracts with as little supplementary services as possible. Higher priced offerings were only selected in rare cases for technical reasons.
Stora Enso	Lowest price among qualified suppliers	Suppliers were qualified based on their financial status, along with their capability and delivery reliability in 800 different machine positions. Mills could suggest changes to volume allocations set by central purchasing, typically for reasons related to total cost.
UPM	Lowest price among qualified suppliers or Weighted point plan	Oftentimes lowest price and best payment terms among qualified suppliers (based on supplier capability). For paper machine clothing: 45 % weight on commercial analysis (price-level, customer service, strategic fit, terms of payment, automatic invoicing in SAP), 55 % weight on technical survey (local technical support and problem solving). Mills had the final say in what supplier they used, based on lead-time, delivery accuracy, consumable lifetime, safety and effects on machine efficiency, capacity utilization rate, sheet breakage and energy use.
Zeta	<not disclosed>	A combination of price, technical service, reliability, financial strength and lifetime performance (overall machine effectiveness, downtime, life cycle length, predictive maintenance). The criteria were evaluated using consumption data, field reports, and information provided by suppliers. Technical requirements were evaluated by a separate technical team.

Table 6: Outline of preferred supplier selection methods and criteria for world-wide or regional framework agreements for paper machine consumables

Mill-level procurement decisions

While paper companies' central procurement was concerned with the formal negotiation of corporate-wide framework agreements for paper machine consumables, every paper mill still bore ultimate responsibility for what suppliers to use, what consumables to run, and what investments to make. Mills were authorized to select suppliers by their own accord in product categories where no framework agreement existed, although they oftentimes consulted with central procurement, whose staff could help with bargaining and analysis. There was also leeway to test new products and services and even permanently introduce exceptions to framework agreements for paramount reasons (S2); e.g. technical compatibility. Neither management nor operating staff reported using formal total cost of ownership analysis to decide on purchase order requests and sourcing decisions (U3; S2; E1; P1). Instead, decisions were made informally, mainly based on lowest price and whether the product was known to fulfill technical performance expectations (U3; S2; E1; P1). The notion of hidden costs was well understood, but they were seldom quantified due to reasons discussed later in Section 0. Paper mills' substantial influence on purchasing was understood by suppliers, who recognized the possibility of making additional mill sales outside of any existing framework agreement. Accordingly, suppliers' sales persons oftentimes approached individual mills directly, without going through central procurement. From mill management's perspective, the only way to determine the truthfulness of suppliers' sales arguments was to conduct a trial (feasibility study) on the machine where the consumables were supposed to be installed (U3; S1; E1).

The reason why trials were necessary was that paper machines are both unique (what worked on one machine is no guarantee that it will work on another similar machine) and complex (overall effects of new parts cannot be predicted from first principles). Doctor blades for instance, need to be tested for each machine position separately to ensure proper functioning (U3). For machine clothing, a managing director noted: "... you can have a similar design on a press felt, but number 1 is working and number 2 is not working. [...] Nobody knows exactly why." (P1). Consequently, a supplier cannot show up with theoretical TCO calculations in a sales pitch and expect customers to buy anything based merely on those calculations. One supply manager reported that a supplier had suggested an upgrade of their sheet metal doctor blades to a much more expensive energy-saving model. Based on some detailed Excel crunching, the supplier had told them they would save 200 000 euros in total costs by installing the new high-tech blades. The supply manager was not convinced, but agreed to a trial where the supplier would deliver two weeks' worth of blades for free. The claimed savings were not verified, and the supplier had to leave empty handed (E1).

Paraphrased from Finnish

« Every salesman says that their product saves energy and lasts longer based on tests in other machines, but nothing is a fact until it a trial has been conducted on our machine. It's up to us to assess whether a trial is needed and whether we believe that the supplier has the potential to become a large supplier for us in the future. A supplier can come and show us a TCO breakdown, but they can't really show anything other than their own price breakdown without running a trial at our mill. And even then, we'd be very wary of revealing any details about our costs. You don't want to go out on the street shouting about how much money we'd lose in a three hour outage, because that information

could be used to deduce our financial outlook. »

~ Supply manager, M-real

While the quote above illustrates the necessity of objective mill-specific data for sell-side TCO analysis, it also shows how cautious publicly listed companies are of revealing operational profitability figures, even to their preferred suppliers. A company may fear knowledge drain to competitors, because suppliers could use the intimate information gained to improve competitors' operations (Gebauer et al. 2005). To secure a trial, a MRO supplier needs good references from similar projects on other similar machines, including as much technical facts and/or tangible examples as possible (Z1; U1; U2; U3; S2; B1; E1). In the words of a supply manager at UPM: "I quickly tell sales people and technical guys that 'what our mill staff likes and what we like, are references. [...] And even better, UPM references.' [...] If they don't have a reference, then the sales presentation] needs to have fewer superlatives and that kind of stuff, and more justifications [of how it's going to work]" (U1). Getting the very first reference is the tricky part (U3). In cases where a real pilot project is in question (i.e. no references available), the supplier may have to give considerable discounts or even some consumables for free (U1; E1; P1).

Even if discounts are given, mills do not easily participate in trials, because of the added work and risk involved (Z1; U1; S2; B1; E1). The business risk of the trials may require a formal review (Z1; B1; E1), and final approval may be sought from central procurement and senior management (U1). A failed trial will worsen the mills' key performance indicators, such as machine efficiency or production schedule compliance (U2; B1). At Boise they had solved this problem by assigning accountability for failed, corporately condoned trials to a corporate development function (B1). Suppliers however, are unable to provide a similar de-risking service, because offering discounts, freebies or even straight cash won't save face nor will it restore blemished KPIs in the case of a failed trial (P1). In short, a total cost of ownership analysis must be based on factual data to be credible. For a MRO supplier, this implies conducting a trial at the customer's plant. But, as discussed prior, customers do not eagerly participate in trials for three reasons: (1) it is risky; (2) it demands internal resources; and (3) it may lead to knowledge drain. This confirms Anderson et al. (2007, p. 8) observation that customers have limited patience in cooperating with suppliers and only a limited willingness to share data. We thus conclude the following:

Obstacle 2: Sell-side TCO calculations become credible only through risky, resource-intensive and highly collaborative field testing at the customer's site.

Use of total cost of ownership analysis in paper companies

As already established, none of the paper companies surveyed reported using total cost of ownership analysis (as defined on page 6) for MRO supplier selection or otherwise, with the exception of a few sporadic analyses made by purchasing managers at UPM (U2). Nevertheless, most purchasing managers demonstrated some degree of familiarity with the method when shown a conceptual TCO breakdown (Z1; U1; U2, S1, B1). In particular, a few noted that TCO was simi-

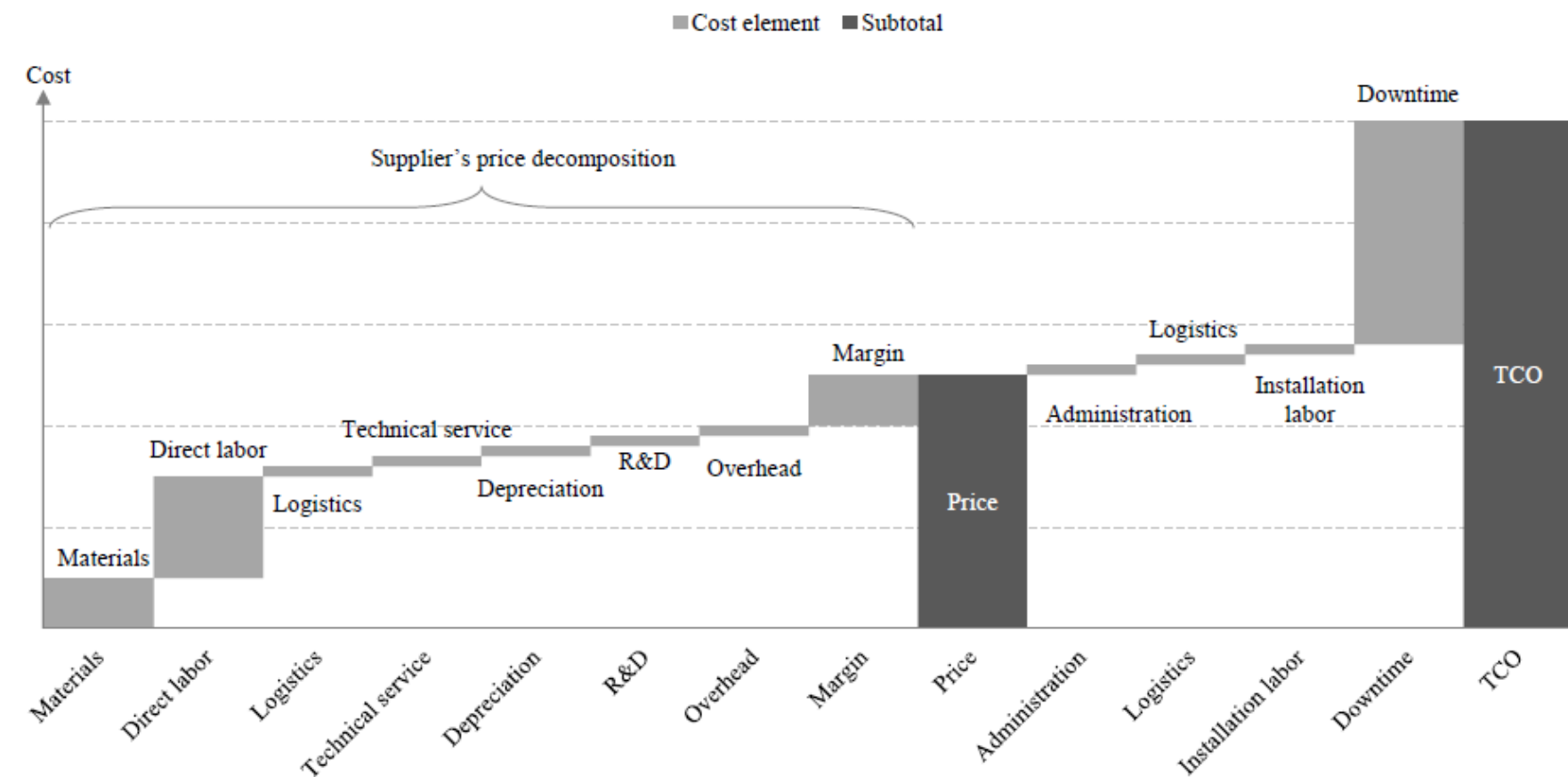
lar to breaking down the supplier's price into cost components (Z1, U1).

Example: Total cost of ownership analysis of a press felt

To see how buy-side total cost of ownership analysis was used in a paper company, a real example is provided in Figure 5 below. Figure 5 shows the final result of a single, one-off TCO analysis (including a price breakdown) conducted on a particular supplier's press felt (a high-cost, short lifecycle piece of machine clothing). The analysis answers three basic questions: (1) How much total costs (TCO) will the paper company incur when buying one press felt from this particular supplier? (2) What are the main cost drivers behind the total cost, considering both the company's internally generated costs and the supplier's costs driving the price? (3) What is the supplier's profit margin? For illustration, assume the felt costs 50 000 euros per unit. Based on the TCO analysis, the answers to the questions above are: (1) Buying the press felt generates 100 000 euros in total costs per unit, which is twice the price of the felt; (2) The main cost drivers are direct labor in the supplier's felt factory and production downtime in the paper mill due to felt change; and (3) The suppliers profit margin is about 10 %. These facts could then be used by the paper company to make a more informed sourcing decision and to provide areas for negotiation beyond price. To understand how the TCO breakdown in Figure 5 was constructed, we need to look closer at how the costs were calculated. Notice that Figure 5 consists of two parts. First, on the left hand side is the supplier's price decomposition—figures that have either been provided by the felt manufacturer voluntarily, or independently estimated by the paper company. From the supplier's point of view, the price decomposition is a profitability analysis, because the product margin has been calculated. To do the analysis, the supplier would either have used traditional absorption costing or more sophisticated activity-based costing. Second, on the right hand side of Figure 5, is the total cost of ownership calculation from the paper company's point of view. Here, the paper company has identified four activities they perform to acquire and use the press felt: administration, logistics, installation and downtime. The sum of all these costly, attributable activities, plus price of the press felt, is considered to be the total cost (TCO) incurred by the company. As an example of the cost estimates used, Table 7 shows, on a general level, how the costs of installation labor and downtime were estimated. Note that both are based on activities (installation and shutdown time) in accordance with the principles of activity-based costing.

<i>Cost element</i>	<i>Calculation</i>
Installation labor	Average number of workers required for installing the felt × Average hours per worker required for installation × Cost of installation work (EUR/hour)
Downtime	Average duration of a planned shutdown (hours) × Share (%) of planned shutdown duration due to press felt change, (depends on, e.g., operating rate, cleaning, maintenance and other reasons). × Paper machine contribution margin (EUR/hour)

Table 7: Two examples of TCO cost element calculations for press felts.



¹ This TCO breakdown is published with permission. To maintain confidentiality, no scales are shown and the figures are fictitious (although representative).

Figure 5: Total cost of ownership breakdown of a press felt.⁸

⁸ This TCO breakdown is published with permission. To maintain confidentiality, no scales are shown and the figures are fictitious (although representative).

The reason downtime is responsible for large fraction of the TCO is that the paper machine needs to be shut down for 4–8 hours when installing the felt, which means forfeiting a contribution margin of thousands or even tens of thousands of euros per hour depending on market conditions (U3; S2). Downtime however is actually an opportunity cost (a revenue-side effect), since it represents contribution margin forgone⁹. It is not a cost that would be visible as an expense on the income statement, but rather its effect on the income statement would be a reduction in revenues (less paper to sell) and a significant but smaller reduction in variable costs (e.g. due to savings in raw materials and energy). On the face of it, the large financial impact of downtime could also be an opportunity for suppliers to offer a quick installation service as part of a felt delivery contract. However, such a service was considered unfeasible by mill management and operating staff. The main reason was that having outsourced the activity, there wouldn't be enough skilled personnel on-site around the clock, nor could the supplier's people arrive quickly enough, to change fabrics in the event of a failed clothing trial or other unscheduled outage (which typically occur once in two months, vs. scheduled ones which occur monthly at most) (U3; S2; E1; P1).

TCO as an extension of supplier price break-down analysis

Figure 5 on page 23 breaks down both the supply-side costs and the customer's hidden costs—together constituting a supply-chain view of the total costs. Although not necessary for a TCO analysis, some buyers aimed to decompose the buyers price. At Zeta, they reported conducting price breakdowns (cost breakdowns) independently based on suppliers' financial statements and market data (Z2), to be used as tool for resolutely negotiating smaller margins with suppliers (Z1). At UPM, on the other hand, the sourcing staff asked supplier's sales people to voluntarily provide the cost structure for their products, by emphasizing open books collaboration to reduce the total costs in the supply chain (U1).

« When talking about TCO-models, we need to really open all the cost drivers. From the end of the pipeline at the mill where the product is used, to the beginning of the pipeline where the product is manufactured. [...] We need this type of thinking, but nobody [expletive] opens up the costs of their products [properly]. [...] I believe that the supplier who figures this out and goes down this road will enjoy a big competitive advantage. In the end it doesn't matter whether the margin is 100 percent or 300 percent as long as the price is competitive. Thank God and good for them if they have a huge margin, that's always better. [...] But nobody wants to open up their prices, because they are afraid that the discussion will inevitably turn to the magnitude of the margin. [...] That's not what I want to do at all. I want to discuss about how to drive costs down [together] so that the margin remains the same.[...] The tragicomic thing is, that [although we've managed to do a few fine analyses], we've never once, during my time at least, put a TCO model on the table together with the mill and the supplier and said: "Alright, let's start thinking about how we can reduce this [TCO] for real". »

~ Category manager, UPM

Some other interviewees were highly skeptical about supplier cost breakdowns being used for win-win purposes. At Boise, for instance, they argued that collaborative arguments like the one above are just a smokescreen for wanting to break down the margin (B1). Suppliers who want to use TCO analysis to prove they are the most economical will inevitably open up the discussion on their cost structure. The reason is that from the customer's point of view, the price of the offering is a big chunk of the TCO of the offering. TCO could therefore be reduced by helping the supplier reduce their costs, which begs the question on what the supplier's costs and margins really are. Suppliers won't be keen to reveal this information, fearing that it would worsen their negotiating position and leak to competitors. Even if suppliers were to voluntarily provide product cost breakdowns, it would be difficult for customers to assess whether or not any of the cost elements contained hidden margins, thus leading to a squabble on what the true margin is (Z1; U2; S1). It may even be the case that suppliers don't know what their true margin is, e.g. because of intricate internal transfer pricing systems (U2), or favoring traditional absorption costing over more accurate activity-based costing (Lere & Saraph 1995). We therefore conclude:

Obstacle 3: Sell-side TCO analysis may necessitate the seller to reciprocally reveal the true cost structure of their offering.

Measuring key TCO drivers for paper machine consumables

While uncomplicated and readily understandable for laymen, the example TCO analysis in Table 7 on page 22 has some shortcomings. First, it leaves out some key lifecycle cost drivers such as energy use and inventory costs. This means that the purported "total cost" is only a fraction of the true total cost of ownership, which should include all attributable expenses. Second, it fails to explicitly account for the useful life of the press felt. If the useful life were to change, then so would the replacement frequency, which in turn would mean a change in the annualized costs of consumables (S1). The omission of these cost drivers is indicative of the difficulties in quantifying them. As it turns out, this applies not only to felts but to machine consumables in general (B1). Next, we discuss how useful life, energy use, and inventory costs were considered by buyers, and draw conclusions as to what this means for the feasibility of sell-side TCO analysis.

Useful life

By definition, all consumables gradually and visibly wear out due to friction, after which they have to be replaced. Simply put, the longer the useful life of a consumable, the less will be needed. For instance, if a high quality felt were to last twice as long as a standard felt, then felt-change intervals could presumptively be lengthened by a factor of two and the machine would require only half the number of felts. Such an effect was not accounted for in the example TCO analysis depicted earlier on page 23, where TCO was calculated per felt. To be able to compare the total cost of consumables with differing lifespans, it would apparently make more sense to compute e.g. TCO per year rather than TCO per consumable unit. Assuming a mill would run continuously, the formula for such a relationship would be:

$$TCO_{Year} = TCO_{Unit} \times \frac{365 \text{ days}}{\text{useful life in days}} \quad (\text{Eq. 2})$$

In real applications however, the formula above does not apply. This is because consumables can only be changed during machine shutdowns, but shutdowns cannot be performed every time a consumable is at the end of its useful life (S2). Rather, shutdowns must be minimized through careful planning, not only because they cause a loss of production, but also due to the much larger risk of component failure when the paper machine is restarted (U3). The shutdown frequency is a system dependent variable chiefly dictated by the consumable with the shortest useful life, namely some types of paper machine clothing that last for about a month (S2; U3; B1). Other consumables must be replaced in sync with this cycle time (or during unplanned shutdowns) and before they become a liability (U3; P1). This makes the predictability of useful life very important (U3; S2; P1). The useful life of a consumable is only an upper limit of the actual use time between installation and removal, which in turn depends on the frequency and length of planned and un-planned shutdowns. Case in point, long shutdowns dry and harden the dirt and deposits in the machine, which may necessitate replacing some of the clothing regardless of condition (U3, S2). Any marginal increase in the useful life of a randomly selected consumable is largely worthless unless (a) it allows postponing replacement to a subsequent shutdown, or (b) the consumable in question is the bottleneck that constrains the entire shutdown cycle. The latter case is of particular interest (Z1), because lengthening the lifespan of the bottleneck consumable not only decreases annual TCO due to fewer replacements, but also directly decreases total machine downtime and allows optimizing the replacement of all other consumables based on the new, longer shutdown cycle. In spite of the intricacies of optimizing consumables replacement, several of the procurement managers interviewed expressed interest towards measuring the lifespans of consumables, as the figures would give them some information about the relative performance of different suppliers (U2; S1; B1). UPM reported having implemented a corporatewide reporting tool for monitoring clothing usage, comprising in-machine time and cause of removal (U2; U3). UPM's tool was thus far limited to milllevel reporting and was unable to provide machine and position specific data (U2). Elsewhere, followup was only done locally at mills using simple spreadsheets (S1; B1; E1). A hurdle to making this information comparable was that the in-machine time of consumables depended on the wear rate, which in turn depended on capacity utilization and production speed (U3). One way of at least partly eliminating the prior factors is to divide annualized costs by the paper tons produced during that time, since the tons are proportional to both capacity utilization and production speed. Conceptually:

$$TCO_{Per \text{ ton}} = \frac{TCO_{Year}}{Tons_{Year}} = \frac{\text{Price}_{Unit} \times \text{Annual replacements} + \sum \text{attributable costs}}{Tons_{Year}} \quad (\text{Eq. 3})$$

While TCO is a plain cost metric, TCO per ton of paper is a cost-efficiency metric since it is of the form input ÷ output. In cross-machine comparisons it is however still a flawed metric, because of differences in paper grades produced (B1).

Paraphrased from Swedish

« I specifically care about cost per ton for felts. But we don't measure it centrally. We're currently implementing a re-port to collect the necessary data from each mill. Later on, it's going to be very easy to centrally calculate and compare how many tons we get on average from Voith's felts and how many tons we get from Metso's felts on the same machine. If we can produce 10 % more with Voith's felts, then maybe they're worth paying a little bit more for as well. And vice versa. »

~ Procurement director, Stora Enso

With regard to sourcing decisions, the key observation here is that TCO (or just price) per ton is an appropriate selection metric only when the consumables can be tested on the same machine under optimal conditions. This implies making a pairwise comparison of the current versus the potential product (B1). If the new product allows more tons of paper to be produced at lower total cost, then it should be selected over the current product; all else being equal. A further inference is that since consumables are business critical items and must be sourced, only the TCO-per-ton difference between the current and the potential product matters. If the difference is negative, then the new product should be selected over the current one.

Energy use

The energy consumption of a paper machine depends on how effectively water can be pressed out of the wet paper slurry. An improvement in mechanical dewatering means that much less energy will be expended on evaporating paper moisture in the drying section of the machine. Paper machine consumables affect the dewatering efficiency and also impact energy use through the friction they generate. As it turns out, it is very difficult to empirically measure the energy consumption attributable to specific consumable, as paper machines are generally not equipped to accurately measure energy use by roll position (Z2; U1; S1; B1; E1; P1). This difficulty in measuring energy use is also reflected in the press felt TCO analysis on page 23, where energy use has been omitted as a TCO driver. Rigorous TCO analysis would nevertheless require the allocation of energy costs, because consumables of different quality may have differing dewatering and frictional characteristics. However, even if energy use could be locally measured by roll position using physical principles, it could still not necessarily be attributed to a consumable in the same fashion as gasoline expenditure can be attributed to a car. The reason is that while a car can be driven in isolation from other cars, paper machine consumables are coupled with the rest of the machine (S1, P1). For instance, a center roll cover is scraped by a center roll doctor blade, whereby the resultant friction depends on the interaction between both surfaces. Consequently, there is no objectively defined chunk of the total electricity and steam bill that can be allocated to the use of a particular consumable. Rather, it is only possible to measure energy performance of a consumable using pairwise comparison with another consumable with the same function, e.g. a rubber suction press roll cover vis-à-vis a polyurethane suction press roll cover. In other words, only the differential energy costs matter.

Inventory costs

Consumables are generally made to order and may have delivery lead times of several weeks

(U3; E1). Combined with the possibility of sudden failures (U3), this forces paper companies to keep a safety stock of replacement consumables at each mill, which in turn means that a significant amount of working capital tied up in inventories of machine consumables. For example, Stora Enso and UPM reported having onsite inventories of machine clothing altogether worth tens of millions of euros and doctor blades worth millions (U1; S1). A clothing inventory simply consists of several long wooden boxes containing one fabric each, typically two to four replacements per clothing position; (U3; S2) whereas in a doctor blade inventory, the rolled-up blades are held in sturdy packages stacked in a mobile storage container near the paper machine (D11). For roll covers on the other hand, it is only necessary to have a single replacement roll with a new roll cover at hand for each roll position (U3). Among other things, inventory carrying costs include storage costs, obsolescence costs and the opportunity cost of the capital tied up. From a total cost of ownership perspective, keeping consumables in inventory is an activity attributable to the future utilization of those items, wherefore inventory costs must be included as a cost element in TCO calculations. However, if inventory costs are equal for all suppliers' comparable offerings, then they are inconsequential for supplier selection. This would normally be the case due to the similarity of the products, were it not for some suppliers offering consignment inventory services. A consignment inventory is a warehousing system that entails storing a stock of supplier-owned consumable machine parts in the paper mill and transferring ownership rights to the customer item-by-item as new consumables are needed in the paper machine (M2). From the customer's perspective, consignment eliminates the risk of obsolescence and the opportunity cost of capital, because these are borne by the supplier.

Excluding warehouse space needed, the supplier also incurs most of the storage costs, because they handle inventory replenishment. Inventory levels are monitored by the supplier either through manual inspection, or, in the case of doctor blades, also through remote monitoring and RFID technology, which allows keeping the inventory properly stacked and invoicing only for blades removed from the container (D6–7; U3). The effect of consignment inventories on the papermakers' total cost of ownership is a contested issue. At UPM, interviewees were divided as to whether the company should engage in consignment inventories (U1; U2; U3). At Zeta, buyers expressed indifference towards consignment inventories for machine consumables, remarking that while transferring inventory ownership to the supplier would reduce their net working capital, suppliers would never accept this unless they recouped the inventory carrying cost in some other way (Z1), e.g. through higher unit prices or by separately invoicing an annual amount equal to a fixed percentage of the inventory value. On the other hand, managers at Stora Enso were in favor of consignment agreements (S1; S2). One argument expressed in favor of consignment agreements was that even with equal costs of capital, it is cheaper for the supplier to hold the inventory because the value of the inventory is lower on the supplier's balance sheet (due to cost-based valuation that excludes sales margin) (S1). However, while this appears to be the case from an accounting perspective, it fails to account for the supplier's opportunity cost of holding rather than immediately selling finished products for cash.

Moreover, inventory capital charges should ideally reflect the market risk (obsolescence) of the inventory itself, rather than being based on the company's weighted average cost of capital. This means that arguments for consignment inventories based solely on suppliers' lower WACC are moot. In the case of a typical finished goods inventory consisting of custom-made consumables, the inventory is as probable to become obsolete regardless of who owns it, since there is only one paper machine in existence where the consumables can reasonably be installed. There-

fore, the capital charge should be the same for both supplier and customer. Summing up, inventory costs are part of TCO, but suppliers appear to be on equal footing in this regard. Even for consignment inventories, there is no simple rationale for how customers' total costs are lowered. Any advantages in terms of inventory handling and efficient supply chain management must be considered on a case-by-case basis to generate what a sourcing manager would see as "a very concrete and believable [savings] calculation" (Z1). A production director suggested that such savings could realistically be based on e.g. machine clothing suppliers having a few variable-length fabrics in stock that could be very quickly fitted and run on several different paper machines (U3).

Cost driver implications

The TCO of paper machine consumables is partly determined by the aforementioned cost drivers: energy, useful life, and inventory costs. Unfortunately, their influence on total costs is not straightforward to ascertain. Energy use needs to be accurately measured locally in the machine, but paper machines lack the necessary instruments. Useful life is negatively correlated with annual replacement costs, but the exact relationship depends on the re-optimization of the machine's shutdown cycle. Inventory costs may be arduously estimated through conventional means, but it is unclear what the cost savings are due to consignment inventory services.

Faced with these complexities, buyers considered hidden costs in terms of differences between offerings, rather than attempting to estimate each cost element in absolute terms as one would do in TCO analysis. For instance, while the absolute energy use of a doctor blade and roll cover dyad could theoretically be estimated, buyers were only interested in determining energy consumption differences between offerings. Similarly, buyers cared little for total inventory costs, but still expressed interest in inventory cost savings. Also, the cost-effect of useful life only makes sense to consider in relative terms. The reason why buyers only cared for cost differences was that they had no alternative but to buy machine consumables, since the papermaking process cannot run without them. This means that when making a sourcing decision, buyers were interested in quantifying cost differences, if any, rather than figuring out the magnitude of all the hidden costs associated with an offering. Total cost of ownership would only matter in the hypothetical case where (a) it was on par with or exceeded the opportunity cost of not buying, or (b) a substitute pay-for-performance service existed. Generally speaking, buyers have little to gain in collaborating with a supplier in conducting a fully-fledged TCO analysis, since the TCO analysis will entail quantifying complex cost elements that may be equal amongst competing offers. We conclude:

Obstacle 4: Sell-side TCO analysis requires allocating all the customer's costs attributable to the offering, regardless of cost driver complexity and regardless of whether the magnitude of a cost element is expected to vary by supplier.

Alternative usage of the term "total cost of ownership"

Although actual usage of TCO analysis was rare among paper companies, the word 'TCO' was

nevertheless part of the industry lingo. ‘TCO’ held several mutually incoherent meanings and was equivocally used as by suppliers in sales pitches. Congruently with the definition of TCO used herein, ‘TCO’ could loosely stand for “capital equipment lifecycle costs”, commonly referring to the whole paper machine’s long-run costs of operation (S2; B1). Accordingly, a ‘TCO contract’ referred to a long-term MRO delivery contract or other agreement emphasizing or guaranteeing post-purchase process improvements (Z1; S2; D10). On the other hand, TCO’ was in some companies used in a specific sense inconsistently with the academic notion of TCO—i.e. the sum of the purchase price plus expenses attributed through activity-based costing (as defined on page 6). Table 8 summarizes these findings.

Next, we will show how the alternative usage of the term ‘total cost of ownership’ reveals deficiencies in proper TCO as a supplier selection metric. Also, the competing nomenclature itself is argued to be an obstacle to the use of TCO analysis in sales.

<i>Company</i>	<i>Use of TCO analysis</i>	<i>Specific use of the term ‘total cost of ownership’</i>
Boise	No	“TCO reduction” $\approx$ net present value of a capital equipment improvement project
M-real	No	Not used
Papierfabrik Palm	No	Not used
Stora Enso	No	Similarly to academia
UPM-Kymmene	Sporadically	Similarly to academia
Zeta	No	“TCO” $\approx$ total cost of acquisition, including guaranteed post-purchase savings

Table 8: Paper companies’ usage of TCO analysis and “TCO” terminology.

The term ‘total cost of ownership’ was loosely understood by interviewees as “capital equipment lifecycle costs” or just “costs”. Generally speaking, the lower the TCO, the better ^(Z1, U1, U2, S1; S2; B1). For this reason, ‘TCO’ was oftentimes associated with process improvement projects, particularly with the estimation or documentation of the savings generated ^(Z1; B1). Basically, a “TCO reduction” could be any process-related benefit such as lengthening the lifetime of machine clothing or alleviating production bottlenecks, as long as the monetary impact could be quantified using some kind of formula ^(Z1; B1).

An example of such an improvement project is given in Table 9. Here, switching to a new type drying fabrics has increased machine drying capacity, which in turn has made it possible to increase the reel speed (~throughput paper tons) by 1.7 % ^(D3). In this particular market, there is more demand for paper than the machine can produce, which means that the surplus paper produced can be sold at normal prices. This keeps the contribution margin (revenue less variable costs) per ton of paper constant—a circumstance more the exception than the rule in markets with production overcapacity ^(B1; E1). The added tons of sellable production are therefore straightforwardly translated into an additional annual contribution margin of 0.7 million euros,

which is ratified as the “documented annual savings”. Note that the word ‘savings’ used here is a misnomer, since there are no actual cost savings. Rather, the increase in reel speed has increased variable costs due to more production, while simultaneously increasing revenue in proportion. This means that total cost of ownership of the machine fabrics and the entire machine has actually increased. The new fabrics are more expensive (not shown in Table 9) and the operational costs are higher due to a faster production rate. Nevertheless, the improvement project was deemed profitable overall based on a payback time of less than a year.

A more accurate way of assessing the profitability of an improvement project is a cash flow analysis. At Boise, such calculations were referred to as “cost of ownership models”, and used to determine the profitability of capital equipment improvement projects. Although profit is not the same as a cost reduction, it was nevertheless implicitly equated with a reduction in total cost of ownership of the capital equipment as is illustrated in Figure 6 below (B1).

Both Table 9 and Figure 6 exemplify circumstances where TCO is an inappropriate metric for supplier and product selection, since TCO by definition only takes into account expenses incurred over the productive lifetime of the asset or product. If a consumable makes it possible to increase production, then the benefit will be a revenue increase rather than a cost reduction.

	<i>Initial state</i>	<i>Reel speed increases by 1.7 %</i>
Weight per square meter (kg/m ²)	0.045	0.045
× Reel speed (m/minute)	1524	1550
× Trim width (m)	8.62	8.62
= Maximum gross production (kg/minute)	591.2	601.2
× Number of minutes in a day	1440	1440
× Number of tons in a kilogram	0.001	0.001
= Maximum gross production (tons/day)	851.3	865.8
× Scheduled operating days per year	360	360
= Scheduled gross production (tons/year)	306 457	311 685
× Percentage of machine uptime	90 %	90 %
× Percentage of good quality produce	98.5 %	98.5 %
= Sellable production per year (tons/year)	271 674	276 309
× Contribution margin per ton	€150	€150
= Contribution margin per year	€ 40 751 138	€ 41 446 367
Documented annual savings		€ 695 229

Table 9: Example of a documented savings claim from increasing machine reel speed (figures are fictional but representative)

Similarly, if a consumable makes it possible to run new paper grades with better margins, then that too would count as revenue improvement. Therefore, whenever a type of machine consum-

able changes the *output* of the production process, then total cost of ownership only tells part of the story on profitability. It is of course possible to make a correction to the TCO figures by deducting revenue increases, but in that case, it would no longer make sense to talk about *total cost*. Moreover, it is very difficult for machinery suppliers to make accurate revenue side estimations, as they have little or no knowledge about each mill's market situation and margins by paper grade ^(E1). As a sell-side industrial marketing tool, TCO analysis will therefore be of limited use whenever the competing offerings affect the output of the customer's paper production process.

Obstacle 5: Revenue improvements are not within the scope of total cost of ownership analysis.

“TCO” of process improvement agreements

Paper mills are dependent on machinery suppliers for improvements of the paper production process. Identifying good investment opportunities and quick-win calibrations requires deep knowledge about the technologies used, so paper mills tend to regularly involve suppliers in conceptualizing new improvement projects by granting them machine audits ^(U3; S2; E1). These auditing services are generally provided by suppliers for free, because audits give the supplier access to mill personnel and detailed process data—critical for making a persuasive sales argument. In one of Stora Enso's mills, for instance, they tried to systematize audits by inviting suppliers only once every six months to audit their machines based on a problem description sent to the suppliers four weeks earlier ^(S2). This way, they tried to get the suppliers' most competent specialists over to the mill to generate multiple independent reports on machine performance and bottleneck locations; all without any guarantees of new sales to the suppliers ^(S2).

Another, more binding way of systematizing audits is a long-term process improvement agreement—colloquially “TCO agreement”. Under such an agreement a machinery supplier *guarantees*, in exchange for a high sales volume on consumables for one or multiple mills, that they will identify and help implement a minimum worth of process improvements on a customer's paper machines ^(Z1). If the guaranteed savings are not fully realized before the contract expires, then the supplier has to reimburse the difference in cash or credit ^(Z1). From the paper companies' perspective, the purpose of such an arrangement is to prevent complacency in established preferred suppliers by necessitating mill presence and diffusion of new innovations ^(Z1). To identify the necessary process improvements, the customer allows the supplier to regularly audit the paper machine and suggest small improvement projects, which may require expenditure on the part of the customer. The improvements do not have to be related to the types of consumables sold, e.g. new doctor blade holders as part of a doctor blade supply contract ^(D9), but can rather be systemic changes such as increasing production speed ^(D3). Once a project is completed, both parties (e.g. mill controllers, machine superintendents and supplier sales representatives) sign a document ratifying the costs and results of the project ^(Z1). Finally, each project is assigned a “documented savings” value that central procurement counts towards the machinery supplier's contractual obligation ^(Z1; Z2).

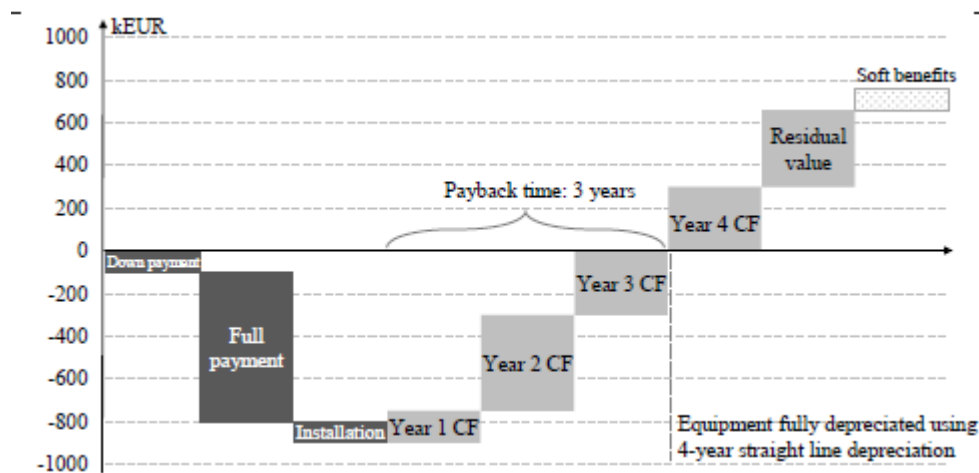


Figure 6: Outline of a sales tool that Boise's central procurement staff suggested suppliers should use when presenting investment proposals.¹

As an example of such an improvement project, consider the calculation in Table 10 (D7). Here, the machinery supplier has helped paper mill staff identify ways to halve the maintenance frequency of a paper machine roll by changing the type of roll cover used. This has halved the maintenance costs for that particular roll and thereby brought about significant annualized savings for the paper mill, due to less maintenance operations being needed (an external cost) and less own labor being needed to change the roll for servicing (an internal cost). The external costs are hard cost savings in the sense that they are verifiable from the company's profit and loss statement. In this example, internal costs are assumed verifiable as well, which implies that all the released man-hours can be cut (which is not the case if employees are salaried (Z1; B1)). Consequently, the total cost of that roll has been reduced by 26 280 euros per year of use, assuming no change in the annualized cost of the new roll cover.

¹ Using this waterfall chart, the supplier would show the customer the expected lifetime discounted cash flow (CF) impact of the capital equipment investment (retrofits, upgrades, new modules, major overhauls). The year-on-year positive cash flow drivers could be e.g. (1) energy savings, (2) added throughput from increased machine speed, and (3) the economic benefit of being able to run new paper grades. Offsetting cash flow drivers could be e.g. maintenance. The calculations would be based on data from the supplier's existing customers and, where needed, any assumptions would be spelled out explicitly. Soft benefits such as improved safety could be shown and acknowledged separately as a bonus consideration, but would not be included in fact-based decisions due to their unquantifiable nature. (B1)

A key part of process improvement contracts is the valuation and documentation of the savings generated. At Zeta, the standard project valuation method was to simply use gross realized savings from a twelve month period (Z1; Z2), corresponding to e.g. €26 280 for the project in Table 10. This valuation method ignores both the size of the investment and any savings realized after the twelve month period. For a typical improvement project with a payback time of less than a year but with a useful life of more than a year, the “documented savings” is therefore only a fraction of the project’s net present value. This means that Zeta ends up with more savings than guaranteed upfront by the supplier, thereby incentivizing mill personnel to cooperate with suppliers in implementing process improvements despite the money-back guarantee. This does not mean that all good investment opportunities identified by suppliers will be approved, funded, and given credit for; because the capital allocation cycle is inflexible and mills have inherent resource constraints (Z1; Z2).

	<i>Before: Roll maintenance once a year</i>	<i>After: Roll maintenance every two years</i>
Cost of a maintenance operation	€50 000	€50 000
× Number of maintenance operations per year	1	0.5
= Cost of roll maintenance operations per year	€50 000	€25 000
Labor cost per hour for roll changes	€80	€80
× Man-hours to change a roll	32	32
× Number of roll changes per year	1	0.5
= Cost from roll changes per year	€2 560	€1 280
Total annual costs from roll maintenance	€52 560	€26 280
Documented annual savings		€26 280

Table 10: Example of a documented savings claim from halving roll maintenance frequency (figures are fictional but representative)

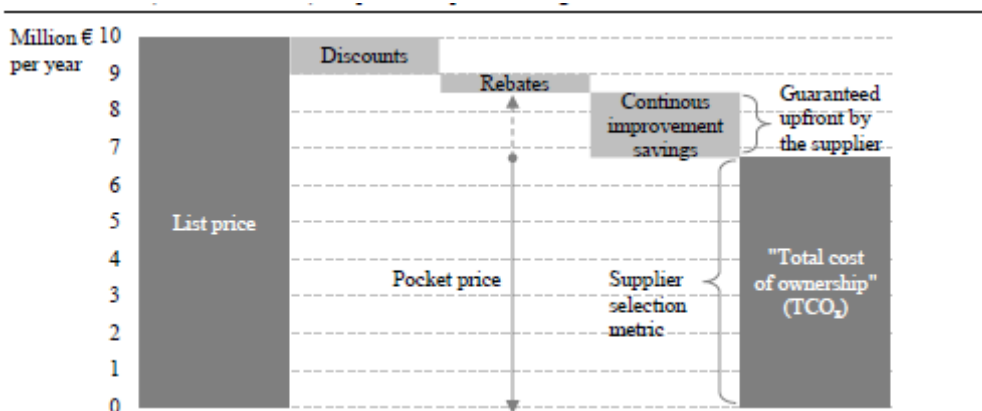


Figure 7: Non-academic usage of the term ‘total cost of ownership’ in a corporate-wide, single supplier roll cover, roll maintenance, and process improvement agreement.

The fundamental consequence of this type of process improvement agreement is that it makes contract price commensurable with the guaranteed savings during framework agreement negotiations. In other words, it mitigates the “green money vs. gray money” problem discussed on

page 14. In regular framework agreement negotiations for consumables, a supplier could try to offer free audits and promises of process improvements to improve the perceived value of their offering. Yet, the customer's central procurement staff cannot quantitatively appraise such services, as a result of which they constitute gray money. Under a process improvement agreement however, the supplier guarantees a certain amount of monetary savings. The guarantee is both credible and measurable, since there is a mutually acceptable, systematic way of documenting the realized savings. Therefore, the guaranteed savings constitute green money. Note that 'realized savings' doesn't necessarily mean true savings in a positivistic sense, i.e. an objective measurement using a combination of technical metrics and accounting techniques. Rather, it is just a mutually agreed upon, best guess monetary value, which may or may not be based on sound science.¹⁰

At Metso and Zeta, they have depicted the commensurability in manner similar to Figure 7 (D10). On the left hand side of Figure 7 is the list price of the contract, i.e. the sum of the list prices for all individual products and services included in the contract. On the right hand side is a column labeled 'TCO' or 'total cost of ownership', which constitutes list price less discounts, rebates and "continuous improvement savings" (the savings guaranteed by the supplier).

Operationalizing the right hand column as "total cost of ownership" is misleading for two reasons. First, it does not represent merely costs (in a P&L sense) because the savings guaranteed by the supplier can arise from revenue improvements rather than cost reductions. Second, it does not represent total costs, only costs of acquisition, because no overhead attributable to the contract has been allocated on top of the discounted price. To avoid confusion, this column is referred to henceforth as 'TCO_x' to distinguish it from proper TCO.

From the supplier's perspective, Figure 7 mostly resembles a pocket price waterfall, where the pocket price is the true revenue (net cash flow) received by the supplier after discounts and other bonuses are deducted from the list (and invoice) price (Marn & Rosiello 1992). The difference between pocket price and the TCO_x in Figure 7 is the guaranteed continuous improvement savings element, which is equivalent to a discount if and only if the supplier completely neglects to deliver the guaranteed savings. In such a scenario, TCO_x would equal the supplier's pocket price. On the other hand, if the supplier does deliver the guaranteed savings, then the TCO_x is less than the pocket price, because the continuous improvement savings are not a revenue leak for the supplier. Note that the supplier does incur some unknown amount of expenses from the auditing and documentation activities, but that this should be smaller than the guaranteed savings to make the contract worthwhile.

¹⁰ The savings documentation method used by Zeta bears semblance to North American industrial parts distributor Applied Industrial Technologies' Documented Value Added ® (DVA) service process developed in the 1990's (Anderson et al. 2006, pp.121–123) and also Swedish bearings Manufacturer SKF's Documented Solutions™ program developed in the 2000's (Anderson & Narus 2003, p.347). A key difference is that these companies used the documentation process for sales purposes rather than procurement.

From the customer's perspective, TCO_x is the direct out-of-pocket costs for the contract if the supplier completely neglects to deliver the guaranteed savings (because the reimbursement is equivalent to a delayed discount). This makes low TCO_x desirable when performing supplier selection. However, if the supplier does deliver the guaranteed savings, then TCO_x is an ill-defined metric for costs incurred by the customer. The reason is that it mixes transaction inputs with transaction outputs by confounding the contract's pocket price with some of the eventually accrued benefits of the contract, namely the documented process improvement savings. The documented savings cancel out part of the pocket price and can even make TCO_x negative if large enough. This may seem reminiscent of a profitability calculation, but TCO_x is not a measure of profit either, because it neglects e.g. the benefit of the consumables themselves. Rather, TCO_x is best described as a modified pocket price.

To summarize, TCO_x is the pocket price minus documented savings from process improvements. This makes TCO_x inconsistent with the conventional notion of total cost of ownership, which is the purchase price plus expenses attributed through activity-based costing. If a MRO supplier attempts to base its value proposition on lowest total cost using sell-side TCO analysis, it will lead to semantic dispute with customers already having a well-established (albeit erroneous) method of calculating TCO. We conclude:

Obstacle 6: Customers may have well-established but unconventional definitions and methodologies for "TCO", which are inconsistent with proper TCO analysis.

This concludes the customer case study. Six obstacles to sell-side use of TCO analysis as an industrial marketing tool were identified based on paper companies' current procurement methods. Next, the implications of these findings are discussed with regard to existing theory on the subject, and managerial implications are presented.

DISCUSSION

Total cost of ownership analysis is an activity-based costing method conventionally used by procurement professionals to objectively quantify and aggregate hidden costs attributable to a product or service from a particular supplier. This allows comparing different suppliers in terms of total cost rather than basing sourcing decisions on price alone or on subjective weightings of price and non-monetary criteria. Under TCO evaluation, a higher priced offering may turn out to be the most economical in terms of total costs, and should thus be favored over low-price substitutes.

This study viewed total cost of ownership from the opposite end of the negotiating table. Could a higher-priced supplier faced with price-oriented customers use TCO analysis as a sales and marketing tool to demonstrate the superiority of their offering?

Existing academic literature dealing with this question is scant, largely speculative, and even offers contradictory opinion on whether TCO is worthwhile pursuing as a sales tool. A thorough keyword search yielded only five peer-reviewed articles and two scholarly books mentioning TCO analysis in the industrial marketing context; out of which the only extensive examination was provided by Piscopo et al. (2008), who conjecturally argued in favor of sell-side TCO. In spite of the advocacy, all published empirical evidence giving credibility to sell-side TCO

analysis revolve around sales cases at Rockwell Automation. Although these may serve as proof of concept, closer scrutiny nevertheless reveals that the calculations only account for subset of all hidden costs. This begs the question as to when a cost model is comprehensive enough to be deemed a total cost model.

In light of the limited research on sell-side TCO, this study set out to explore the topic in greater depth through an embedded case study in the paper machine maintenance, repair and operations (MRO) market. MRO sales arguably constitutes a typical or even critical case (Yin 2003, p.40) for TCO analysis as an industrial marketing tool, because MRO items are particularly suited to pure cost-based comparison. The reason is that unlike raw materials and components that become part of the end product, MRO supplies and services do not normally affect how the final market offering (e.g. wholesale paper) is perceived downstream from the manufacturer (Wouters et al. 2005).

The case study design consisted of two parts. First, a descriptive and explanatory narrative was provided of machinery manufacturer Metso Corporation's paper machine consumables business and their idea-phase TCO initiative to exemplify antecedents as to *why* a MRO supplier would attempt to use TCO analysis as a sales tool, i.e. the background and motives for trying to change established industrial marketing practices used in the company. This was a key question with regard to use of sell-side TCO analysis, because the methodology must serve the underlying needs behind the initiative; in other words, the ends must justify the means. The second part of the case explored the business context of Metso's TCO initiative from the perspective of six of Metso's major customers in the pulp and paper industry. This made it possible to identify plausible obstacles, "*why not(s)*", to the implementation of sell-side TCO analysis, without having to longitudinally follow up a multi-year implementation attempt. Together, the antecedents ("*whys*") and obstacles ("*why not(s)*") were then used to make inferences with regard to the applicability of sell-side TCO analysis as an industrial marketing tool.

Synthesis and interpretation of the findings from the case study

Antecedents to sell-side TCO initiatives

The focal supplier narrative suggests three antecedents that may drive a MRO supplier to engage in a sell-side TCO initiative. These are listed in Table 11 below.

Table 11: Antecedents to sell-side TCO initiatives as suggested by the focal supplier case.

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1. The supplier is higher priced, but the incremental value over low-price substitutes is contestable.
 2. The supplier believes that all things considered, its offering is the most economical for the customer.
 3. There is some explicit customer interest in total cost of ownership.
-

Antecedent 1 is a contributory cause to sell-side TCO initiatives for two reasons. First, there

must be significant uncertainty with regard to the hidden costs (and possibly benefits) of competing offerings, since otherwise the analysis would be superfluous. Second, the higher the supplier's price in relation to substitutes from other qualified competitors, the greater is the burden of proof placed on the supplier to show how the price difference will be recuperated by the customer in the long run. Sell-side TCO analysis allows quantifying post-purchase cost savings, hence the incentive for the higher priced supplier to pursue it.

Antecedent 2 then states that the supplier must believe TCO analysis would show its offering as the most economical for the customer, since only in that case would a sell-side TCO initiative be beneficial. Conversely, if the supplier is being outmatched by competitors on a total cost basis, then a TCO analysis would only make the inferiority clear to customers as well.

Antecedent 3 is a powerful trigger for a sell-side TCO initiative, because here an important customer could be explicitly demanding total cost considerations rather than a low price. With a single credible business case at hand, middle managers championing the TCO initiative are thus more easily allocated critical resources by top management to pursue it.

While the above antecedents may appear self-evident in hindsight, Metso's TCO initiative exemplified a messy reality where few managers understood why and what they were actually developing. After a key customer triggered the initiative, the word 'TCO' quickly became a buzzword running rampant in the organization. Not only was it incorrectly applied in cost calculations, but the label 'TCO' was also stamped on service-heavy contracts and pricing schemes, thereby leading to considerable semantic confusion.

Obstacles to sell-side TCO analysis

The customer case study suggests six obstacles to sell-side TCO analysis. These are listed in Table 12 in the order they appeared in this paper.

Obstacle 1 may appear trivial, but it underlines the fact that sell-side TCO analysis aims to change the way customers select suppliers, at least on a case by case basis. This is a fundamental obstacle because customers may have spent years on developing and honing the ways they currently select suppliers, e.g. bidding processes and subjective weighted point systems. Conversely, if a customer did use TCO analysis for supplier selection, then suppliers would be best off by cooperating and providing reliable data.

Obstacle 2 emphasizes that it is impossible for suppliers to conduct believable TCO analyses without access to the customer's data, particularly on the performance of competitors' products and services. Although theoretical calculations and referential analyses from other machines may spark interest, collaborative field testing is ultimately needed as proof because MRO items can be very sensitive to machine specific conditions. Such field tests are not only laborious, but also risky due to the increased possibility of machine failure during the trial.

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1. Customers do not use TCO analysis for supplier selection.
 2. Sell-side TCO calculations become credible only through risky, re-source-intensive and highly collaborative field testing at the customer's site.
 3. Sell-side TCO analysis may necessitate the seller to reciprocally reveal the true cost structure of their offering.
 4. Sell-side TCO analysis requires allocating all the customer's costs attributable to the offering, regardless of cost driver complexity and regardless of whether the magnitude of a cost element is expected to vary by supplier.
 5. Revenue improvements are not within the scope of total cost of ownership analysis.
 6. Customers may have well-established but unconventional definitions and methodologies for "TCO", which are inconsistent with proper TCO analysis.
-

Table 12: Six obstacles to sell-side TCO analysis

Obstacle 3 is a result of the supply chain perspective on total costs. One of the benefits of a TCO analysis is that it reveals the hidden cost elements with the most improvement potential, thereby enabling the customer and the supplier to collaboratively work out ways of reducing the customer's total costs. From the customer's perspective however, the supplier's price is a cost element amenable to the same improvement principles. The customer might therefore, in the spirit of cost reduction collaboration, demand that the supplier reveals the cost elements that make up the price of the product or service. This is an obstacle to sell-side TCO analysis because not only does the supplier have to reveal sensitive sales margins, but the supplier would also have to know the cost structure of their own product-service bundles. This may be surprisingly difficult or even impossible without a corporate-wide full costing system in place.

Obstacle 4 is a practical consequence of how total TCO is defined. As established on page 6, total cost of ownership, as the name suggests, measures the true cost of a purchase by including all expenses attributable to the product or service throughout its useful life. Consequently, significant cost elements cannot be omitted from a TCO analysis while still proclaiming it to be total cost of ownership, as that would misrepresent both the meaning and the accuracy of the analysis. This is a major obstacle to sell-side TCO analysis, because many key cost drivers are difficult or even impossible to quantify and allocate without the customer already having implemented activity-based costing systems for the very purpose. Moreover, some cost drivers may be inconsequential with regard to the sourcing decision if their magnitude is not expected to vary by supplier, but TCO analysis necessitates their quantification regardless.

Obstacle 5 is another consequence of the definition of total cost of ownership. TCO analysis allocates cost overhead to procured products and services, but ignores the effect that these products and services have on revenues. In other words, while TCO is an accurate measure of the firm's inputs, it ignores outputs and therefore says nothing about the input-output difference, i.e. the profitability of the firm's inputs. This limitation is sensible from an accounting perspective because an input to the firm is generally combined with a multitude of other vastly dissimilar inputs to produce outputs, so revenues cannot be objectively allocated to individual inputs to arrive at a "total profit of ownership". For sourcing decisions, this is not a problem as long as the revenue effects among competing offerings are identical, in which case the best supplier is the one delivering the lowest TCO. However, as it turns out, even functionally similar MRO items may affect the buying company's revenues by altering end product quality or quantity. This limits the potential for sell-side TCO analysis to demonstrate the overall impact of an offering because it excludes quantifying how the customer's revenues will be affected.

Obstacle 6 is a type of semantic discord where a customer already has an established way of calculating "TCO", but the method is inconsistent with the academic notion of TCO analysis. 'Inconsistent' here means that the method is not just a sub-activity of TCO, such as total cost of acquisition or landed cost, but rather a calculation based on principles other than activity-based costing. For example, this case study demonstrated an instance where the word 'TCO' strictly meant pocket price minus post-purchase documented savings. In such circumstances, suppliers using TCO analysis as an industrial marketing tool may have a particularly difficult time coming to terms with the customer

TCO analysis as an industrial marketing tool

Together, the antecedents and obstacles discussed above reveal a mismatch between (a) what a supplier is trying to achieve with sell-side TCO analysis, and (b) what feasibly can be achieved using the methodology. The supplier's objective is to motivate their higher price and win deals by demonstrating that their offering is more economical for the customer than competitors' lower priced substitutes. The allure of TCO analysis is that it adds all hidden costs on top of the purchase price, thereby revealing which of the alternative offerings is the cheapest in terms of total costs for the customer. This is advantageous for the higher priced supplier as long as the higher price translates to correspondingly lower hidden costs for the customer, and thereby lower total costs.

While some of the obstacles to using TCO analysis for this purpose can arguably be overcome with intense effort, some of the shortcomings are so fundamental that they essentially confute TCO analysis as a sell-side tool. TCO analysis necessitates extensive customer-supplier cooperation to model and measure all cost drivers attributable to the product or service, both for the supplier's offering and for other competing alternatives. This leads to two insurmountable issues. First, it does not make sense to mine the data if the cost of doing so exceeds the expected benefits for both parties—a highly probable situation when dealing with complex cost drivers. Second, TCO analysis includes all or at least the most significant cost drivers (by magnitude), even if they would have negligible bearing on the supplier selection decision. For instance, if all product alternatives in any given decision require about as much inventory, then inventory costs will not affect the decision and need not be modeled, even when inventory costs are a large part of total costs. In other words, customers are interested in cost differences between alterna-

tives, not the absolute total costs per se. The semantically liberal reader may argue that this elimination is allowable in TCO analysis, but, if that were the case, ‘total cost of ownership’ would become a misnomer as it would no longer measure total costs, but would be a sum of e.g. (a) easily measurable cost elements, or (b) the most variant cost elements.

Also, the customers’ objective is to maximize profits, so they are not just interested in reducing costs, but also in increasing revenue, or more specifically, generating more contribution margin to cover for fixed costs. Revenue enhancements are not within the scope of TCO analysis, although this methodological limitation can be overcome by considering the contribution margin increase as a negative cost. The problem is that this might make TCO negative if the revenue enhancement is large enough, which again makes ‘total cost of ownership’ a misnomer.

Based on the prior theoretical arguments and the case study as a whole, the following proposition is inferred:

Proposition: Total cost of ownership analysis is inapplicable as an industrial marketing tool.

Assuming this proposition is true, why then is TCO analysis inappropriate in sales but a real possibility in procurement? There seems to be at least three reasons for this. First, unlike a one-off sell-side TCO analysis, buy-side TCO costing systems can be set up permanently and applied to many different product categories, thereby making a much larger initial investment worthwhile. Second, the buyer has direct access to its own cost data and information from all potential suppliers, while a single supplier would have to depend on the buyer share such data. Third, TCO becomes the metric of choice when performance specifications are frozen (i.e. no differing revenue effects), but only buyers are able to make such demands.

Implications for industrial marketing theory

The findings in this case study corroborate the assertion made by Anderson et al. (2007, p. 8) that sell-side TCO analysis is “unworkable in practice”. Importantly, this also means that the findings and the main proposition are at odds with Piscopo et al. (2008), who extensively argued that “TCO analysis can be a powerful selling tool”. This apparent contradiction can be semantically resolved by distinguishing between proper TCO analysis as defined on page 6, which aims to quantify the total cost of each alternative separately, and a superficially similar, but much less comprehensive differential cost approach that only sums cost elements that are expected to vary the most between alternative offerings. This difference can be elucidated by rearranging what Anderson & Narus (2003, p.6) call the fundamental value equation. The equation states that customers will buy the focal supplier’s offering when the value less the price of the offering is greater than that of alternatives¹¹.

$$\underbrace{\text{value}_{\text{supplier}} - \text{price}_{\text{supplier}}}_{\text{incentive to buy from supplier}} > \underbrace{\text{value}_{\text{alt}} - \text{price}_{\text{alt}}}_{\text{incentive to buy alternative}} \quad (\text{Eq. 4})$$

For simplicity, assume value can be decomposed into a sum of economic benefits (B) less a sum of all non-price indirect costs (C) (similarly to Forbis & Mehta 1981). The decomposed equation

tion is then:

$$\sum B_s - \sum C_s - P_s > \sum B_a - \sum C_a - P_a \quad (\text{Eq. 5})$$

By rearranging the equation and using the definition of TCO in Equation 1 on page 6 (ignoring salvage value), the following form is obtained:

$$\sum (B_s - B_a) > \underbrace{\sum C_s}_{\text{TCO}_s} - \underbrace{(\sum C_a)}_{\text{TCO}_a} \quad (\text{Eq. 6})$$

Further assuming the economic benefits are equal ($\sum B_s = \sum \bar{B}_a$, i.e. no revenue-side effects) and expanding the cost element summations:

$$0 > \Delta \text{TCO} = (P_s - P_a) + (C_{1,s} - C_{1,p}) \\ + (C_{2,s} - C_{2,p}) \dots + (C_{N,s} - C_{N,p}) \quad (\text{Eq. 7})$$

The equation above states that ΔTCO —the “differential cost of ownership” or plainly “differential cost”¹²—must be less than zero for the supplier’s offering to be superior in comparison with the alternative. Simply put, the supplier’s offering must generate incremental cost savings. The advantage of estimating ΔTCO directly without first estimating TCOs and TCOa separately is that part of the N cost elements can be eliminated at the outset if there is *good reason to expect that the difference* (e.g. $S_{2,s} - S_{2,p}$) *is negligible*. This pairwise comparison makes it possible to eliminate cost elements one-by-one until only the expectedly most variant ones remain for quantification—as illustrated in Figure

8 below. This should be done by the seller and buyer together to ensure mutual agreement. Sellers can initiate the discussion using a generic cost driver list like the one compiled by Ferrin & Plank (2002, p.25), and then together with the buyer strike off irrelevant and invariant cost drivers from the list until only the most variant ones remain. The computation of the differential cost thereby becomes much easier and practical; all with little loss of accuracy in comparison with fully-fledged TCO analysis.

¹¹Considered one of the major definitions of ‘value’ (Lindgreen & Wynstra 2005), Anderson et al. (1993) define value as “the perceived worth in monetary units of the set of economic, technical, service and social benefits received by a customer firm in exchange for the price paid for a product offering, taking into consideration the available alternative suppliers’ offerings and prices”, with the addition that ‘benefits’ mean “net benefits that subsume costs other than the acquisition price (e.g. lifecycle costs)”. Note that value is independent of price.

¹²The term ‘differential cost’ is derived from an unpublished prescriptive paper by Marc Wouters titled “Beyond the Acquisition Price – Total Cost of Ownership for Supporting Purchase Decisions” (2007).

With these considerations, it appears that the single empirical evidence published in favor of sell-side TCO analysis by Piscopo et al. (2008) could be better described as a differential cost approach, since the case example from Rockwell Automation only contains the top four cost drivers in terms of cost savings. This is also indirectly confirmed by Anderson et al. (2007, p.123), who noted that Rockwell’s “TCO analyses” are most often limited in scope and “really do not drill down into *all* [emphasis in original] the costs”.

Consequently, the proposition that TCO analysis is inapplicable as an industrial marketing tool is not in conflict with existing evidence. Rather, there is unfortunate ambiguity among both procurement and marketing scholars and practitioners as to what counts as “total cost of ownership”, and how it relates to customer value models (compare e.g. Snelgrove 2012; Anderson et al. 2007, p.8, 123; Wouters et al. 2005; Plank & Ferrin 2002; Anderson & Narus 1998; Ellram 1995; Forbis & Mehta 1981). In particular, there is a need to pragmatically distinguish TCO analysis from the differential cost approach and also establish a clear connection with other subsuming notions such as *differential value*—the value difference between an offering and its next best alternative (Anderson et al. 2010)—and the proposed *total value of ownership*, which is TCO extended to include revenue effects (Wouters et al. 2005).

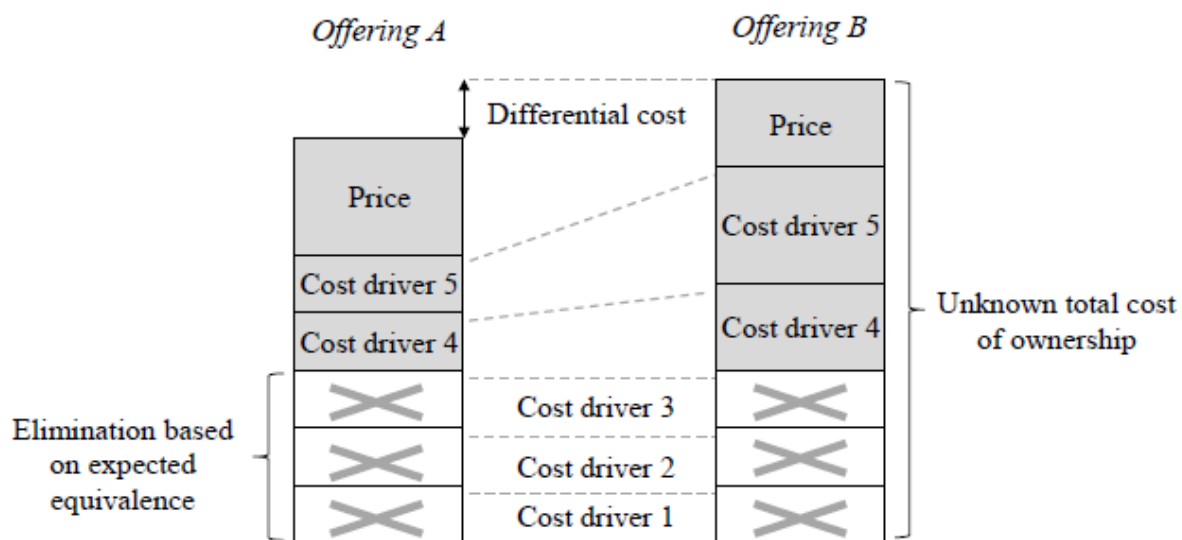


Figure 8: Conceptual illustration of the differential cost approach

An instructive way of distinguishing between these four concepts (total cost of ownership, differential cost, differential value and total value of ownership) is suggested in Table 13. The idea is to consider circumstances where each of the four metrics represents the relevant objective function in the supplier selection problem. The differential cost approach will only lead to an optimal decision if there is a simple choice between alternatives. ‘Simple choice’ means that it must be possible to conduct an isolated pairwise comparison of two (or more) discrete offerings, eliminate seemingly equal cost drivers, and then make the correct choice on the basis of the differential cost. In contrast, the choice is not simple if there are significant trade-offs and other interdependencies between an offering and other goods and services bought. For example, the inventory costs of two competing products could appear equal at first sight, but may

drastically change with time depending on batch sizes, which depend on delivery truck fill-rates, which depend on the mix of different products bought from the same supplier. Other examples include discount and rebate schemes that depend on total volume spanning multiple product groups. Due such interdependencies, the optimal solution to the supplier selection problem might be to buy a particular product mix from several different suppliers using a volume allocation rule that changes over time. This optimal solution cannot be found via the differential cost method (which always suggests a single supplier), but can be generated programmatically using sophisticated TCO analysis, which includes all cost drivers (see e.g. Degraeve et al. 2005; Degraeve & Roodhooft 1999).

Furthermore, both the differential cost approach and TCO can be considered subcases of differential value and total value of ownership respectively, which also take into account performance differences that lead to changes in the buying company's revenues (and thus profits).

		<i>Is there a simple choice between alternatives?</i>	
		<i>No</i>	<i>Yes</i>
<i>Does the revenue effect differ between alternatives?</i>	<i>No</i>	Total cost of ownership (e.g. Degraeve & Roodhooft 1999)	Differential cost (i.e. cost savings / increase)
	<i>Yes</i>	Total value of ownership (Wouters et al. 2005)	Differential value (Anderson et al. 2010) Economic value to the customer (Forbis & Mehta 1981)

Table 13: Objective functions relevant in different buying scenarios

For example, if a sourced component is more reliable, then the final product containing that component will also be more reliable and may therefore command a higher price. Differential value (Anderson et al. 2010) between two well-defined offerings not only includes lifecycle cost differences (excluding price differences¹³) but also includes the difference in benefits conferred, as seen in Equation 6 on page 37. Differential value therefore conceptually subsumes differential cost, as long as the price difference is taken into account as well. In the same way, Wouters et al. (2005) suggested the *total value of ownership* concept to subsume TCO by including revenue effects; however this concept has not been further developed, possibly due to the inherent difficulty in estimating the *total* benefits of an offering.

¹³ Differential value is similar to *economic value to the customer* (Forbis & Mehta 1981), except that the latter includes price differences as a component of value.

Managerial implications

For industrial marketers aiming to demonstrate the superiority of their offering using monetary quantification, this paper suggests *abandoning attempts at sell-side TCO analysis* in favor of the differential cost (or value) approach. TCO analysis is unfeasible as an industrial marketing tool and will also lead to quantification of cost elements that have little or no bearing on the supplier selection decision. However, the activity-based costing principles that form the basis TCO analysis can be used to selectively quantify hidden costs as part of the differential cost approach. Moreover, single TCO analyses can be used to direct process improvements—a domain where suppliers can provide considerable input and even offer TCO analysis support as a paid service.

Managers in general should avoid using ‘TCO’ as a buzzword. Total cost of ownership is a valid theoretical construct, and TCO costing systems can be implemented buy-side with sufficient investment in data collection processes. There is no good reason to use ‘TCO’ or ‘total cost of ownership’ in place of ‘operational costs’, ‘cost savings’, ‘profit’, ‘net cash flow’, ‘pocket price’, ‘total cost of acquisition’, ‘landed cost’ or ‘value’. It is a no-brainer for suppliers to try to win the customer over by demonstrating hard cost savings or incremental profit in comparison with competitors’ solutions. No customers will be convinced by simply slapping the ‘TCO’ label on marketing material, contracts, pricing schemes and value documentation.

Limitations and future research

The key limitation of this paper is that it only proposes that TCO analysis is inapplicable as an industrial marketing tool. The antecedents and obstacles identified are not generalizable per se, but rather explain, through the force of example (Flyvbjerg 2006), why there is universal absence of evidence in favor of sell-side TCO analysis. Stronger conclusions (evidence of absence) would require a statistically generalizable sample. However, the proposition emerging at the end of the study still fulfills the hallmarks of good theory: it is parsimonious, testable and logically coherent (Eisenhardt 1989). Importantly, the proposition can be falsified by demonstrating that TCO analysis is being successfully applied as an industrial marketing tool in some context. Thereafter, theory development can take place by specifying the business contexts where TCO analysis is applicable, and where it is not.

Future research building on this study can therefore take at least two paths. The first option is to aim for refutation by trying to find one or more successful cases of sell-side use of TCO analysis. The second option, which can be combined with the first one, is to aim for verification and generalization by surveying a statistically significant sample of industrial companies. The case company Metso could be longitudinally followed up in such a study, although at the time of finalizing this manuscript, it appears that the sell-side TCO initiative morphed into more of a post-purchase value documentation initiative similar to that used by bearings manufacturer SKF.

Such documentation of cost savings or value delivered represents another possible avenue for future research. Under the guise of “TCO”, this case study inadvertently uncovered a sophisticated value documentation method where the buying company required suppliers to make up-front cost savings guarantees (on a money-back basis), and then systematically monitored

whether or not the supplier delivered those savings. This made price commensurable with the savings guarantee, thus making it possible for high price, high value suppliers to more effectively demonstrate their worth to cost-conscious buyers. Conversely, suppliers could develop a similar system where they would guarantee savings up-front, and follow through using the differential cost (or value) method cooperatively with the customer. A couple of open questions in this area include: (1) What types of value documentation methods exist and what are the valuation mechanisms? (2) How can suppliers develop the risk tolerance to provide up-front guarantees and how can customers ensure that the results can be measured to mutual satisfaction?

CONCLUSION

This embedded case study explored whether industrial suppliers can use total cost of ownership (TCO) analysis to demonstrate the superiority of their offering to the customer. While TCO analysis is an established buy-side management accounting methodology for quantifying the total cost of procured products and services, there are only a few scholarly publications that discuss the possibility of using the method sell-side as an industrial marketing tool. Published empirical evidence on the matter is limited to only a few sales case descriptions, and existing viewpoints are contradictory and largely conjectural.

The focal supplier case of machinery manufacturer Metso Corporation indicated that sell-side use of TCO analysis is intriguing because of explicit customer interest in total cost considerations and an underlying belief that such analysis would reveal the supplier's higher priced offering to be more economical than competitors' lower priced substitutes. However, interviews with customer companies revealed six generic obstacles to successful implementation. Most importantly, TCO analysis by definition requires computing or at least approximating the total cost incurred as a consequence of the acquisition and subsequent utilization of a product or service, which leads to inordinately resource-intensive collection of customer and competitor specific data whereof only a fraction actually influences the supplier selection decision.

Based on the mismatch between the focal supplier's motives and the six obstacles identified, and supported by the lack of favorable evidence elsewhere, this study proposes that TCO analysis is inapplicable as an industrial marketing tool. In place of TCO analysis, sellers can use a less comprehensive differential cost approach that only considers the expectedly most variant cost elements. The semantic distinction between these two methods reconciles conflicting recommendations in prior scholarly literature. Differential cost and TCO can further be considered special cases of differential value and total value of ownership respectively.

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D8 (2011). Full-service program proposal for CustomerCo (Sizer TCO).

D9 (2011). Doctor blade agreement with CustomerCo PMs.

D10 (2011). *Using Total Cost of Ownership (TCO)*

APPENDIX

Abbreviated interview questionnaire

The semi-structured, explorative customer interviews were guided by the questions below. Spreadsheet examples obtained from the focal supplier were used to facilitate discussion.

Questions establishing supplier selection context

- (1) How is the operation and maintenance of your paper machines currently organized?
- (2) How are consumables for paper machines procured? What are the roles of the operating, maintenance and corporate central procurement organizations?
- (3) How are the different consumables financed?
- (4) Do you have a specific strategy or policy which guides consumable supplier selection? E.g. category management.
- (5) Has top management set specific targets for consumables procurement?
- (6) Do you look for the best prices, e.g. using metrics such as euros per meter of doctor blade, or do you have other key performance indicators such as consumable life-time?
- (7) How do you evaluate the technical specifications of the consumables?
- (8) How are the supplier selection metrics connected to the buyer's incentive systems or performance evaluation?

Questions regarding hidden costs

- (1) How large are the hidden costs over the consumable's lifetime compared to the purchase price?
- (2) Do you track and try to uncover hidden costs such as paperwork, delivery costs, installation costs, inventory costs, maintenance costs, energy costs, and costs due to consumable failure such as paper broke, downtime costs, and damage to machine components?
- (3) Have you used any form of total cost of ownership, life cycle calculations, value-in-use or other overall total cost methodology to select the supplier for any type of product or service (not necessarily consumables)? Such a methodology would examine all the direct and indirect costs over the life of the product/service.

The interviewee is shown a table of cost and revenue drivers derived from Ferrin & Plank's

(2002, p.25) compilation from 73 manufacturing organizations.

(4) Mark all the drivers that you see deem relevant for consumables (doctor blades, roll covers and machine clothing). You can also add relevant drivers that are not in the table.

(5) Which of the marked drivers do you pay the most attention to? Why?

(6) Theoretically speaking, are these drivers measurable objectively in monetary terms using some key performance indicator or other metric?

(7) Practically speaking, can the drivers be measured with reasonable costs?

(8) What is it that makes the drivers hard to measure?

Questions regarding cost calculators

(1) Would it be beneficial for you if the suppliers could give examples of the total hidden costs associated with consumables? *[Demonstration of a TCO waterfall]*

(2) Would it be beneficial for you if the supplier used some form of value calculator (e.g. spreadsheet) to calculate what the offering is worth? *[Demonstration of roll lifecycle calculator]*

(3) Should such calculators be simple or comprehensive?

(4) Should the value models be created together (both you and the supplier), or should both model the savings separately?

(5) Should the calculators be based around certain key performance indicators such as net present value, payback time, plant availability, maintenance cost (per ton), production cost (per ton), profit (per ton), OEE etc.? *[Demonstration of contribution margin calculator]*

(6) What do you think are the foremost challenges in making the value calculations believable to both parties?

(7) Should suppliers attempt to explicitly compare their offering against that of their competitors?

(8) In their sales pitches, consumable suppliers sometimes make cost savings claims that are hard to believe. How extensively would you be willing to cooperate with suppliers to determine the truthfulness of those claims? E.g. allowing machine audits to measure performance.

IMPROVING NEW PRODUCT DEVELOPMENT PERFORMANCE WITH INTER-FIRM RELATIONSHIPS: AN INVESTIGATION OF RESOURCE FLEXIBILITY

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New product development (NPD) has received a great deal of attention in the strategy literature, and is a firm capability that can improve overall firm performance (Guo 2008; Li and Calantone 1998; Vorhies and Morgan 2005). Some research has shown that products launched in the past five years can account for nearly half of a firm's annual sales and profits (Schmidt and Calantone 2002). However, new product development is not always a successful process. Some industries indicate failure rates of 40% (Schmidt and Calantone 2002) while others showing failure rates approaching 80% (Green, Barclay, and Ryans 1995). It is thus no surprise that both practitioners and academics seek to identify factors that lead to greater levels of success with new product development (e.g., Evanschitzky, Eisand, Calantone, and Jiang 2012).

Knowing that critical resources for a firm may span boundaries (e.g., Dyer and Singh 1998), it may be important to consider the role of resources outside of the organization that could lead to success with NPD. Critical capabilities combined with resources, both internal and external to firms, may be important in obtaining a competitive advantage (Teece, Pisano, and Shuen 1997), in that these resources and capabilities can facilitate enhanced NPD (Rumelt 1987). Since technological innovations are rather complex, firms may need to seek transaction partners in order to acquire the external resources needed to produce products (Lee, Lee, and Pennings 2001; Schibany and Polt 2001). These relationships may provide an opportunity for a firm to obtain a competitive advantage while developing new products.

In this study, the authors explore the role of resources and capabilities of innovating firms in how they lead to improved levels of new product success and to greater levels of firm performance. The role of interfirm relationships is investigated using the social network characteristics of network centrality and network density. To consider the role of resources and capabilities within the walls of innovating firms, resource flexibility is explored as a moderator to the network characteristics and success link. The nature of these relationships is shown in Figure 1.

Conceptual Model and Hypotheses Development

NPD product Outcomes

The impact of marketing within an organization has long been studied, with varying degrees of emphasis. Most marketing and innovation expenditures represent long-term investments. For this reason firms may find it difficult to maintain expenses in these areas, as the funds often become redirected towards achieving short term results. Investments in marketing activities are decreased, yet the role of marketing continues to play a strategic role in the firm (Homburg, Workman, and Krohmer 1999).

One such activity is new product development (Vorhies and Morgan 2005), and it is of continued interest to both researchers and practitioners as numerous findings have shown that new product development is linked with firm performance.

Successful NPD is critical to the competitive strategy of a firm. It is also one of the most challenging things to manage because of the need to make decisions in constantly changing markets (Kessler and Bierly 2002). Contributing to the difficulty of achieving successful NPD are the various metrics that can be used to determine whether NPD was indeed successful. NPD can be evaluated using either firm level (Cooper and Kleinschmidt 1995) or individual project level metrics (Griffin 1993). Since product development measures vary broadly, we will consider the metrics of performance that can be used to evaluate the competitiveness of products being developed and also the performance of the firm. In order to assess project and firm level performance, we will focus on measures of innovativeness, costs, and firm level performance.

As a measure of product performance, *innovativeness* is used to determine to what extent newly developed products differ from existing products (e.g., Henard and Szymanski 2001). The degree to which a firm produces innovative products may be important to consider, for a variety of reasons. Existing products that have minimal changes (e.g., incremental innovations) might not have a strong competitive advantage over existing products (Gatignon and Xuereb 1997). On the other hand, those products with considerably more changes than existing products (e.g., more radical innovations) could provide superior benefits to customers and may yield a stronger market position for the innovating firm (Chandy and Tellis 1998; Kleinschmidt and Cooper 1991).

Another measure of product level performance is the consideration of product development costs. Cost reduction strategies in NPD vary widely, and can include process changes (Griffin 1997) that managers follow to gain an advantage over rivals. This is because they can affect market-share, profitability, and long-term competitiveness (Sanchez and Perez 2003). Cost is often used to compare projects since many organizations allocate funds to projects based on budgets and closely monitor the expenditures. Good projects typically come in at or below projected costs, while bad projects often exceed projected cost estimates (Schmidt and Calantone 1998). In this study, we use *decreased costs* as a measure of cost efficiency in new product development. Project investments often fluctuate throughout the various phases of development, with project costs typically increasing as projects move into the later phases of development (Cooper and Kleinschmidt 1988). Thus it is important to consider costs in NPD.

The performance implications of new product development activities on the firm are of continued interest in the marketing literature (Rubera and Kirca 2012). A research priority for the Marketing Science Institute (MSI) has been the development of metrics to measure the impact of marketing. The development of metrics at all levels of the marketing productivity chain is of continued interest (Lehmann 2004), and these metrics must be linkable to financial performance. Unfortunately, as Lehmann (2004) noted, there is a lot of “stuff” (p. 74) that happens before the value in the investment in marketing activities is realized, therefore we include performance measures at the firm level to capture the effect of marketing activities on the firm. These measures are considered meaningful when assessing NPD and firm performance. Next we will explore the role of interfirm relationships in achieving success.

Interfirm Relationships

Technological innovations are rather complex, and firms often interact with other firms to generate their innovations (Kessler, Bierly, and Gopalkrishnan 2000). Since these interactions involve exchanges between social partners, it is appropriate to apply social network theory to study these exchanges. The nature of a firm's network and the position a firm has in a network of relationships can provide a firm with "network resources" and potentially lead to a competitive advantage (Gulati, Nohria, and Zaheer 2000). Network relations are important to the creation of knowledge, because they not only serve as a conduit of information, but network relations also inform members in a network about the existence, location, and significance of knowledge contained within the network (Hansen 2002). To study the role these networks play in enhancing new product success, we will use social network theory to investigate the characteristics of the network that a firm can take advantage of while performing new product development.

Social network theory has been used in the study of enhancing innovation capability in multinational firms (Persuad 2005), the study of individuals as actors (Garcia 2005), and reputation across work groups (Bond, Walker, Hutt, and Reingen 2004). To explore the role connections with others play in NPD, we consider the network characteristics of network centrality and network density.

The position of a firm relative to other members of a network is of great interest when studying the effects of social network theory on interfirm relationships. The concept of centrality is an important attribute of social networks (Freeman 1987). *Network centrality* is the extent to which an actor is connected to others in a network (Sparrowe, Lide, Wayne, and Kraimer 2001). Network centrality implies a position of power as relationships between other firms also include the focal firm (Burt 1982), and indicates that firms might have different access to and control of valued resources, and a significant source of potential power (Ibarra 1993).

One resource that a network central firm can control is that of information and this also entails the flow of information (Brass, Galaskiewicz, Greve, and Tsai 2004). As the firm has the potential to serve as an information conduit between other firms, there is an increased chance that the firm is exposed to greater levels of external knowledge, giving it the potential to increase new product development success. Thus it seems that firms that exhibit high levels of network centrality will have high outcomes of resources base enlargement. With higher levels of knowledge and greater access to inputs for innovation, innovating firms should be able to develop more innovative products and do so more cheaply. Access to more inputs for innovation should also lead to greater levels of firm performance.

H₁: Firms with a greater level of network centrality will have greater levels of NPD performance and firm success.

Past research has shown that network effects are not uniform, and may be contingent upon the nature of a firm's ties (Rindfleisch and Moorman 2001). *Network density* is an assessment of the overall strength of relationships a firm has with other firms (Antia and Frazier 2001; Burt 1992), where strong ties exhibit a higher level of closeness and weak ties provide access to greater inputs of information (Granovetter 1973). Strong ties are believed to provide a steady stream of new ideas, technological innovations, and operational support (Capaldo 2007) which can be quickly and easily activated (Simard and West 2006).

Density in relationships implies a higher level of redundancy in the network structure. This can lead to an increased flow of knowledge, which in turn enhances the exchange of knowledge and the integration of ideas (Kogut 2000). Those firms that exhibit higher levels of network density are likely to experience greater levels of trust and reciprocity (Dyer and Nobeoka 2000), which can itself facilitate knowledge transfer between entities. Dense networks provide firms with the potential for greater cooperation and information sharing from other members of networks (Sparrowe, Liden, Wayne and Kraimer 2001) and can additionally improve information transfer between firms (Swaminathan and Moorman 2009). Those firms with a high network density will benefit in NPD because of the ability to transfer information quickly from exchange partners.

H₂: Firms with a greater level of network density will have greater levels of NPD performance and firm success

Resources inside the organization may be necessary in order to enhance the benefits gained from interfirm relationships. Next, emphasis is placed on the ability of the firm to build up a resource base that assists it when new inputs are identified from outside the organization.

Resource Flexibility

Studies investigating resource bases in innovation have had mixed results, with some studies suggesting there is greater innovation when more resources are present, while others find innovation increases with greater resource constraints (von Burg, Podoyntitsyna, Beck, and Lommelen 2012). NPD managers seeking to garner strategic advantages in dynamic markets often look for flexible resources that can provide the firm with different options if the event arises (Sanchez 1995). In a product development context, the positive link between resource flexibility and NPD process outcomes can be explained by three reasons. The first reason is based on the range of alternate applications, where a flexible resource is one that can be effectively used to develop or market a variety of new products through its multiple uses. Second, resource flexibility implies lower switching costs, which leads to lower development costs. And third, flexible resources enable faster times to switch between uses. Based on these reasons, the first perspective suggests that flexible resources enable firms to incur lower project costs at faster speeds.

As Sanchez (1995) notes, the developing firm does encounter a dilemma with flexible resources, namely flexible resources can be constrained for use in the development of one product when a need arises for it to be used elsewhere. This would require the resource to be redeployed or reconfigured for application in other development projects. This often costs the firm elsewhere, as resources need to be reconfigured for other uses. Thus it is important to tie the availability of a flexible resource base to the ability of the firm to bring in opportunities for their use.

Resource flexibility acts as a moderator to the network characteristics and NPD performance link. As novel inputs for innovation are brought into the firm, a redeployable resource base should enable a firm to respond to opportunities and to increase the novelty of products being developed. Costs decrease when less time is spent configuring external inputs. Firm level performance will improve as firms are able to better integrate the external environment and do so more quickly.

H₃: Resource flexibility moderates the network centrality and NPD performance and firm success link.

H₄: Resource flexibility moderates the network density and NPD performance and firm success link.

Research Method

Using a list of industrial and service firms in Austria and Germany, we sought out key informants to participate in the study. We sought highly ranked purchasing and supply chain managers within firms, with the unit of analysis at the firm level. This was chosen so that we could explore firm level effects. After list purification, we sent our survey out to the managers at 729 firms. Sample firms represented machinery, automotive, construction, chemicals, hi-tech, and other manufacturing industries. All participants were offered an opportunity to participate in a raffle. After a follow-up email sent within a week, we obtained 84 total responses yielding a response rate of 11.5%. To test for nonresponse bias, we compared early respondents to late respondents on firm characteristics such as number of employees, annual sales, purchasing volume, supplier base, and model constructs and found no differences, thus concluding that there was not a threat to nonresponse bias in the data. Key informant checks were done by evaluating the managerial positions for each respondent, and no issues were noted.

Assessing the existing literature, we developed a survey that captured the domain of the constructs and that also encapsulated the domain of each construct. The survey instrument was developed using existing scales found in the literature and in the researcher's operationalizations of model constructs. The questionnaire was pre-tested in two phases. The survey was translated and evaluated. In the second phase, the survey was translated back into English and checked for consistency, grammar, and spelling prior to developing an electronic survey. The scales for network centrality and network density were adapted from Antia and Frazier (2001). The conceptual work of the use-based view of resources by Sanchez (1995) laid the foundation for our use of resource flexibility. The dependent measures for innovativeness was adapted from Gatignon and Xuereb (1997), decreased costs was a relative measure evaluating cost performance, and firm performance considered relative comparisons for profitability, market share, and growth rate. We include controls for firm size and R&D capability to account for firm level effects.

PLS with bootstrapping was used to test the research model and hypotheses. PLS is increasingly being used in marketing research (Hair, Sarstedt, Ringle, and Mena 2012). The correlations, composite reliability and AVE for each construct are found in Table 1. The summary of the path estimates from PLS are found in Table 2. Partial support for H₁ is found when network centrality leads to decreased product development costs. Partial support for H₂ is found when network density decreases costs and also increases firm performance. A number of the interaction terms are also found to be statistically significant. Per Cohen, Cohen, West Aiken (2003), the interaction terms are plotted to explore the nature of the interactions. The moderation of resource flexibility on network centrality (H₃) is not supported. There is partial support for the moderation of resource flexibility on the network density (H₄) and both innovativeness and firm performance links. Additional details about the sampling frame, survey method, survey items, measurement model, and interaction plots are available from the authors.

Conclusion

These results suggest that firms should invest in developing resources both within and outside the organization. Contributing to theory, we find that firms benefit by maintaining strong interfirm relationships and that these benefits can be further augmented when a flexible resource base is controlled within the organization. Our results indicate that firm performance and product innovativeness can be improved as a result of interfirm relationships and controlling a flexible resource base. Interestingly, we find that there are no cost benefits due to the moderation by resource flexibility on the strong interfirm relationships and performance link. Firms may need additional time to deploy flexible resources resulting in increased costs.

Managers may benefit from our findings. It takes time to develop deep and strong relationships, and managers must dedicate resources to do this (Tranekjer and Knudsen 2012). Additionally, if firms are not able to seek out opportunities to leverage the flexible resource base, and these additional options are not tapped, the additional cost for the resource base is might not become offset by the use of the resource base being fully utilized.

There are some key limitations to this study that could lead to future research opportunities. Interfirm relationships might not yield the only source of inputs for new product development. The open innovation literature (e.g., Chesbrough 2003) suggests that there are numerous opportunities to seek out and identify additional inputs to innovation. There may be other ways to characterize interfirm relationships not captured in this study. Additionally, there may be different resource base characteristics that could provide a firm with a competitive advantage.

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Figure 1:
Moderation of Social Network Characteristics and Performance Link

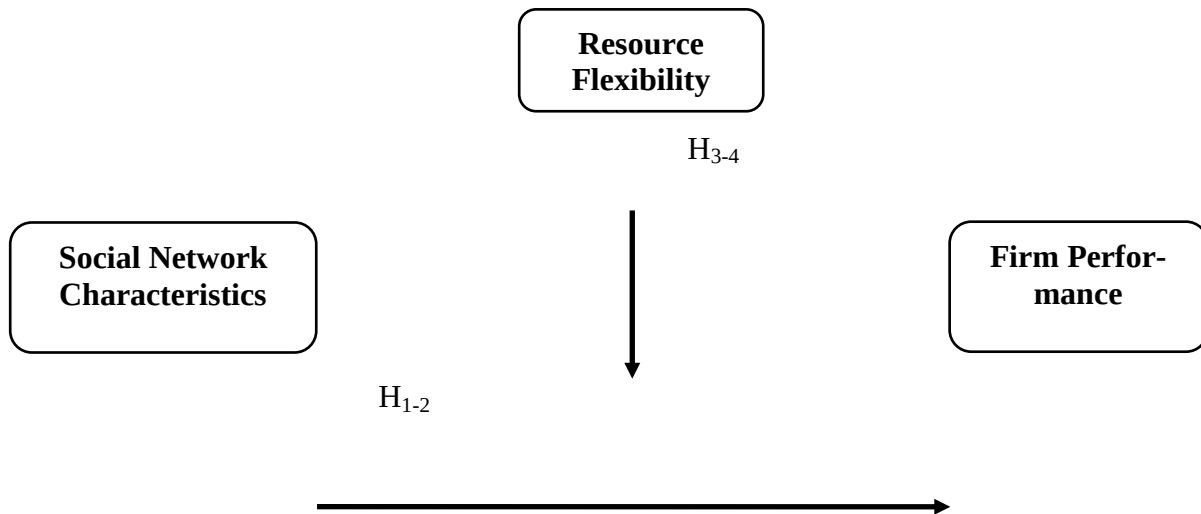


TABLE 1
Correlation Results

	Mean	SD	CR	1	2	3	4	5	6	7	8	9
1. Network Centrality	3.670	1.126	.842	.813								
2. Network Density	2.236	1.116	.906	.370 **	.756							
3. Resource Flexibility	3.602	.909	.835	-.116	-.083	.725						
4. Innovativeness	2.877	1.522	.780	.138	.142	.185	.741					
5. Decreased Costs	3.457	1.198	.890	.199	.197	-.173	-.140	.716				
6. Financial Perfor.	2.694	.814	.868	-.050	.209 *	.186	.054	-.055	.888			
7. log Employees	2.835	.921	--	.115	.074	.215 *	.050	-.019	.014	--		
8. log Sales	7.489	1.054	--	.162	.091	.219 *	.026	.002	.046	.746 **	-	
9. R&D Capability	3.806	1.204	.916	.179	.095	-.379 **	.215 *	.054	.030	.394 **	.284*	.803

Notes: Diagonals contain the square root of AVE.

**Correlation is significant at the .05 level (two-tailed).*

***Correlation is significant at the .01 level (two-tailed).*

TABLE 2

Path Estimates of PLS Model

	Innovativeness		Decreased Costs		Firm Performance	
Network Centrality	.117	(.169)	.310	(.186)**	-.034	(.139)
Network Density	.086	(.141)	.211	(.152)*	.287	(.132)**
Resource Flexibility	.326	(.191)**	-.194	(.147)	.195	(.148)*
Network Centrality x Resource Flexibility	.155	(.174)	-.251	(.137)**	.169	(.193)
Network Density x Resource Flexibility	.246	(.180)*	.230	(.159)*	.264	(.174)*
R&D Capability	.320	(.126)***	.223	(.170)*	-.009	(.169)
Sales	-.039	(.371)	-.004	(.414)	.124	(.456)
Employees	-.013	(.382)	-.040	(.403)	-.126	(.468)
R^2	.295		.235		.133	

Notes: Standard error in parentheses

*: $p < .10$

**: $p < .01$

UNDERSTANDING RELATIONAL CUSTOMER ATTRACTIVENESS FROM THE SUPPLIER PERSPECTIVE

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Purpose of the paper

In the case of a number of industrial markets, market power is relatively concentrated (oligopolistic market structure). If this power is concentrated with suppliers, they may not dedicate their resources equally to all their customers, and become more selective. Therefore, they will choose to allocate relational resources according to the perceived attractiveness of different customers. How suppliers make such attractiveness judgments is an important aspect in business relationships, and also has implications for customers, i.e. in order to be able to collaborate with the best suppliers and to maintain already existing trade links, customers need to be more attractive than their competitors for these suppliers. In this research we explore the concept of customer attractiveness as well as drivers of it. We are particularly interested in aspects of ‘relational attractiveness’, i.e. the attractiveness that relates to behavioural consequences which are intended to instigate a new relationship with a customer, or continue and deepen an already existing one. As relational attractiveness is likely to be context specific, our research is aimed at including a contingency perspective.

Literature Review

Some (arguably limited) extant literature covers the issue of customer attractiveness from the perspective of suppliers: Mortensen and Freytag (2010) consider the positive effect of being attractive for becoming ‘an interesting’ or a ‘more interesting’ customer to the supplier. Ellegaard et al. (2003) assume that if the customer is perceived as being attractive to the supplier, then continued commitment to this relationship will exist. According to Cordon and Vollmann (2002), attractive customers could get ‘the best brainpower’ and supplier commitment. In this context Mortensen et al. (2008) note the positive impact of increased levels of attractiveness on performance, loyalty, trust and commitment. Furthermore, Ramsay and Wagner (2009) emphasize that suppliers are more willing to accept the customer’s offer if the customer is attractive for them.

More recently, Schiele et al. (2012) proposed a model of *preferred customership* linked to customer attractiveness. According to them, customer attractiveness may be relevant beyond building competitive advantage, efforts aimed at open innovation and ensuring supply stability. Baxter (2012) primarily focuses on the supplier’s perception of customer financial attractiveness. La Rocca et al. (2012) take a step in the direction of conceptualization of the components of attractiveness as well as outlining methodological developments to measure attractiveness. However, overall the literature on attractiveness in business relationships focuses on aspects of the supplier (and utilizes therefore the perspective of the customer). The perspective of the seller/supplier regarding customer attractiveness is still under-conceptualised.

Furthermore, the interplay (i.e. configuration) of different aspects in the formation of the concept of customer attractiveness is underexplored, i.e. a Gestalt-based conceptualization of business partner attractiveness, is still missing. Such formations are expected to be contingency-dependent (i.e. change with context). Furthermore, a specific focus on relational aspects of attractiveness, i.e. those that focus specifically on fostering business relationships with customer companies, is also missing. For these reasons, our research is aimed at conceptualizing a more holistic understanding of relational customer attractiveness from the perspective of their exchange partners, i.e. suppliers, within a contingency framework.

Data collection and analysis

Around 15-20 semi-structured face-to-face interviews will be conducted; the interviewees are key informants of supplier companies. Where possible, multiple informants are used. The research is not restricted to one particular managerial view (e.g. sales), thus development and general managers, as well as sales managers are among the potential interviewees. The interviews cover three main groups of questions. Firstly, questions related to the company and position of the interviewee (industry, country, size of supplier, position of the interviewee and the estimated number of customers they serve). Secondly, questions related to customer companies – the interviewee is asked to choose one of their customers and after describing this company (industry, country, length of the relationship, customer's share in their business) he/she is asked to speak about the relationship between the two companies, including inter-personal relationships and critical incidents. Finally, there are questions related to the dynamics of customer attractiveness, i.e. why did the interviewee choose that particular customer; why was that customer initially attractive; to what extent is it attractive now and why; do they have any future plans for the development of this relationship; and what is not attractive in case of this customer. Interviewees are encouraged to bring up any related issue which has not come up or asked by the interviewer.

The analysis is carried out with text-based content analysis and fuzzy set QCA. Input into fsQCA will be a qualitative content analysis based on NVIVO to explore the contextual richness of data by supporting the sorting, retrieving and the coding process. Meaning units are abridged into condensed meaning units and coded into sub-themes and themes in case of each interview. The tentative categories are discussed by two or three researchers and revised accordingly. The various codes are compared based on identified similarities and differences. Cases are defined, and themes translated into conditions for fsQCA. Outcome constructs are most likely 'relational customer attractiveness' as well as its inversion, 'relational customer un-attractiveness'.

The identified themes are handled as conditions and are calibrated into set membership values ranging from 0 (observation is fully out of a set) to 1 (observation is fully in the set) (Ragin 2000; Fiss 2011). Using fuzzy set logic, cut-off and change-over points of set membership are defined for each condition. Based on the membership values, the analysis applies Boolean algebra to determine configurations leading to a particular outcome in customer (un-)attractiveness. This technique helps to generate a reduced set of logic statements that describe the underlying causal patterns to evaluate the analysed cases.

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LOCAL MARKET POSITIONING FOR FUNERAL SERVICES AS COMPETITIVE STRATEGIC ALLIANCES

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Abstract

Is important to any company create value. One of the oldest services on the market is the funeral services. The aim of this study is to determine a framework for action with the positioning strategies of the funeral to stay in the market. We analyze the strategies adopted by foreign and domestic markets and its implementation in the funeral industry in the most recognized Mexican companies, this as a means of market positioning. As a question how can absorb the demand for funeral services at the most likely consumers? The answer is by creating strategic alliances with key suppliers, as well as other undertakers and constant innovation.

Keywords: Strategic alliances, competition, positioning, funeral services.
JEL M19

Resumen

Es de vital importancia para de toda empresa crear valor. Uno de los servicios más antiguos en el mercado son los servicios funerarios. El objetivo de este trabajo es determinar un marco de acción con las estrategias de posicionamiento de las empresas funerarias para permanecer en el mercado. Se analizan las estrategias tomadas por mercados extranjeros e internos y su implementación en el sector funerario en las empresas mexicanas con mayor reconocimiento, esto como medio de posicionamiento de mercado. Como pregunta ¿Cómo lograr absorber la demanda de los servicios funerarios en los momentos más susceptibles de los consumidores?. La respuesta es mediante la creación de alianzas estratégicas con los principales proveedores, así como con otras funerarias y la innovación constante, para sobresalir en un mercado competitivo.

Palabras clave: Alianzas Estratégicas, competencia, posicionamiento, servicios funerarios.

1. Introduction

One of the oldest businesses is the funeral services market. Its success is largely due to continued increasing demand at the rate of population growth. Every human being reaches the end of his life, so that all people will be in need of these services to sue their lifeless. Such services are considered one of the first necessities. However due to the high costs that some companies offer their services, not everyone can be so considered as usual users of these services.

As indicated by Marcos (2003) in his work on the economy funeral, there are moral and religious implications which make these services are not supposed of first necessity or staple due to the requirements of consumers in terms of their beliefs and traditions.

Due to the constant changes in the preferences, such as the last wishes before dying, for the plaintiffs and considering that the funeral industry currently is in a market where there is competition, the creation and implementation of strategies means to survive. To this end, in this paper, it is discussed and analyzed if the market is really competitive in this type of business. This is determined by the Herfindahl index and Pascual Index.

Subsequently, it is conducted a brief overview of the innovations in this market made by American businessmen like the strategies used by the funeral J. Garcia López and Gayosso funeral in Mexico to market positioning. Finally, a comparison is made between the funeral industry in the United States, with the analysis of strategic partnerships implemented by both countries to establish a framework that distinguishes between companies and allows positioning of them on the market.

2. Background of the problem

Previously the funeral market was characterized as traditionalist, which led consumers to choose between price and the proximity of the place. The funeral services sector over time has been analyzed by different authors considering different perspectives on their market positioning. Quevedo (2008) conducted an analysis of the funeral industry and strategic partnerships with external insurers and he sustains that the grounds and motives of business cooperation between firms' stems from the demands brought about by globalization, such as the qualifying competition and improved technology.

This allows through partnerships to take advantages of business opportunities, get more applicants offering greater quality and efficiency of the goods and services sector. These conclusions were derived from the authors Dussauge and Garrete, (1991) who explain as the main cause of strategic alliances the pretenses and expectative in the global market claims arising from the high level of competition and advancing technologies. In contrast to Mexico partnerships and strategic alliances were created with the same competitors, churches and suppliers, finding here vertical and horizontal partnerships.

Another strategy for market positioning is marketing. Distinguish between competitors is complex and to achieve it innovation comes as one of the best strategies. This creates an added value services which leads then to be the key for success, as mentioned De Rosas & de Corcho León (2010); In the current environment, in which is looming for businesses, according to market conditions and the emerging new paradigm of knowledge, technological innovation requires proper management, and in turn is a prerequisite for achieving competitiveness. Hence, it is necessary the integration between strategy, management of technological innovation and competitiveness.

What lies ahead is a business that flourishes widely, is a market that never ceases to be consumed. What is really facing companies is the right decision, to have enough information to ensure the strategies were implemented and create brand distinction, be unique and matchless.

3. Justification

Due to lack of volunteer consumers about funeral services to be the last to want to purchase, the companies are in constant battle to differentiate their products and services due to competition. Creating strategies strategic alliances or product positioning and / or service, allows employers to increase their profits. However if the strategies are not adequate or he is not an entrepreneur runs the risk of disappearing. Furthermore, consumers are becoming more demanding and if in is this type of service there comes susceptibility, since it is not only losing a loved but also to pay a large sum of money over a period of time too short, this is where the bidders and suppliers create strategies to differentiate their services.

As for its contribution to the corporate level, this work brings results that support small businesses on how others have exceeded expectations and won market in a competitive industry and unwieldy with customers given the circumstances under which it is requested. It is important to consider the innovations that have been causing in the funeral industry as motivation to implement in their companies or as a means of information. Innovations in some cases help reduce costs through the use of new materials for products. In the case of the media through the internet branding involves less cost than a traditional advertising campaign.

4. Hypothesis

The implementation of strategic alliances ensures large market share by factors such as geographical location, share technology and reduce competition. Innovation brings recognition by consumers leading to position itself in the market.

5. Framework

Strategy is defined as the theory of a business on how to compete successfully (Peng, 2010). According to Peng, strategy is about competing and winning. This can be obtained through strategic alliances and market positioning.

6. Strategic alliances

A strategic alliance is defines by Peng (2010) as the agreements between firms involving exchange, share or jointly develop products, technology or services. And in turn, strategic alliances are classified into: Contractual alliances, not based on capital, including joint marketing, research and development contracts, projects ready to operate, suppliers and distributors and strategic licensing / franchising.

Capital-based partnerships include strategic investment capital where one partner invest with another partner and have cross-shareholdings.

Another definition of strategic alliance considers the associations between rival or potentially rival who prefer to conduct a project by coordinating capabilities, assets and resources. It involves a mutual and continuing with a long-term commitment. The partners carry information sharing and recognition of risks and rewards in the relationship. A compilation of the main authors who address the issue of strategic alliances is summarized in the following table that shows the determinants of performance (Mireles, 2011).

Table 1. Factors determining the performance of strategic alliances.

Previous experience of partner alliances	Gulati and Gargiulo (1999)
Variety Faems partner agreements.	Faems. Van Looy and Debackere (2005)
Partner Corporate Culture	Brouthers, Brouthers and Wiikinson (1995)
Prior confidence in the partner agreement before	Adobor (2005)
Resources and apparent capabilities of future socio	Beamish (1987)
Analysis of partner prior to the formation of the alliance	Geringer (1991)
Acquiring skills and socio	Beannish and Berdrow (2003)
Interest in learning partner Emden	Emden, Yaprak and Cavusgil (2005)
Partner absorbency	Cohen y Levinthal (1990)
Construction of new knowledge by the socio	Ellinger, Ellinger, Yang and Howfon (2002)
Knowledge acquisition channels used by the partner.	Makino and Delios (1996)
Social capital of partner	Burt (2004)
Managing conflict in the alliance	Ariño and DelaTorre (1998)
Mutual cooperation in the alliance	Brouthers et al. (1995)
Mutual trust in the alliance	Luo (2008)
Balance of power in the alliance	Inkpen and Beamish (1997)
Organizational routines in the alliance	Zolio, Reuer and Singh (2002)
Mutual dependence on the alliance	Anderson and Narus (1990)
Mutual commitment to the alliance	Dasy Kumar (2009)
Relational Standards in the alliance	Deeds and Rothaermel (2003)
Relational and social capital in the alliance	Burt (2004)
Number of alliance partners	Beamish and Kachra (2004)
Age of the alliance	Deeds and Rothaermel (2003)
Skills acquisition of the alliance	Beamish and Berdrow (2003)
Interest in learning in the alliance	Emden et al. (2005)
Absorption capacity of the alliance	Cohen and Levinthal (1990)
Construction of new knowledge in the alliance	Ellinger et al. (2002) '
Channels of knowledge acquisition in the alliance	Zou and Ghauri(2010)
Existence of an administrative function of the alliance	Dyer, Kale and Singh (2001)
Formal social control in the alliance	Geringery Hebert (1989)
Social network structure of the alliance	Ahuja (2000)
Social cohesion of the alliance network	Gulati (1998)
Social bonds of alliance	Blankenburg, Eriksson and Johanson (1999)

Companies sometimes collaborate in forming strategic alliances as horizontal alliances: Strategic alliances formed by competitors. This type of partnership is the best option for the funeral industry. Upward vertical alliances: With firms at the side with suppliers, implemented with coffins and cemetery providers. Downward vertical alliances: With distribution firms. (Peng, 2010). In our definition, strategic alliances are agreements that create a link between companies to find the maximum benefit for both in a shared geographic space, joint technology, financial and intellectual resources, all of this to achieve positioning in the market for a long period of time.

7. Market positioning.

Waleska (2008) defines positioning based on great authors as a subjective and relative term, because it has been defined over time broadly as the place of a product or service in the mind of the consumer and what make it unlike and different to its competitors. Waleska (2008) mentions Trout who first spoke positioning in 1969 and since then with Al Ries are considered the fathers of this term, referring to him as everything that is done with the mind of prospective clients, this means as how the product affects your mind.

According to Trout (1969) a company can enter into a sector expeditiously, whether national or international, but its role will be wasted if its image does not persist in the minds of consumers. This concept is applicable to any activity in which measures a competitive environment (Trout, 1969). Thus concludes Waleska (2008) each particular company provides strategies that seek to position in some specific way in the market, and is a key point for them, because it can affect its performance within the industry to which it belongs.

The positioning as it was mentioned earlier refers to the time when the demand of funeral services are required, the first thing that pops into mind is the image of the brand is seeking to be positioned in the market, only then will know that the strategy was successfully implemented to achieve this recognition.

8. Competitiveness

In terms of competitiveness, in Table 2 there are comprised the factors necessary to attain competitiveness especially highlighting the innovation which is linked to the concepts of strategic alliances and market positioning.

Table 2. Factors of competitiveness

Internal or exogenous factors	External or exogenous factors
Innovative products	Information available

Specialization and diversification	Infrastructure of the activity
Innovation in processes	Supply in human resources and of formation
Innovation in management	Research centers
Training of human resources	Industries of support and complementary
Internationalization of activities	

Source: Ribeiro Soriano y Villaplana Gabaldón (1998).

These factors are framed under the concepts of value, rarity, imitation and organization (VRIO) to fit the content of this theory (Peng, 2010):

- Value, by creating partnerships and innovation of new services.
- Rarity; capabilities that are developed collectively as the location at strategic points. Be the first to innovate.
- Factor imitation trust between strategic alliance partners to avoid falling into opportunism. Break the alliance and imitate.
- And finally the organization has a good administration.

9. Methods

The process is performed by analytical research study due to object range information already available. In this type of research variables are manipulated and analyzed in the original way in which they are found in the sources of information.

10. Market analysis

A. *Herfindahl Index*

This index shows the level of participation in a given market, the number of participants and their positioning. It is the sum of the squares of the shares of each operator ($H = \sum_i Q_i^2/H$). (Gaceta Oficial, 1998)

B. *Pascual Index*

Pascual index (P) or the Dominance uses the Herfindal (H) and improves it subtracting restrictions to the index when making mergers of certain features in the market. To do this, it will first determine the percentage contribution h_i of each company to H index defined in the previous paragraph ($h_i = 100 \times q_i^2/H$). Then it is calculated the value of ID applying the Herfindahl formula, but using h_i contributions instead of shares q_i (i.e., $ID = \sum_i h_i^2$) (Gaceta Oficial, 1998).

The importance of this index is that it is constructed in a way that does not penalize any merger or consolidation, but the result depends on the relative size of the merging firms and the particular market structure. The results obtained by the concentration ratios with a value of 0.33 and 0.34 respectively indicate that a market is oligopolistic type. These

results are shown in Table 3. The data were taken from the 2009 Economic Census by INEGI, funeral services sector.

Table 3.Indices Herfindahl Concentration and Pascual

Funeral services México 2009				
Company	Gross production total (Thousands of Pesos)	Market share	Herfindal	Pascual
Gayosso	1061089.2 ¹	0.38	0.144400	0.183819
J. García López	837702 ²	0.3	0.090000	0.071407
Rest of firms	893548.8	0.32	0.102400	0.092439
Total market	2792340			
		H	0.336800	P 0.347665

Source: Own elaboration

Note: Total gross production was taken as the value reported by the 2009 Economic Census for the funeral services sector (INEGI, 2009).

¹ This figure was obtained by the data published by the Milenio newspaper in June 2009. For more information <http://www.milenio.com/cdb/doc/impreso/8599476>.

² This percentage was obtained by the data published by CNN expansion in October 2010. For more information <http://blogs.cnnexpansion.com/informacion-privilegiada/2010/10/28/j-garcia-lopez-vende-como-pan-caliente/>

11. Strategic analysis of Group Gayosso.

Gayosso is the strongest market funeral recently in competition with J. Garcia Lopez. The market position of the company is detailed in the following table 4.

Table 4. Positioning strategies

Positioning strategies of Gayosso and J.García López	
Innovation	
Gayosso	- In 2008, implementation of SAP ERP (Applications Enterprise Resource Planning). - Create a unique base of customers; get more efficient processes for the collection and monitoring of prevision plans.
J. García López	Campaign "What I want to do before I die", where through a web page, the public expressed his last wishes before he died, fulfilling some of them. This funeral company breaks with the

	traditional funeral raising public interest in death by taken her in a nice way. • Similar plan sales to tourism, create "shared time", and implemented at supermarkets modules similar to travel agents.
Strategic alliances	
Gayosso	• In 2007 acquired by Advent achieves presence in 16 cities, with a population of 50 million people. • It becomes its own suppliers. Assets acquired 25 chapels, 21 cemeteries, 6 mausoleums and 16 crematoria. (Only in 2007). • Gayosso has strategic alliances with -Tiempo y Vida, S.A de C.V - Jardines del Tiempo S.A de C.V
J. García López	• It has strategic alliances with more than 150 funeral homes. • Partnership with Instituto Mexicano Del Seguro Social (IMSS) and Instituto de Seguridad y Servicios Sociales de los Trabajadores al Servicio Del Estado (ISSSTE), and provider of these institutions.
Positioning	
Gayosso	• Hoarding market. Provides to customers services across the horizon. • 70% of its revenue comes from packages, 30% in services at the time.
J.García López	• It begins in the franchise business; its award began in 2013.

Sources: Own creation with data from

Aguiar (October 25, 2007). *Milenio*. Retrieved from <http://www.milenio.com/cdb/doc/impreso/7137302>.

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12. International innovation strategies

U.S. Innovation strategies

Beginning in 2005, Esmeralda Kent, with a new concept of graves "Kinkarako green shrouds". It is green burials where the coffin is replaced traditional aromatic biodegradable fabrics (shrouds), and burial in green areas in the company of nature, which makes part of it to those who ceased to exist.

Clint Mytych, founder and CEO of Eternal Image (ETIM) with the introduction of themed coffins, derived from the pursuit of self as a Mustang.

In 2006 the Farmington Hills (Mich.) introduced themed urns and signing agreements with license from the library collection of the Vatican and American Kennel Club, among others. Besides cost reduction compared to traditional coffins.

In 1996, Angels Flight, of Castaic, Calif., where after the cremation of the body, the ashes

are introduced in pyrotechnics, is creating a show for their families.

Neptune Society. A company offering cremation and burial at Neptune Memorial Reef, an artificial reef off the coast of Florida.

Source: Own creation with data from Businessweek (20 June 2008). Bwsmallbiz. *Businessweek* Retrieved from www.businessweek.com/magazine/content/08_66/s0806044892758.htm

14. Conclusions and recommendations

According to figures from the Consejo Nacional de Población (National Population Council), were reported in Mexico in 2011, 546,683 deaths, and it is expected in 2012 to be recorded about 557,637 deaths (CONAPO, 2012). To quote the commercial director of the funeral company J. Garcia Lopez, there is an increase of mortality in the season between October and February by the climatic situation of 12% to 14%. These data indicate the proper funeral industry market and business opportunity that major companies such as Gayosso and J. Garcia Lopez take advantage of knowing to maximize.

The emotional state of the consumer is undoubtedly the most important determinant of the decision to use the funeral service. The key to the funeral services are the determining ethnic, cultural and religious factors (Marcos, 2003). Companies are aware of this therefore act upon growth and positioning strategies.

Strategic alliances are a key part of the expansion of J. Garcia Lopez, to acquire competitive advantages such as geographical location and especially the presence in all states through their allies. Among the main strengths are to hold the market of IMSS and ISSSTE. This is a population that if equal has not sufficient resources to pay large sums of income but it is secure. Meanwhile Gayosso is not far behind because is the provider of its own inputs through partnerships.

Innovation takes vital importance in countries like the United States, where funeral companies break with the traditional scheme leading to death as the last acquisition to meet preferences from the most ecological and funny in one extreme to the other as the most exotic and tenderly.

"What I want to do before I die" is a major contribution to creating branding innovation in Mexico by J. Garcia Lopez, achieving the positioning strategy in mind of the plaintiffs, creating it the best option to acquire the services even before death and preventable. The prevention is another important aspect, it is creating packages funeral or burial insurance, and payment facilities through multiple assistance, there is a quality service in the most difficult moments of human beings.

Finally, opportunism is present, taking the greatest advantage to acquire what gains will have to come someday.

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RETHINKING INNOVATION IN BUSINESS RELATIONS AND NETWORKS: A COMPLEX SYSTEMS PERSPECTIVE

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ABSTRACT

We introduce a complex systems perspective on innovation in networks in which innovation is conceptualized as a form of creative act associated with the dynamics and evolution of business networks. We show how innovation is a form of creative act that involves the creation of new ideas and their exploitation, in which new ideas come from combining and recombining existing ideas in new ways that have value. We stress the need to move away from traditional linear, comparative static variables based theories and models to more nonlinear, dynamic, evolutionary mechanism and process based theories models of business networks. This calls for different types of methods including systematic case histories and agent-based models

Keywords: Business Networks, Innovation, Complex Systems, Evolution, Mechanisms, Processes, Dynamics.

1. Introduction

Innovation in business networks is about how and why things change over time; about the dynamics and evolution of products and services and business organisations, including relations and networks themselves (Wilkinson, 2008). In this paper we argue that the concept of innovation hides a deeper and more profound logic of change and change processes. The concept of innovation implicitly suggests that non-change is the norm. But is this true? Things are changing and evolving all the time in markets; they are not operating in equilibrium but far from it. Products and services are continually being produced, consumed, bought and sold. This may create loyalty and non change in a specific sphere but this in itself is likely to influence changes in other spheres (i.e. non change can be the cause of change somewhere else). Transactions of different kinds are being brought about with the same or different transaction partners, relations and networks are continually being formed and reformed. Considerable effort is often involved to keep reasonable amounts of stability within relationships and networks in a world of change. Business life is one continuous flux or flow of action, reaction and adaptation over time.

Some patterns of behaviour are repeated or reproduced over time; habits of behaviour and thought develop. Firms may continue to interact with each other for a long time – as we have seen in previous IMP case studies.

The same basic shape of a business network may also continue to exist over time as people and firms get to know each other, trust each other and become loyal and committed to dealing with particular customers and/or suppliers. This means that they try to keep interacting with the same partners, even though things are continually changing at other levels. The personnel involved change, knowledge and experience grows, markets change, new opportunities emerge, technologies change, information and ideas move about in the network, changes in other relations impact on a focal relation. And so business life proceeds. Change, change, change, all the time. Business life, indeed all of life is not physics. Firms are not billiard balls subject to rules of behaviour like conservation of momentum. We make up our rules of behaviour, within biological and technical limits, and change and evolve them. Business life does not end it goes on forever and has a long history.

And the pace of change is increasing. Lifecycles of product acceptance are shorter than they were 20 years and the rate of product introduction is also increasing. So why do we “privilege” change rather than non-change? Surely it is becoming more and more difficult to keep reproducing past patterns of behaviour. It is change rather than non-change that is the norm.

Changing is a fundamental biological and psychological process. We change to grow, to develop and to survive. At an individual level, we learn and build on what we know. In business we react and adapt to changing conditions in the market and environment. There is a basic business axiom, “change or die”. To be sure, there are forces that work to countervail change - inertia and resistance to change occur as people and firms try to stick to old habits, engage in selective and self serving perceptions and are subject to the “not invented here” syndrome (Rong and Wilkinson, 2011). Lack of action in one part of a network influence other parts and in itself is likely to produce change elsewhere.

Over time social and business systems are continually being reproduced, or not. Reproduction is an active process of reconstructing and redoing things. As noted, social and business systems are not like billiard balls subject to the conservation of momentum law that says an object will continue in the same direction unless some external force changes it! Unlike billiard balls, social and business systems are complex adaptive systems (CAS). As such, properties of CAS describe these systems’ properties. These systems show properties of emergence, where collective and group behaviour is different from individual behaviour; nonlinearity, i.e. the behaviour of the whole is more than the sum of the behaviour of its parts. The future cannot be extrapolated from past, there are webs or networks of interaction rather than evenly distributed interaction, and the degree of diversity of an organisation and its network are important to its survival generally equates with greater fitness (performance) and greater opportunity. The diversity of the organisation must match that of its environment in order to survive, as Ashby first encapsulated in his principle of requisite variety (Ashby, 1958). All of these properties are conducive to change as systems need to constantly adjust to the unanticipated which will be less likely to lead to an unchanged state and more likely to lead to a changed state.

Here we argue that innovation is part of a much larger process of change and evolution that characterizes all complex living systems – biological, economic, business, social and cultural. And there are similarities in the way change and evolution occur across all these types of systems.

This is in contrast to a traditional focus on innovation in business which represents a comparative static, actor-centered perspective on business and life, derived from seeing living systems as similar to physical and mechanical systems in which there is conservation of momentum.

Societies and business systems and networks are not like a gas. Social science is not physics. Both comprise numerous interacting entities: gases are made up of randomly interacting, non-evolving, inanimate, homogenous atoms and molecules. In contrast, societies and business systems are made up of networks of interacting, evolving, heterogeneous, sentient people and organisations. You cannot represent social and business systems in terms of average individual behaviour or mean field approximations, as many economic models tend to do. The systems are far too complex, non linear, nuanced and dynamic. For individual people and firms and their relations and networks it is constant change all the way down. Imagine trying to approximate the behaviour of animals by having a representative animal – would a particular fish do – with some random environment to move about in and feed and have babies? Or, suppose we used lots of random animals that are homogeneous or, better, make them have some degree of heterogeneity in terms of their fitness (whatever that means) with an average degree of interconnectivity to represent the Earth's ecological system. If we did that you would laugh at us. But this is essentially what macro economists and financial market modelers do and the way they think about those systems. How much can that help us tell an individual firm or manager or animal how they do and should behave; would you trust government policy or environment management systems designed based on such models.

In complex adaptive social systems, and business networks, large scale order emerges in bottom-up self-organising ways that are not yet well understood. But the science of complex systems is revolutionizing theory and method in all sciences. It is moving us away from a linear, comparative static, variables-based view of the world to a view that is non-linear, dynamic, process and mechanism based (Jorg, 2011). Such a view, we believe, can help us to better understand, model and influence innovation in networks.

In this view, innovation is a process by which new ways of behaving occur; it is a form of evolution. Innovation involves two kinds of process: a) the emergence or evolution of new ideas, which may also be described as entrepreneurial or creative acts or opportunity recognition; and b) the development and exploitation of these new ideas. These two processes are distinct but interconnected, they feed off each other (Chandra et al., 2009, Chandra et al., 2012). The processes of development and exploitation of discovered opportunities in turn lead to the discovery of new ones.

2. The Evolution of New Ideas.

New ideas have history. They arise from the combining and recombining of existing ideas in new ways that have some value. Knowledge builds on itself. The behaviour and organization of a social system or business network reflects the culture underlying it - the set of ideas characterising the actors involved.

Cultural evolution refers to the evolution of ideas and the movement of those changed ideas through a connected social system. This is essentially a creative act and, as Arthur Koestler has pointed out, the creative process is essentially the same in art, science and humour.

Earlier theories of innovation and creativity tended to focus on the characteristics of individual actors in trying to explain creativity in all its forms, including innovation, entrepreneurship, scientific progress, invention and technological change. Creative people and organisations have different characteristics to less or non-creative ones. But this “lone genius” type explanation is rather inadequate, as (Ebel, 1974) first pointed out. It is a description of behaviour masquerading as an explanation - people and firms act creatively because they are creative. Individual differences do matter but it is not as simple as identifying magic ingredients or orientations. What matters also is how individual are positioned in the flow of ideas among people and organisations over time and space – their location in socio-economic networks – as well as how open they are to absorbing new ideas and being motivated and thus able to combine and recombine the ideas they have access to in ways that have value:

“Entrepreneurs and inventors are no smarter, no more courageous, tenacious, or rebellious than the rest of us – they are simply better connected” (Hargadon, 2003)

The act of creation in all its forms is a psychological act of recombining ideas (and other things) or what Matt Ridley refers to as “ideas having sex with each other” (Ridley, 2011). The sexual encounters of ideas that are possible depend on the pool of ideas that are in play at any time and place and, more specifically what are known to particular people and firms. This depends on those entities’ networks and history.

2.1 The Role of Relations and Networks

The role of relations and networks, both business and social, in the innovation process cannot be underestimated. But they play two quite different roles in the discovery and creation of new opportunities and ideas and in their exploitation. The distinction is captured well in Podolny’s concept of networks as prisms and pipes (Podolny, 2001). As prisms, relations and networks are the means by which firms extend their eyes, ears and other senses. They are the means by which knowledge and ideas move around and people and firms encounter new knowledge and ideas. This can be both through deliberate search with and through others and through more serendipitous processes. Either way, the “self” of the firm is extended beyond its own boundaries, resulting in the enhancement of its adaptive properties (Wilkinson and Young 2005). Considering these in complexity terms, there is a group comprised of people, firms and other organizations that functions differently than does any firm or organization comprising it, which has properties not divisible or attributable to particular actors in the system (i.e. the interactions of firms have properties distinct from the firms themselves) and these properties can and do result in greater fitness for the firms within the network as well as for the network itself and is selected for in the process of evolution (Ladley et al., 2011, Henrich, 2004).

Through these means, new ideas come to the minds of people to be combined and recombined and confronted with other ideas, leading to acts of creation and innovation.

Elsewhere we have discussed the specifics of the “soft assembling” that characterize the building of new ideas and particularly strategies (Clark in Wilkinson and Young 2005), here we focus on the output of these processes. These processes continue over time and when combined with outcomes and experiences of an actor’s own direct actions and interactions serve to shape what a person and firm knows and does not know at any time and place. In other words, history matters in determining the set of ideas a person or firm has at any time and place and hence the creative acts they are (then) capable of.

This is referred to as their “prior knowledge” (Shane, 2000), which shapes what a person or firm can and cannot see and how they respond to incoming information, including new ideas. Their motivations, other skills and capabilities and the context in which they operate are path dependent i.e. come about from the unique historical path in which they have participated which opened future possibilities and closed off others. This past (which cannot be changed, though it can be reinterpreted) determines which, if any, of these creative acts occur and what can and cannot be done about them. These processes lie at the heart of the theories of knowledge and entrepreneurship espoused by Schumpeter (Schumpeter, 1934), Hayek (Hayek, 1945) and further developed later by Kirzner (Kirzner, 1973, Kirzner, 1997)

The role of relations and networks in shaping innovation is well illustrated in case studies of opportunity recognition in international ventures (Chandra et al., 2009, Chandra et al., 2012). The first example concerns the discovery of an international marketing opportunity in China for a T-Shirt designer, who was looking for a textile manufacturer in China. As the owner explains:

“I approached a friend in Melbourne who was a pattern maker at a big Australian design company.... The pattern maker introduced me to a Guangzhou factory owner.... During our first summer design launch, the owner of the Guangzhou factory and her daughter also came to Australia to see this presentation and were really impressed. She said that she would be interested to develop 2Spot together in China and that it would sell very well because the market was huge and they loved things European. It sort of fell into place because the Chinese company approached us and said you should open a store in China and do you want to be a partner in it?” (Chandra et al., 2012)

Here the T-Shirt designer seeking a producer in China uses his personal networks to contact someone in the industry who uses their networks to recommend a potential supplier. The Chinese supplier sees the opportunity in China and persuades the designer to come on board.

Here is another example:

“We are quite respected in the industry for high quality products....we have served architectural firms in Australia well... one of them is Thompson Adsett (a large MNC)...eventually they have subsidiaries in overseas countries, including Indonesia...they recommended us to the customer and then the customer contacted us directly by phone... they came to us and said they wanted to install our nursing call system into their hospital...that’s how it all began.” – (*General Manager and son of the principal founder of an electronics company*)

Here a firm's strong ties with a customer lead the customer to recognize an opportunity for them in the Indonesian market and pass it on.

Opportunity recognition can also come from network members more deliberately combining resources to achieve innovation. For example, a Chinese-German IJV established a dominant position in the Chinese trade show industry with both partners seeking and then combining their own resources. This included the long time managerial expertise of the German partner and their international networks with the Chinese partner's understanding of what would work in their market and their local networks. As well, they combined their capabilities for combining capabilities (based on their separate histories in other ventures) with resulting synergies (Dawson, Young, Tu and Chongyu 2012).

The role of relations and networks in shaping the discovery of new business ideas is reflected in a number of concepts and theories of innovation and technological change, including: Hakansson's theories of industrial technological development from a network views (Håkansson and Johanson, 1992, Hakansson, 1987); the concept of open innovation (Chesbrough, 2003); Von Hippel's concepts of developing links with lead users (von Hippel, 1986); and the concept of productive friction (Hagel, 2005).

As pipes and prisms, relations and networks play a key role in the development and exploitation of new ideas and opportunities. They are the means by which the various resources and skills required to commercialise and refine a new idea are accessed and assembled, i.e. networks as pipes, and the means by which such ideas are passed on or sold to others who are better able to exploit them, i.e. networks as prisms (Chandra et al., 2009, Chandra et al., 2012, Styles, forthcoming, Wilkinson, 2008).

The networks required to access and assemble relevant resources, skills and capabilities are not necessarily the same as those involved in the creation of the new idea. This is evident in the way countries and firms complain about losing the value of technology inventions developed by them to others. The industrial context required for invention is not necessarily the same as that for commercialization and exploitation.

3. Complex Systems Theory: A Theoretical Framework for Understanding Innovation in Business Networks

In order to be better able to understand innovation in and the evolution of business networks and to advise practitioners and policy makers we need a different type of theoretical framework to that usually found in mainstream literature. Mainstream perspectives are dominated by linear, actor focused, comparative static, variables based and reductionist theories. We need to move to nonlinear, network and context oriented, dynamic, process and mechanism-based holistic theories. Such a perspective is reflected in complex systems theory that has its origins in general systems theory that began in the 1950s (Bertalanffy, 1972) and heavily influenced Wroe Alderson's theories of marketing Alderson, one of the founders of modern marketing theory (Alderson, 1965, Alderson and Cox, 1948).

We have written about this extensively elsewhere, including the managerial and policy implications, (Wilkinson and Young, forthcoming, Wilkinson and Young, 2002, Wilkinson and Young, 2005, Wilkinson et al., 2012, Wilkinson, 2008) so we will only recap some of the main points here.

As already mentioned, business relations and networks are examples of complex adaptive systems in which order arises in a self-organising bottom-up manner from local actions and interactions taking place. Macro structures and order emerge and are reproduced or not over time in this way in a continuous process of being (existing at a given time and so influencing actions and interactions) and becoming (being reconstituted or changed by the experience and outcomes of the the ongoing actions and interactions taking place over time). Business networks are comprised of the ongoing actions and interactions (activities) of animate actors (people, organisations), inanimate objects (resources, material things, geography) and abstract objects (ideas, schemas and business cultures) operating in an environmental context that its self is a complex systems of other business relations and networks as well as the macro environment – the socio-economic, cultural, biological and material world. These dimensions of business relations and networks are summarized in terms of the actor, activities, resources and schemas that underly much of the thinking of the Industrial Marketing and Purchasing (IMP) Group (Håkansson and Snehota, 1995, Welch and Wilkinson, 2002).

While this theory addresses the complex processes that underpin the evolution of networks, much of the associated empirical investigation does not. Instead there is a growing trend in business to business research to use survey methods and statistical analysis (Denize and Young 2007). Complex systems theory (CST) seeks explanation not in terms of the common statistical variables based models. Variables do not exist in the real world they are abstractions developed by researchers to disembodied dimensions of the world from their real world contexts. Instead CST seeks explanation in terms of event sequences, processes and mechanisms.

Events unfold over time and are interconnected through various mechanisms and processes. Innovations are events that emerge through time as a result of various processes and mechanisms by which ideas diffuse, mutate, are combined and recombined and evolve. They are part of the ongoing flux of business life. These result in both incremental and substantial changes or innovations arising over time and place. Mechanisms and process refer to why and how events happen. We like to think of them as the “verbs” of explanation and events as the “nouns”.

To study innovation in business networks from a complex systems theory we focus on identifying, understanding and modelling the underlying processes and mechanisms in play and how they play out over time within and across firms, relations and networks. This calls for an extended portfolio of research methodologies, moving beyond the commonly-used surveys and experiments, relevant though they still are.

We need to directly observe and model the actions of actors innovating and the mechanisms and processes involved. We need to understand what takes place before an innovation occurs that makes it more or less possible, what happens during creative acts of innovation and what happens afterwards that shapes their development, exploitation, success or failure.

To consider the unfolding of this process we need longitudinal studies and systematic case histories that map the events taking place over time and the processes and mechanisms by which events are interconnected. Lastly, we need to be able to translate this understanding into complex systems computer simulation models that enable us to analyse and explore the role and importance of different mechanisms, processes and environmental conditions on the way innovation happens. For more on these methods see Wilkinson and Young (in press).

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SUCCESSFUL SOLUTION DEPLOYMENT:

HOW CAN MANUFACTURING FIRMS LEVERAGE THEIR CHANNEL PARTNERS MORE EFFECTIVELY?

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Abstract

Manufacturing firms are entering the solution business, with a unique and specific resource, their distribution networks. By better understanding the role that channel partners can play in solution deployment manufacturing firms may find the source of a sustainable competitive advantage, hard to replicate for other companies providing solutions. Capitalizing on transaction cost theory and a rigorous review of the solution literature; we investigate how the presence of a subcontracting in the solution deployment process influences value co-creation dynamics in the triad. We empirically test this model with data consisting of survey data from 170 solution clients and archival performance data from a manufacturing firm marketing solutions with the help of its subcontracting channel partners. We contribute to the understanding of triadic value co-creation in solutions.

Key words: solution performance, triadic value creation, inter-organizational collaboration

1. Introduction and research motivation

Major manufacturing firms are currently undergoing an important strategic move by developing complex customer solutions next to their existing product offerings (Foote et al. 2001; Kapletia and David 2009; Tuli et al. 2007). According to many scholars, companies should hence be able to create more value with for their client (Lilien et al. 2010; Vargo and Lusch 2004).

Complex customer solutions are defined as a "set of customer-supplier relational processes...aimed at meeting customers' business needs" (Tuli & al 2007). Solutions call, more than any other service offerings, for intimate collaboration between multiple organizations. First, the solution provider needs to build and manage intimate value creating relationships with its solution client. But more importantly, solution providers oftentimes need to team up with other organizations to build strong and differentiated value propositions (Dyer and Singh 1998; Jap 1999; Sawhney 2006). It is by leveraging their unique relationships with other organizations that solution providers can differentiate and gain cost advantage (Cova and Salle 2008; Ulaga and Reinartz 2011; Windahl and Nicolette 2006). Manufacturing companies can specifically leverage their existing distribution network as subcontractors, when deploying solutions, hence creating a competitive advantage hard to replicate for other solution providers, not having access to an existing distribution network (Ulaga and Reinartz 2011).

However, manufacturing companies working with subcontractors face multiple challenges: how will the client react to the involvement of another organization in solution execution? How will the solution provider costs be impacted by the involvement of third party in execution? Against this backdrop, this research investigates how manufacturing firm can best leverage the presence of a subcontractor to succeed in solution. This is in line with the call for research investigating drivers of solutions effectiveness (Tuli et al. 2007; Ulaga and Reinartz 2011) and the 2010 Marketing Science Institute Research priorities, highlighting the need for research “regarding strategies and practices for co-creating and delivering solutions for business customers.”¹

2. Theoretical model

We define successful solution execution as the ability for the solution provider to deliver value profitably to its client. For this reason, we investigate three dependent variables being (1) client’s satisfaction, (2) client’s attitudinal loyalty and (3) the solution provider cost-to-serve the client. We investigate the impact of different constructs capturing the co-creation dynamics between the client and the solution provider stemming from past literature, being (1) solution provider’s transaction specific investments, (2) client’s transaction specific investments, (3) information exchange norm and (4) solution provider’s flexibility. Due to page constraints, we hereafter focus this abstract on how we hypothesize that the presence of a subcontractor can modify these existing dynamics.

From a transaction cost theoretical standpoint, when working with a subcontractor, the solution provider is losing vertical control over its operations (Rindfleisch and Heide 1997). Transaction theory advocates that in the solution context, where transactions are highly customized (high asset specificity) and co-creation depends on ongoing co-creation (frequent interactions), solution providers should keep the control of their execution activities. When involving a channel partner, the solution provider risks that the partner will not share the intimate client knowledge built over time or shirk in maintenance tasks, threatening both quality and margins of the solution provider (Brown et al. 2000; Jap and Anderson 2003). This strongly questions the appeal of triadic value creation in the delivery of solutions. We hypothesize that, to leverage the presence of a subcontractor, the solution provider can foster specific relational mechanisms with the client, hence facilitating triadic value co-creation.

According to the relational view, information exchange and flexible behaviours are potential sources of inter-organizational competitive advantage, since they build inter-organizational knowledge sharing routines. Information exchange captures behavioural expectations at stake in the client-solution provider relationship. If information exchange is frequent, it will certainly facilitate triadic value co-creation. First, dyadic information exchange in the client-solution provider relationship facilitates the integration of the subcontracting channel partner in the operations and acts as relational safeguard for the solution provider (Brown et al. 2000).

For instance, in our exploratory qualitative work, we observe that, by regularly exchanging

information with its client, the solution provider became quite knowledgeable about the subcontracting channel partner's deeds. In this respect, information exchange was effectively safeguarding the solution provider from channel partner's opportunistic behaviours. Second, relational norm in use in the dyadic relationship, may spill-over to the other relationships, hence promoting a norm of information exchange in the other relationships (McFarland et al. 2008). Prior research has shown that inter-firm behaviours from one dyadic relationship to an adjacent dyadic relationship within the supply chain, a phenomenon they call "supply chain contagion". As a consequence, we hypothesize that:

H1: The presence of a subcontractor positively moderates the positive relationship between information exchange and (a) client's satisfaction and (b) client's attitudinal loyalty.

Solution provider's flexibility captures the extent to which the solution provider is perceived to be subject to good-faith modification if a particular practice proves detrimental in the light of changed circumstances (Bercovitz et al. 2006; Palmatier 2008). Triadic value co-creation calls for important coordination across the three organizations involved in solution execution. At the company level, flexibility involves a cushion of resources that allows firms to adapt and respond to opportunities (Fang et al. 2008). At the relationship level, extant marketing research considers flexibility as a key relational behaviour in inter-organizational relationship because it supports sharing and integration of knowledge and resources in response to changing circumstances (Anderson and Narus 1990; Morgan and Hunt 1994). Triadic collaboration increases the complexity of the co-creation process: information may not be equally shared across the three organizations, schedules might be difficult to coordinate, unexpected events poorly resolved. The solution provider needs to exhibit higher flexibility in triadic solution execution, for instance to take charge of service provision in case of critical incident. Such flexibility will be a strong reassurance for the client.

H2: The presence of channel partner positively moderates positive relationship between the solution provider's flexibility and (a) client's satisfaction and (b) client's attitudinal loyalty.

We hereby focus solely on these two moderations, which have the greatest relevance to triadic value creation dynamics. However, we additionally develop extra hypotheses relative to the impact of these co-creation dynamics on the solution provider's cost-to-serve the client and the direct effects of adding a subcontractor in the solution deployment network.

3. Method

As for the empirical study context, we develop a close collaboration with a European tire manufacturing firm. With a long history in manufacturing and selling, this manufacturing firm has been marketing a fleet-management solution offer for approximately 10 years with different execution strategies, partially relying on subcontractors for managing the client accounts. We empirically test this model based on data consisting of (1) survey data from multiple solution clients (n=170) and (2) archival client-level data from the manufacturing firm marketing solutions. We take the local solution execution network as my unit of analysis. We hypothesize that co-creation mechanisms have diverging performance consequences depending on the whether a subcontractor is involved in solution deployment

or not or not. As we expect that the decision to serve a particular customer via a channel partner or not is not randomized, we correct for potential selection bias using a two-stage selection model (Maddala, 1983). The results for the selection model predicting whether a client is served directly or via a channel partner appear in Table 1.

VARIABLES	Presence of a subcontractor
Client size	-0.005* (0.002)
Relationship age	-0.047* (0.020)
Client business - regional	1.544** (0.534)
Client business - national	1.391** (0.537)
Client local - bus Con- stant	0.130 (0.542)
Observations	0.843+ (0.443)
Adj R2	147 0.16
Robust standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05, + p<0.1	

Table 1: Selection regression

4. Empirical results and discussion

Survey measures come from prior literature and measures exhibit satisfactory psychological properties. Cronbach alpha's are all above 0.73 and average variance extracted above the commonly agreed threshold of 0.5. All constructs successfully passed the Fornell and Lacker's discriminant validity test, indicating a satisfactory level of discriminant validity (Fornell and Larcker 1981).

The results for the second stage of our model appear in Table 2. We find that the presence of a channel partner modifies the effectiveness of different value co-creating mechanisms. First, the presence of a channel partner negatively interacts with information exchange ($\beta=-0.272$, $p<0.1$), hence supporting H1. It seems that information exchange in the solution provider-client dyad is less effective when a subcontractor is taking part to the execution. The presence of a third party reduces the benefits of exchanging information in the dyad.

However, the presence of a subcontractor increases the positive impact of solution provider flexibility ($\beta=0.499$, $p < 0.001$) on client's measures. In triadic setting, the solution client seems to be more sensitive to the solution provider flexibility, hence increasing its attitudinal loyalty. This provides directions for solution provider working in triadic setting.

The results of these moderating effects are of great importance for the solution provider: they demonstrate that relational drivers key to succeed in solution execution may differ depending

on the presence or the absence of a subcontractor. Triadic value co creation may call for different success factors than dyadic co-creation. From a theoretical standpoint, this research contribute to better understand how multiple organizations (suppliers, intermediaries or network partners) can work together to identify, develop, and deliver compelling value propositions (Anderson et al. 2003; Cova and Salle 2008; Vargo and Lusch 2004).

	Client Satisfaction	Client Attitudinal Loyalty	Solution Provider Cost-to-serve
Solution Provider TSI	0.277**	0.155*	0.0319
	-0.0985	-0.0896	-0.0928
Client TSI	0.0556	0.0199	-0.123
	-0.0883	-0.0662	-0.0813
Information Exchange	0.434***	0.391***	-0.133
	-0.133	-0.12	-0.191
Solution Provider Flexibility	0.149	0.0302	0.2
	-0.135	-0.14	-0.151
Presence of a channel partner	-0.0238	-0.164	0.201
	-0.164	-0.152	-0.208
Presence of a subcontracting channel partner x Flexibility	0.108	0.499**	-0.0986
	-0.149	-0.188	-0.188
Presence of a subcontracting channel partner x Information Exchange	-0.219	-0.272*	0.25
	-0.16	-0.16	-0.224
Competitive Intensity	-0.0823*	0.101*	-0.0132
	-0.0418	-0.049	-0.0606
imr	-0.00576	-0.00917	-0.0000895
	-0.0118	-0.0105	-0.0116
Constant	0.544**	-0.405	-0.00933
	-0.221	-0.296	-0.454
N	137	137	135
adj. R^2	0.438	0.425	0.04
F	19.22	14.85	1.829
df_m	9	9	9
df_r	127	127	125

Table 2: Model regression results

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A CAPABILITY PERSPECTIVE ON RELATIONSHIP ENDING AND ITS IMPACT ON INNOVATION AND PERFORMANCE

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Introduction

Business relationships are seen as beneficial way of structuring inter-organizational exchanges. For example, transaction cost economics (TCE) posits that relationships as a governance form are specifically important for recurrent transaction types in terms of their mix and ideosyncratic nature (Williamson, 1985; 1996). Interdependencies between the relational partners due to asset specificity are expected, i.e. relationship-specific investments are prevalent in business relationships (Harrison, 2004). In such situations contracts are often seen to provide the foundation for long-term relationships as duration safeguards (Williamson, 1985; Weber et al., 2011), for example against opportunism (Stump & Heide, 1996; Wathne & Heide, 2000). Such business relationships are seen provide specific benefits above and beyond mere transactional exchanges.

Innovation, and the success of innovation activities, is often associated with inter-organizational relationships (Gemunden et al., 1996; Un et al., 2010). This is related to the issue of resource dependence (Pfeffer and Salancik, 1985), i.e. most companies depend on specific resources to innovate, such as knowledge, people, or technology which they do not own or control themselves but which are provided by business partners. In this context, innovation is dependent on a companies ability to mobilize other actors, such as customers, suppliers, or even competitors (Mouzaz and Naude, 2007; Wognum et al., 2002). Therefore, how a company manages in its business relationships, i.e. what kind of business partner portfolio it has, and how strong these relationships are, is important for the innovation performance of a focal firm. In this context, the capabilities to manage in such business relationships become important antecedents of innovation behaviour and success. Such capabilities have been conceptualized in the context of network competence (Ritter, 1999; Ritter and Gemünden, 2003; 2004) as well as networking capability (Mitrega et al., 2012). However, while capabilities linked to the initiation and development of business relationships are well-researched (also in the context of innovation, e.g. Emder et al., 2006), for example the strengthening of the relationship, or the conflict management as part of a relationship (Bstieler, 2006; Ragatz et al., 1997; Handfield et al., 1999), aspects of relationship ending have not been covered in the same detail (Ritter and Geersbro, 2011).

In this study, we are interested in the impact of relationship ending capabilities of a focal firm on its innovativeness, and ultimately on its firm performance. In line with Tähtinen and Halinen (2002) we focus specifically on capabilities that are aimed at relationship endings which refer to the deliberate decisions and actions by a focal actor in a business relationship, particularly a supplier relationship, to terminate that relationship.

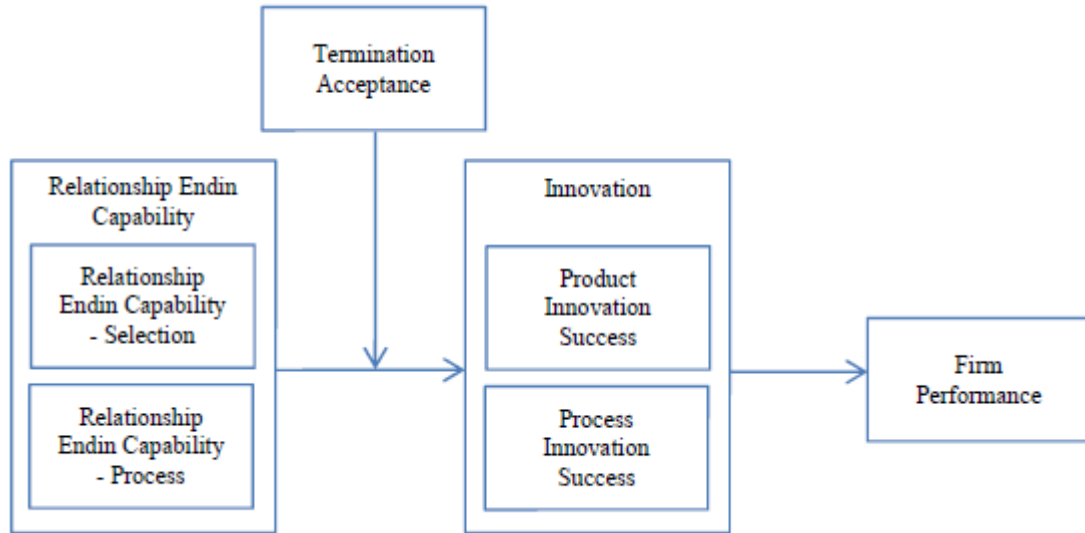
Business Relationship Ending

Relationship ending is discussed under several names in the literature, such as relationship termination, dissolution, exit. In the context of our research, relationship ending refers to the intentional decision and implementation of managerial activities aimed at ending a business relationship which otherwise would have continued. As such, relationship ending relates not to relationships which have a natural end built into them, for example project relationships, as Halinen and Tähtinen (2002) argue in case of episodic relationships.

Relationship ending is often explicitly or implicitly seen as something negative or counterproductive, which is to be avoided (Vaaland, 2004; Vaaland et al., 2004). Thus, the scarcity of relational strategies to avoid relationships to end has been lamented (Beverland et al., 2004). Problem-solving strategies as well as ‘passive aggressive’ strategies for negotiations have been mentioned as providing positive effects on relationship continuation (Ganesan, 1993), as have managerial activities that increase commitment (Tsiros et al., 2009) or trust (Yang et al., 2012). However, other scholars have argued that ending relationships can be beneficial and desirable (Alajoutsijärvi et al., 2000; Havila and Wilkinson, 2002). Some authors relate this to stress or conflict within a relationship (Holmlund-Rytkönen & Strandvik, 2005): *“Relationship ending arises when the conflict levels in the relationship build to such a high level that the actor bonds between the parties cannot be recovered”* (Vaaland & Purchase, 2005, p. 44). Developing goal incongruence, or unfairness perceptions in business relationships are further drivers of dissolution. Other authors, such as Havila and Wilkinson (2002), show case examples where relationship ending is the result of external circumstances, i.e. not necessarily related to aspects of the dyad itself. Furthermore, a relationship can become undesirable due to specific internal reasons of one relationship partner. Based on an RBV perspective, the concept of relationship ending is detailed by Mitrega et al. (2012) who propose a relationship termination capability as part of their conceptualization of networking capabilities. Related to Reinartz et al.’s (2004) argument, they posit that relationship ending relates to two aspects: the capability to select unfavourable business relationships, and the capability to discontinue these relationships. However, their operationalization is not exclusively focused on CRM issues, and shows validity with regard to customer as well as supplier relationships. Thus, for the purpose of our research we use a concept of relationship ending based on Mitrega et al. (2012) and define relationship ending as a capability made up from the two sub-dimension of selection capability, and process capability. This is in line with a RBV-oriented perspective in which activities and resources affect directly outcomes, and orientations (i.e. attitudes) are used as moderating factors.

A Relationship Ending Model based on the Capability Perspective

Relationship ending as a focal firm capability will be linked to certain outcome variables for that firm. Relationship ending as an aspect of the dynamic management of business relationships is related to a *selection capability* and to a process capability, i.e. activities by the focal firm to disengage from a relationship with a supplier. These two capability constructs are linked as antecedents to certain performance outcomes, in line with a RBV logic, in the case of this study to innovation success. The literature distinguishes between process innovations and product innovations which are both included in our model. The overall nomological model as used in our study is depicted here.



Research Method and Design

The proposed model was tested via a sample drawn from the Iranian automotive industry. We used a multiple-informant approach to collect data from automotive supplier firms. We designed two questionnaires: a) a *purchasing survey* to collect data regarding antecedents, moderators, and dependent constructs from the purchasing managers/general managers of the supplier company, and b) a *R&D survey* to collect data regarding mediators (innovation success) from the R&D managers of that company. This approach is used following the suggestion by Podsakoff et al. (2012) to reduce the potential existence of common method bias. To collect the data, we followed a key informant approach and phoned purchasing managers and R&D managers of 500 suppliers of a major Iranian car manufacturer and asked whether they were willing to participate in the survey. We mailed the purchasing and R&D questionnaires separately to managers of 340 suppliers who indicated a willingness to participate in our study. We initially received two matched questionnaires back from 143 suppliers, after which we made a reminder phone call to the remaining companies. We collected further matched questionnaires from 51 more suppliers, reaching a total of 194 firm responses (i.e. 388 questionnaires) with a response rate of 38.8%. We discarded responses from suppliers that provided only one of the questionnaires (either purchasing or R&D).

Different measurement models are tested. A CFA shows satisfactory fit results:

$\chi^2_{df=174} = 303.06$, CFI=.96, NFI=.92, and RMSEA=.069. The adequacy of the reflective multi-item measurement models was assessed; all item loadings are all above 0.7. All construct reliabilities are above 0.776, with scale composite reliabilities all above 0.78. All construct average variances extracted (AVEs) are above 0.55, and they are greater than the squared correlations of the constructs.

A variance-based Partial Least Squares (PLS) approach is chosen, and SmartPLS 2.0M3 was used to estimate the model. In a first step we tested the hypotheses for the main model with the whole sample. We used a path weighting procedure with a maximum of 300 iterations. To compute t-statistics, we applied a bootstrapping procedure with 5000 bootstrap samples; the bootstrap cases correspond to the number of observations (Hair et al., 2011). Table 1 provides an overview of the results for the main model.

In order to assess the nomological validity of the model, Sarkar et al. (2001) suggest assessing the explained variances (R^2) for the focal dependent constructs: product innovation success and process innovation success are explained to 38.3% and 15.9%, respectively, while firm performance is explained to 25.4%. Stone-Geisser's Q^2 indicates predictive validity and should be above 0; we used a blindfolding procedure and cross-validated redundancies with an omission distance of 9 (to ensure that the number of observations divided by the omissions distance is not an integer). All constructs fulfill this criterion. Finally, the variance inflation factors (VIF) for the dependent constructs show values below 5 (the highest recorded VIF is 1.83), thereby indicating that multi-collinearity is not a problem (Hair et al. 2011).

	Main Model	Direct Effect Model
<i>Main Effects</i>		
REC → Product Innovation Success	0.294** (2.131)	0.294** (2.165)
f^2/q^2	0.0586/0.0295	
REC → Process Innovation Success	0.409*** (3.935)	0.413*** (3.978)
f^2/q^2	0.1510/0.1146	
Process Innovation Success → Product Innovation Success	0.402*** (3.021)	0.401*** (3.032)
f^2/q^2	0.2188/0.1094	
Product Innovation Success → Performance	0.399*** (3.931)	0.382*** (3.755)
Process Innovation Success → Performance	0.012 (0.130)	-0.006 (0.061)
REC → Performance		0.076 (0.707)
Termination Acceptance → Product Innovation Success	0.020 (0.230)	0.021 (0.242)
Termination Acceptance → Process Innovation Success	0.010 (0.098)	0.009 (0.088)
<i>Interaction Effects</i>		
Termination Acceptance × REC → Prod. Innovation Success	0.276*** (3.235)	0.277*** (3.133)
f^2/q^2	0.1005/0.0692	
Termination Acceptance × REC → Proc. Innovation Success	0.055 (0.386)	0.056 (0.403)
<i>Control Variables</i>		
Firm Size → Prod. Innovation Success	0.081** (1.995)	0.081* (1.912)
Alternative Supply Chain Partners → Performance	0.242*** (3.543)	0.220*** (2.714)
R^2 (Product Innovation Success)	0.383	0.383
R^2 (Process Innovation Success)	0.159	0.161
R^2 (Performance)	0.254	0.258
Q^2 (Product Innovation Success)	0.2672	0.2674
Q^2 (Process Innovation Success)	0.1245	0.1260
Q^2 (Performance)	0.1393	0.1371

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 1: PLS Estimation of the Structural Model using REC as Higher-Order Construct

A comparison of the results of the main model which uses product innovation success and process innovation success as mediating constructs, with a direct model that also links

relationship ending capability directly to firm performance shows that the path REC to firm performance is insignificant, i.e. the effect of the relationship ending capability on firm success is fully mediated (see Table 1).

In order to test our operationalization of REC as a second-order construct, we contrast our results with an alternative model that links both REC selection and REC process to the two innovation success constructs . In this alternative model the two paths to product innovation success are becoming insignificant, while both paths to process innovation success stay significant. Termination acceptance only positively and significantly moderates the relationships between REC process and product innovation success. R^2 are similar to the main model, as are the Stone-Geisser Q^2 .

References available upon request