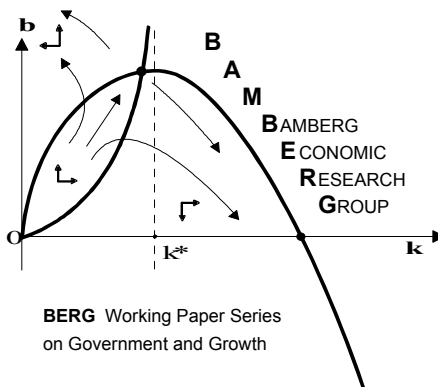


# J.-B. Say's 1803 *Treatise* and the Coordination of Economic Activity

Stefan Hopp

Working Paper No. 47  
July 2004



Bamberg Economic Research Group  
on Government and Growth  
Bamberg University  
Feldkirchenstraße 21  
D-96045 Bamberg  
Telefax: (0951) 863 5547  
Telephone: (0951) 863 2547  
E-mail: [public-finance@sowi.uni-bamberg.de](mailto:public-finance@sowi.uni-bamberg.de)  
<http://www.uni-bamberg.de/sowi/economics/wenzel/berg>

ISBN 3-931052-43-5



**J.-B. Say's 1803 *Treatise* and  
the Coordination of Economic Activity**

by

Stefan Hopp\*

**Abstract**

Although historians of economic thought emphasize J.-B. Say's contributions to utility theory, the structure of the subject matter of economics, entrepreneur theory and the construction of the "law of markets," they rarely appreciate what Say accomplished in the first edition of the *Traité d'Économie Politique*. Only in chapters 21 and 22 of his 1803 *Treatise*, however, does Say sketch business firms as institutions that create and operate markets. In doing so, he essentially provides the basis for a non-walrasian concept of the coordination problem of a decentralized economic system. Thus, concerning Adam Smith's metaphor of the "invisible hand," Say ought to be considered as the first theorist to introduce into economic literature what Robert W. Clower called the "visible fingers" of the "invisible hand."

Keywords: Invisible Hand, General Equilibrium Theory, Jean-Baptiste Say, Market Maker, Say's Law, Des Débouchés

JEL Classification: B12, D50

The paper was presented at the annual meeting of the History of Economics Society (HES), July 4<sup>th</sup> - 7<sup>th</sup>, 2003, at Duke University in Durham, N.C., USA.

---

\* Economics Department, Chair of Public Finance, Otto-Friedrich-Universität Bamberg.  
Email: stefan.hopp@sowi.uni-bamberg.de



## Introduction

On the occasion of the 200<sup>th</sup> anniversary of the publication of Adam Smith's classic, Roland H. Coase described *The Wealth of Nations* as a work that "still lives and from which we continue to learn" [1977, p. 309]. Although Say's *Traité d'Économie Politique*<sup>1</sup> celebrates its 200<sup>th</sup> anniversary this year, no similar claim of timelessness has thus far been established. In spite of sporadic attempts to correct his standing in the history of economic thought,<sup>2</sup> Say's name would long have been forgotten were it not so tightly attached to the so-called "law of markets." As Mark Blaug noted, "Jean-Baptiste Say is almost unread today" [1991, p. ix]. Valid for Say's writings in general, Blaug's judgment is all the more true for the first edition of the *Traité*.

Despite its marginality in modern economic discourses, Say's *Traité* deserves recognition as a basis for an alternative foundation for applied economics. My paper suggests that Say's work outlines a way toward the advancement of economic science by portraying money and trading firms as the institutions coordinating the economic exchange process. The term "coordination of economic activities" thereby refers to an actual economy's ability to balance the transactors' desired sales and purchases or, in other words, to the economy's self-regulating capabilities.<sup>3</sup> The idea of the exchange economy as a self-regulating mechanism goes back, of course, to Adam Smith, and represents the gist of his famous "invisible hand"-metaphor.<sup>4</sup> In chapters 21 and 22 of his *Traité*, Say basically provides "a nontechnical portrait of the 'fingers' that [...] are responsible for the visible action of Adam Smith's 'invisible hand'" [Clower, 1994, p. 3].<sup>5</sup>

---

<sup>1</sup> The full title is *Traité d'Économie Politique ou Simple Exposition de la Manière dont se Forment, se Distribuent, et se Consomment les Richesses*. Unless stated otherwise, references are to the original French edition, published in 1803 in Paris in two volumes (Tome I and II) with a total of more than one-thousand pages. Where the chapters of the original edition were not accessible to the author, the German translation of the *Traité*, published in 1807 in Halle and Leipzig, served as a primary text. All quotes from the 1807 German edition of the *Traité* have been translated by the author. Direct quotes from the 1803 *Traité*, except noted otherwise, have been translated by Baumol [1977].

<sup>2</sup> See, for example, Koolman's [1971] re-assessment of Say's contribution to the theory of the entrepreneur. Palmer's [1997] biography also analyzes the contributions of the first edition of the *Traité* to economic theory [pp. 1-5 and pp. 67-89].

<sup>3</sup> For this definition see Axel Leijonhufvud [1973, p. 104-105].

<sup>4</sup> Smith introduces and discusses the invisible hand in book IV, chapter ii of *The Wealth of Nations* [(1776) 1979, IV.ii.10, p. 456]. The economy's „automatic“ adjustment mechanism, the „System of Natural Liberty“, Smith discusses in his famous chapter vii "Of the Natural and Market Price of Commodities" [(1776) 1979, I.vii].

<sup>5</sup> Clower [1994] named trade intermediaries the "visible fingers" of the "invisible hand," because their activities lend order and coherence to the independent exchange decisions of millions of transactors and may thus be regarded as the real-world counterparts of Smith's metaphor. In Germany, there are currently about 37 million households, more than 2 million enterprises and about 15.000 governmental institutions in exchange relations with one another.

A re-reading of the *Traité* from the point of view of the coordination of economic activities is not only instructive for an understanding of the working of a market economy. In addition, the inquiry reveals that one cannot ascertain any law-like proposition in the famous chapter “Des Débouchés,” the supposed origin of the law of markets. Furthermore, the proposed interpretation reveals that Say clearly recognized the importance of money for a highly subdivided exchange economy.

### **Preliminary Note: The Smithian Diversion**

In her review of the discourse on Smith, Vivienne Brown [1997, p. 287] considers the Smithian market theory as a forerunner of neowalrasian<sup>6</sup> economics. Despite carrying a positive note for some economists,<sup>7</sup> this observation reveals an important shortcoming in Smithian as well as neowalrasian economics: regarding the coordination of economic activities, both abstract from money and markets and assume their functions to be performed by a mythical entity.<sup>8</sup> Similar to Smith talking about individuals being led by an “invisible hand,” neowalrasians appeal to “the auctioneer” or to “the price system” in order to “explain” the adjustment process between supply and demand.<sup>9</sup> In particular neowalrasians deflect theoretical attention from market processes to an impersonal set of (production or consumption) choices and consider them to be costless and executed perfectly.

Granted that Smith’s conceptual model<sup>10</sup> of the economic system is as defective as that of modern neowalrasians, his approach equals that of other inductive sciences. Smith

---

<sup>6</sup> Following Clower [1995, p. 307, fn. 1], I regard the word „neowalrasian” as an impersonal noun that requires no capitalization as there exists only an inspirational connection between Walras’ *Éléments* and the writings of his followers (e.g., Hicks [1939], Samuelson [1947], Arrow and Debreu [1954], and Debreu [1959]). For an analysis of the gulf separating Walras’ work from that of his disciples see Costa [1998b].

<sup>7</sup> See, for example, the statement of Arrow and Hahn [1971, pp. vi-vii].

<sup>8</sup> For an analysis of the futility of money and markets in an Arrow-Debreu-world see Starr [1972]. Starr [1972] is a duplicated form of chapter 1 of Starr’s Ph.D.-thesis written under the supervision of Arrow in the late 1960s [Clower, 1994, p. 807, fn. 3].

<sup>9</sup> Costa [1998a] analyzed how this conception constrained our understanding of the exchange process and, consequently, impeded progress in our understanding of the relevant stylized facts of an ongoing market economy. According to Costa, exchange theory developed into a sterile exercise where the question of existence of equilibrium prices for purely notional trading plans has been confused with the different question of how exchange plans can actually be carried out. See Clower [1994, pp. 807-808] for a comparison of the stylized facts of real-world economic behavior with the conception of economic „reality” implied by neowalrasian theory. Blaug [2003, p. 154] concludes that “[t]he best way *not* to learn how markets function and how a competitive economy actually works is to study general equilibrium theory.”

<sup>10</sup> Clower [1989, pp. 12-14] uses the term “conceptual experiments” to refer to a category of scientific stories that “provides the reader with enough information to figure out not only what the teller of the story is saying but also what he is talking about.” Walker [1997] demonstrates that many general equilibrium theorists fail to specify their models such that the “reader knows what they are talking about.”

understood economics as the “study [of] observed actions of individuals interacting in trading relationships, with a view to discerning patterns of group behaviour worth cataloguing, explaining, and communicating” [Clower, 1998, p. 401]. Hence, according to Smith, a theory is comparable to an “imaginary machine invented to connect together in the fancy those different movements and effects which are already in reality performed” [1980, HA, IV.19, p. 66]<sup>11</sup>. The neowalrasians’ deductive approach, on the other hand, invented a world to inquire whether it was conceivable in this form [Arrow and Hahn, 1971, p. vii]. In order to emphasize the hypothetical character and formal nature of their models, “science fiction” would be a more appropriate term to label these works.

This is not the place, however, to elaborate the methodological foundations of either Smithian or conventional general equilibrium analysis.<sup>12</sup> The claim I wish to establish is that, in contrast to the neowalrasians, Smith attempted to create a model description of an ongoing exchange economy.<sup>13</sup> Nonetheless, Smith ignored the reflections of Richard Cantillon, Jacques Turgot and David Hume on the “entrepreneur market-maker as the essential coordinator of economic activity” [Clower, 1998, pp. 398-400; Koolman, 1971, p. 283]. Consequently, his retreat to the “invisible hand” deserves the label *The Smithian Diversion* [Clower, 1998, p. 401]. And, as far as the understanding of market processes is concerned, Smith’s procedure should be “treated not as an ingenious modeling expedient [...], but rather as an explanatory evasion which opened a yawning gap in economic analysis that requires closing” [p. 401]. Describing the organization of exchange through trade specialists, Say was the first economist who attempted to remedy Smith’s misstep.

## Markets as Institutions

Following the “Discours Préliminaire,”<sup>14</sup> Say begins his treatise by distinguishing three types of industry: agricultural, industrial (manufacture), and commercial. Commercial

<sup>11</sup> Refers to Smith’s *History of Astronomy*, section IV, paragraph 19, page 66. Though first published in 1795, Smith wrote the essay long before the publication of *The Wealth of Nations*, in the year 1758 (see Skinner [1987, p. 3]).

<sup>12</sup> For such an inquiry, see, for example, Costa [1998b].

<sup>13</sup> The effect of his „invisible hand“ metaphor upon the subsequent developments of the theory of exchange may thus be deemed „unintentional“ [Clower, 1998].

<sup>14</sup> The Discourse is an extensive introduction on the nature and history of Political Economy to which Say attached a particular importance. In a letter to C. R. Pinsep, Say criticized its omission in the first translation: “[...] As for your translation, Monsieur, it seems to me to have been made conscientiously with a sincere desire to propagate economic knowledge. But I would have wished you to include the Introduction with which the work begins and the Epitome with which it ends. I know not why you have supposed that a preamble setting forth the purpose of political economy, answering objections raised against it as a field of knowledge, showing its advantages to mankind, and giving a brief history of its progress, should be without interest for readers of a book on this subject. Professors using it as a text in Italy, Germany, ...

industry is the type on which this discussion focuses. Say describes it as “transferring goods from places where they are plentiful to places where the consumers are [i.e., where they are scarce]” [1807, I.i.1, p. 3]<sup>15</sup>. Say adds that, “[w]ithout commercial industry[,] this kind of connection [between producers and consumers] could never be established” [1807, I.i.1, p. 4]. Here, Say characterizes the essential function of trade intermediaries, which is to perform the necessary tasks to organize and to maintain a link or a channel through which spatially scattered buyers and sellers may trade. According to Say, the parties involved could not exploit the potential gains from exchange without the trade intermediary.<sup>16</sup> In a later edition of the *Traité*, Say characterizes commercial industry as placing “within our reach objects of want which would otherwise be beyond reach” [(1834) 1964, I.ii, p. 64]. In other words, the trade specialist concentrates on activities that enable exchanges otherwise uneconomical to be performed. A possible reason consists in the existence of a lump-sum component in the search and transaction costs that customers incur each time they trade.<sup>17</sup> The trade specialist helps to reduce these costs by engaging in what will hereafter be called market-making services, which include price formation, stockholding, and provision of information.<sup>18</sup>

Say does not treat market-making functions explicitly, but proceeds by way of example. He emphasizes, however, that providing market-making services is a resource-consuming, productive activity identical with that of any other industry (agriculture or manufacture)<sup>19</sup> and, consequently, may be performed with more or less diligence.<sup>20</sup> Say was the first economic thinker to argue consistently that to produce, in economics, is to give utility to things [1807, I.i.6, pp. 21-22]. But how is utility to be measured? According to Say, the quantity of goods offered for one quantity of another good approximately measures the relative utility of the first good to an individual [p. 22].<sup>21</sup> Hence, the exchange value of a good provides a measure of the extent of production.<sup>22</sup> Since the ex-

---

Poland, Russia, Sweden, and Holland have not shared in your opinion” [Oevres diverses, 4, 430; from: Palmer, 1997, p. 125].

<sup>15</sup> Refers to the German translation of the *Traité* [1807], volume I, book i, chapter 1, page 3.

<sup>16</sup> This also hints at the entrepreneurial and (search) cost reducing function of the trade intermediary. He specializes in discovering links (basically markets) to realize potential gains from exchange.

<sup>17</sup> See Alchian [1969] and Hirshleifer [1973].

<sup>18</sup> These include information on price, quality, location, availability of inventory or risk of stockouts, payment methods, quality of service, and so forth [see Costa, 1998a, appendix F].

<sup>19</sup> Likewise, for example, Spulber [1999, p. 3]: „Just as producing goods and services consumes resources, so does the establishment and operation of markets to allocate those goods and services. Companies incur costs in adjusting prices and communicating price information to buyers and sellers.“

<sup>20</sup> See Koolman [1971] for a general account of the nature, functions, and qualities of Say's entrepreneur.

<sup>21</sup> Here Say basically hints at Walras' [1965, p. 87] equation of exchange:  $m \times v_a = n \times v_b$  in which  $v_a$  is the value in exchange of one unit of (A) and  $v_b$  is the value in exchange of one unit of (B). Thus, the price of one commodity in terms of the other (i.e., the ratio of the values in exchange) is equal to the inverse ratio of the quantities exchanged; that is,  $v_a/v_b = n/m$ .

<sup>22</sup> Say also outlines the relative nature of exchange value and distinguishes it from a goods money price (i.e., its exchange value relative to the commodity called “money”) [1807, I.6, p. 23].



change value of goods clearly depends upon their spatial location, and since commerce facilitates the exchange of things from one place to another, Say concludes that commercial activity is productive in the proper sense of the word [p. 25].<sup>23</sup>

In the ensuing chapter “Des différentes manières de faire le Commerce” [1803, I.i.21, pp. 147-151]<sup>24</sup>, Say restates the necessity of trade due to the spatial separation of prospective buyers and sellers. Furthermore, Say lists various kinds of trade specialists and describes the market-making services they perform. The retail dealer, for example, *provides a ready market*<sup>25</sup> for prospective buyers: he buys his products from the wholesale dealer and *offers them for sale* in his shop (store) to the customers. (And though Say did not mention this explicitly, a retail offer for sale usually involves the *posting of an asking price*.) Because the trade specialist *organizes exchange*<sup>26</sup> prior to the final purchase, the customers are in a position to buy the goods offered in quantities as small as they desire [p. 148]. The broker, another example chosen by Say, lowers transaction and bargaining costs by *providing information* about the value of the traded objects (e.g., real estates), thereby enabling prospective buyers and sellers to locate each other.

Later in the chapter, Say adumbrates the *market-equilibrating function* of trade intermediaries.<sup>27</sup> Due to the nature of commerce, trade specialists have a strong incentive to continually explore the current bid and ask prices of other producers. Thereby, the trade specialist directs his trade channels<sup>28</sup> to those places and products that offer gains from exchange considered worth exploiting. Say concludes that competition among different trade specialists places a check on profits and ensures that gains from exchange are reduced to their average (normal) level [p. 150].

According to Say, profit-seeking business firms organize and operate markets for other (non-specialist) transactors and thereby effectively coordinate the economic exchange process.<sup>29</sup> Consequently, Clower [1994, p. 13] demands that “we must focus [on the activities of trade specialists] if we are to have any hope of one day understanding the

---

<sup>23</sup> Say wrongly assumes, however, that the exchange as such is not a productive activity (Say [1803, I.i.22, p. 147, fn. 1]; Gide and Rist [1913, p. 122, fn. 3]; Heyne [2000, pp. 134-135]). It should be noted, furthermore, that Say puts too much stress on the organization of exchange to the neglect of the production of information by trade specialists [Heyne, 2000, p. 160]. In any case, regarding the utility of trade specialists, public consciousness seems to change very slowly. Note that almost two-hundred years after Say, Heyne [2000, p. 134] still talks about the „public’s deep-rooted suspicion of middlemen.“

<sup>24</sup> Refers to the French edition of the *Traité* [1803], volume I, book i, chapter 21, pages 147 to 151.

<sup>25</sup> See Friedman [1989].

<sup>26</sup> These include the purchase of the goods at the wholesale dealer, transport to the retail dealer’s location, and the arrangements at the retailer’s shop.

<sup>27</sup> I have been unable to locate a similar passage in the second American Edition [Say, (1834) 1964].

<sup>28</sup> Literally, Say wrote about the merchant’s industry and capital.

<sup>29</sup> See Clower [1994, pp. 9-12] for a verbal account of the price and quantity adjustments of a representative shop-owner.

[actual] economic organism.”<sup>30</sup> And although we are able to conceive a world without organized exchange,<sup>31</sup> the importance of market-making firms for the economic well-being of every actual member of society cannot be questioned. In the absence of organized trading facilities, a great deal of society’s resources would have to be used to perform costly search and transaction activities.<sup>32</sup>

Contrary to Say, Smith uses the term “market” vaguely by referring to the general interdependence of its participants and its capacity for self-regulation (e.g., the invisible hand):

The town is a continual fair or market, to which the inhabitants of the country resort, in order to exchange their rude for manufactured produce. It is this commerce which supplied the inhabitants of the town both with the materials for their work, and the means of their subsistence. The quantity of the finished work which they sell to the inhabitants of the country, necessarily regulates the quantity of the materials and provisions which they buy [(1776) 1979, III.i.4, p. 378]<sup>33</sup>.

As a result, one can not ascertain, for example, the meaning of Smith’s hypothesis set forth in the chapter “That the Division of Labour is limited by the Extent of the Market”:<sup>34</sup> Arrow [1980, p. 155] interprets Smith as follows:

[T]he more the selling of goods and services takes place, the greater can be the division of labour [...] The subdivision of labour can be made finer and finer as the market extends. There is a mutually reinforcing relationship between specialization, and therefore greater efficiency, on the one hand and the growth of the market economy in which people are buying and selling on the other. The resulting differentiation in tasks performed gives rise to the profitability of trade, because people are doing different things, they can gain by exchanging these services in effect.

Like Smith, however, Arrow remains unclear about the term “growth of the market economy.” Referring to “the extent of the market” in Smith, Starr [1972, p. 7] argues

---

<sup>30</sup> Economists increasingly use models of organized exchange to explore topics in monetary theory, market theory, and the theory of the firm. Howitt [2002] provides a model of endogenous fiat money in which specialist traders organize the exchange process through facilities called “shops.” Howitt and Clower [2000] use evolutionary game theory to show how a coordinating network of trade specialists emerges spontaneously in an economy where transactors follow simple adaptive rules. Spulber [1999] presents a microeconomic theory of the firm where firms are perceived as exchange intermediaries that establish and operate markets. Clower and Howitt [1996, 1997] consider market-making to be the principal function of business firms in a market economy. For further literature on the view that trading specialists coordinate the economy’s exchange process see the references in Howitt and Clower [2000, p. 56, fn. 1].

<sup>31</sup> Modern search theory builds upon such a conception of economic activity. On the other extreme, general equilibrium models assume that one general market costlessly and perfectly organizes exchange activities.

<sup>32</sup> In order to illustrate the importance of trade specialists, Clower [1994, pp. 534-535] conducted the following conceptual experiment: „[imagine] how life would be if one morning we awoke to discover (as have many Eastern Europeans in recent years) that all shops from which we normally buy and all employers for whom we normally work had simply vanished. No doubt most retail outlets would be replaced by new ones in a few months or a few years [...], and life might then go on much as before. In the interim, we should have to devote vast amounts of time and resources to arranging barter deals with other households, and many of us would probably expire in the process.“

<sup>33</sup> Refers to *The Wealth of Nations*, book III, chapter i, paragraph 4.

<sup>34</sup> See Starr [1972, p. 7].

that “[t]he measure of the extent of an agent’s power of exchanging is the ease or difficulty of performing exchange.“ In accordance with Say, trade channels organized by the network of trade specialists essentially determine the further development<sup>35</sup> of society by rendering the performance of exchanges for non-specialists more or less routine.

### Interpreting “Des Débouchés”

Literally translated, “des débouchés” means “outlets” or “markets.“ In defense of Say’s views on the organization of exchange, the term “des débouchés” will henceforth be used to denote “an organized set of institutional arrangements for the negotiation [and execution] of exchange contracts among individual transactors” [italics removed; Clower and Due, 1972, p. 37]. Historians of economic thought single out the chapter “Des Débouchés,” because the “law of markets”<sup>36</sup> supposedly originates from this three-page chapter in Say’s *Traité* [1803, Li.22, pp.153-155].<sup>37</sup> Since its re-statement by Lange [1942], however, the “law” and its content have been subject to intense exegetical efforts, comparable only to the profession’s attempt to scrutinize the meaning of the “invisible hand.”<sup>38</sup> Despite or because of their vague meanings, both concepts are considered to be equally “fundamental,” “essential,” “indispensable,” “vital,” “important” for a proper understanding of economic theory and, ultimately, the economic system.<sup>39</sup>

In the recent past, Kates [1998, 2003] examined the early developments of the law of markets, arguing that “Des Débouchés” “is a chapter devoted to explaining how each person’s own productions *create a market* for the goods produced by others” [italics mine, 1998, p. 22].<sup>40</sup> A re-reading of Say [1803] shows, however, that Kates’ conclusion is much closer to James Mill [1807] than to anything in “Des Débouchés.” In *Commerce Defended*, Mill argues that “[t]he production of commodities *creates [...]* a mar-

<sup>35</sup> Leijonhufvud [2000, p. 256] distinguishes development from growth: „Economic development, as opposed to ‚mere‘ economic growth, is a process of system evolution toward more and more complex patterns of coordinated activities. It entails, in Adam Smith’s language, ‚increasing division of labour‘.“

<sup>36</sup> Because of its institutional character, Niehans [1994, p. 111] suggested that Say’s “law of markets” be renamed in “law of outlets.”

<sup>37</sup> Kates [1998, p. 21, fn. 4] and Thweatt [1987, p. 211] provide references to the origin debate. The discussion is about whether Mill [1807] or Say [1803] deserves credit for being the “discoverer” of the law of markets. This paper does not address this issue explicitly, but demonstrates that no “law-like” proposition can be ascertained in “Des Débouchés.”

<sup>38</sup> See Grampp [2000] for a survey of the literature on the concept of the invisible hand.

<sup>39</sup> Kates (ed.) [2003] calls Say’s Law „economic theory’s most controversial principle.“ Hutt [1963, p. 389; from: Johnson, 2001] considers Say’s Law as “the basic economic reality in the light of which all economic thinking is illuminated.” Whether or not the debates will produce greater clarity, time will decide.

<sup>40</sup> Note that, here, the term „market“ is used, as Baumol [1977, p. 147] explains, not as a trade-facilitating institution, but to denote the availability of effective demand.

*ket* for the commodities produced” [italics mine, 1807, p. 81]. No sooner than in book iv of the second volume of the *Traité* [1803, II.iv.5, p. 175] may a similar proposition be found: “Is the quantity of outputs demanded consequently determined by the quantity of products created? Without any doubt.” In his review of Say’s *Traité*, Mill [1805, p. 419] describes this proposition as an “important relation between consumption and production.”<sup>41</sup> Hence, Mill [1805] and later economists such as Kates [1998, 2003] ultimately ignored the contents of “Des Débouchés” and commented upon some of its purported implications discussed by Say in volume II (book iv) of the original *Traité*.

In order to ascertain the original meaning of “Des Débouchés,” one first has to take a look at chapters ii (“Of the Principle which gives occasion to the Division of Labour”) and iii (“That the Division of Labour is limited by the Extent of the Market”) in Smith’s *Wealth of Nations* [(1776) 1976].<sup>42</sup> Here Smith reflects upon the mutual interdependence of individuals in a society organized by exchange, resulting from the social division of labor<sup>43</sup>:

Among men [...] the most dissimilar geniuses are of use to one another; the different produces of their respective talents, by the general disposition to truck, barter, and exchange, being brought [...] into a common stock [I.ii.5, p. 30].

When the market is very small, no person can have any encouragement to dedicate himself entirely to one employment, for want of the power to exchange all that surplus part of the produce of his own labour, which is over and above his own consumption, for such parts of the produce of other men’s labour as he has occasion for [I.iii.1, p. 31].

Say illustrates the same idea in “Des Débouchés” [1803, I.i.22, pp. 153-154]:

Imagine a very industrious individual having everything he needs to produce things: both ability and capital; if he were the only industrious person in a population which, aside from a few coarse foods, does not know how to make anything; what could he do with his products? He will purchase the quantity of rough food necessary to satisfy his needs. But what can he do with the residue? Nothing.

Thus, Say concludes, the existence of a variety of useful goods or products is a necessary prerequisite for exchange to take place: “if the outputs of the country begin to multiply and grow more varied, then all of his produce can find a use, that is to say, it can

---

<sup>41</sup> Probably Mill’s review influenced Say when the latter revised “Des Débouchés” for the second edition and expanded it from 3 to 16 pages. Niehans [1990, p. 111] states that it is unknown, however, whether Say has also been influenced by Mill’s *Commerce Defended* [1807].

<sup>42</sup> See Clower [2003, p. 3].

<sup>43</sup> Groenewegen [1987] differentiates between two kinds of the division of labor: „The division of labour may be defined as the division of a process or employment into parts, each of which is carried out by a separate person. This includes the separation of employments or professions within society at large or *social division of labour* as well as the division of labour which takes place within the walls of a factory building or within the limits of a single industry, the *manufacturing division of labour*” [p. 901]. Of course, Adam Smith was concerned with the social division of labor.

be exchanged for things which he needs or for additional luxuries he can enjoy, or for the accumulation of the stocks that he considers appropriate" [I.1.22, p. 154].<sup>44</sup>

Similarly, economic thinkers recognized, long before Say, a further idea contained in "Des Débouchés," namely that money serves "only" a facilitating function in the conduct of exchange [Gide and Rist, 1913, p. 129]. About half a century before Say, Smith's friend and teacher, David Hume, stated that "[m]oney is not, properly speaking, one of the subjects of commerce; but only the instrument which men have agreed upon to facilitate the exchange of one commodity for another. It is none of the wheels of trade: It is the oil which renders the motion of the wheels more smooth and easy" [(1752) 1955, p. 33]. Likewise, Smith observes that "[m]oney [is] the great wheel of circulation, the great instrument of commerce" [II.ii.23, p. 291] and "[t]he sole use of money is to circulate consumable goods" [II.iii.23, p. 339].

In "Des Débouchés," Say argues: "[M]oney serves approximately the same role as the posters and the handbills in a large city which facilitate the intercourse of persons who may want to do business with one another" [1803, I.i.22, p. 152]. Despite alluding to the information-producing function of monetary exchange, Say concludes that, ultimately, "[m]oney performs no more than the role of a conduit in this double exchange" [pp. 153-154].<sup>45</sup>

From the general interdependence of economic actors and the intermediate role of money follows what is generally regarded as the gist of the law of markets, that is, "[w]hen the exchanges have been completed, it will be found that *one has paid for products with products*" [italics mine; Say, 1803, I.i.22, p. 154].<sup>46</sup> Analogously, Smith states that "every man may purchase [with his product] whatever part of the produce of other men's talents he has occasion for" [(1776) 1979, I.ii.5, p. 30].

According to Sowell [1972, p. 12], the law of markets "produced two of the most sweeping, bitter, and long-lasting controversies in the history of economics."<sup>47</sup> A less controversial interpretation of Say's conclusion in "Des Débouchés" is possible, however, when reserving the term „purchase“ to transactions where an „exchange is made involving one commodity called ‚money“” [Say, 1807, II.1, p. 355]. Giving credit to

<sup>44</sup> Lavington [1925, p. 24] likewise observes the general interdependence of economic actors: "In a time of general depression the individual firm is working at low pressure because other firms are working at low pressure. [...] The inactivity of all is the cause of the inactivity of each."

<sup>45</sup> In the light of Hume's and Smith's statements, it seems unnecessary to underline Say's "emphasis [on] [...] the *unimportance* of money" [Baumol, 1977, p. 153].

<sup>46</sup> Say concludes that "when a nation has too large a quantity of one particular type of product, the means of disposing of them is to create goods of another variety" [1803, I.i.22, p. 154]. According to Stigler 1953, p. 312], this sentence of "Des Débouchés" contains the gist of the law of markets.

<sup>47</sup> Sowell refers to the early nineteenth century and to the Keynesian revolution of the 1930s.

Say's emphasis on the intermediate role of money, one might substitute the term „purchased“ for the phrase „given in exchange.”<sup>48</sup> In accord with the French historians Charles Gide and Charles Rist [1910, pp.129-131],<sup>49</sup> the law of markets can now be stated as follows: “[P]roducts are given in exchange for products” [pp. 128-129].

Gide and Rist remark that “though [Say's expression] is a happy phrase, it is not in truth very profound.” Referring to the high hopes that Say attached to the diffusion of his “discovery,” they characterize Say's notion as “so vague and so self-evident as being almost useless” [p. 129]. Agreeing with Gide and Rist, Clower [2003, p. 4] justly regards Say's proposition, “products are given in exchange for products,” as a mere “Platitude.” Nevertheless and in contrast to any theorems associated with Say's Law, Say's Platitude is neither contentious nor quantitative [Clower, 2003, p. 4; Gide and Rist, 1913, p. 129].<sup>50</sup>

Despite Say's statements in “Des Débouchés,” he does not consider trade-facilitating institutions (e.g., money and markets) to be unimportant. In fact, he stresses the importance of both of these institutions for the organization of the exchange process. As for money, he does so less in “Des Débouchés” than in the first chapter of book ii entitled “Of the Nature and Uses of Money.”<sup>51</sup> The first part of this chapter, which stresses the want for exchange, represents an almost literal copy of the first part of “Des Débouchés.” Therefore, the content of the chapter “Of the Nature and Uses of Money” is indicative of Say's view on the subject in general, including “Des Débouchés”. Say continues that trade-facilitating institutions “are indispensable in an advanced stage of civilization“ and that „[i]n a very advanced state of civilization [...] exchange becomes a matter of more urgent necessity, as well as much more frequent and more complicated [...]” In summary, “[m]oney is the more requisite, the more civilized a nation is, and the further it has carried the division of labor” [1807, II.ii.1, pp. 350-356].<sup>52</sup>

<sup>48</sup> See Gide and Rist [(1915) 2000, p. 115].

<sup>49</sup> According to Gide and Rist, the only interesting aspect of the “law of markets” lies in its application to overproduction (“general glut”) theories.

<sup>50</sup> Hobson [(1894) 1965, p. 289] remarks that „since all commerce is ultimately resolvable into exchange of commodities for commodities, it is obvious that every increase of production signifies a corresponding increase in the power to consume. [...] But the fallacy involved in the supposition that over-supply is impossible consists in assuming that the power to consume and the desire to consume necessarily co-exist in the same persons. [...] In order to be operative in the steady maintenance of industry the desire to consume must be a desire to consume now, to consume continuously, and to consume to an extent corresponding with the power to consume.”

<sup>51</sup> The title of book ii [1803] is “De la Monnaie” (“On Money”). From the second edition on, Say made this chapter 21 of book i, leaving its title unchanged.

<sup>52</sup> See Say [(1834) 1964, pp. 217-219]. Say does not discuss the underlying forces that might make the use of exchange facilitating institutions more necessary. He recognized, however, that barter exchanges become more inconvenient the more subdivided the tasks performed. Arrow [1980, pp. 160-162] argues that an increased division of labor also increases the costs of coordination due do a more extensive need

## Conclusion

The passages quoted from the *Traité* reveal that, although the division of labor was less elaborate at the beginning of the nineteenth century,<sup>53</sup> Say was impressed by the complexity of exchange relations.<sup>54</sup> As far as concerns the analysis of the coordination of economic activity, Say's *Traité* [1803] still offers many lessons to be learned. First, in contrast to Smith and modern equilibrium theorists, Say clearly appreciates and emphasizes the importance of trade specialists and money for the economic well-being of society.<sup>55</sup> He considers trade-facilitating services as resource-consuming, productive activities indistinguishable from those performed by most other industries. Second, replacing Smith's "invisible hand" with a description of the nature and use of trade specialists, Say deserves credit for introducing into economic literature what Clower called the "visible fingers" of the invisible hand. As indicated above, Say's conception of a market economy allows one to ascertain the subtleties of some of Smith's central doctrines.

Replaced throughout later editions by issues pertinent to the overproduction crisis, chapter 22 of the first edition contains an unambiguous proposition concerning the interdependence of transactors in an exchange economy. Therefore, Say's first edition of the *Traité* deserves more scholarly attention than it has so far received as a basis for inquiry into the coordination of economic activities.

---

for communication. Alchian [1977] analyzes the role of money in reducing information and transaction costs.

<sup>53</sup> Commenting on the striking phenomena of the economic system more than a century and a half after Say, Knight [1967, p. 31] observes that "[w]e have an amazingly elaborate division of labour," which implies a social order of "unfathomable complexity."

<sup>54</sup> On the complexity of (unintended) market-coordination, Smith remarks in the *Wealth of Nations*: „Observe the accommodation of the most common artificer or day-labourer in a civilized and thriving country, and you will perceive that the number of people of whose industry a part though but a small part, has been employed in procuring him this accommodation, *exceeds all computation*. [...] How much commerce and navigation in particular, how many ship-builders, sailors, sail-makers, rope-makers, must have been employed in order to bring together the different drugs made use of by the dyer, which often come from the remotest corners of the world! [...] [I]f we examine, I say, all these things, and consider what a variety of labour is employed about each of them, we shall be sensible that *without the assistance and co-operation* of many thousands, the very meanest person in a civilized country could not be provided, even according to, what we very falsely imagine, the easy and simple manner in which he is commonly accommodated" [italics mine; (1776) 1979, I.i.11, pp. 22-23].

<sup>55</sup> Modern research demonstrated that both institutions can be explained as arising from the same behavioural forces (see Howitt and Clower [2000]).

## References

- ALCHIAN, Armen A. [1969]: *Information Costs, Pricing and Resource Unemployment*. In: *Journal of the Western Economic Association*, Vol. 7, Issue 2, pp. 109-128. Reprinted in: ALCHIAN, A. A. (ed.) [1977]: *Economic Forces at Work*. Indianapolis (Liberty Press). pp. 37-71.
- ALCHIAN, Armen A. [1977]: *Why Money?*. In: *Journal of Money, Credit and Banking*, Vol. 9, Issue 1, pp. 133-140. Reprinted in: ALCHIAN, A. A. (ed.) [1977]: *Economic Forces at Work*. Indianapolis (Liberty Press). pp. 111-123.
- ARROW, Kenneth J. [1980]: *The Division of Labor in the Economy, the Polity, and Society*. In: O'Driscoll, G. P. Jr. (ed.) [1980]: *Adam Smith and Modern Political Economy. Bicentennial Essays on The Wealth of Nations*. Ames (Iowa) (The Iowa State University Press). pp. 153-164.
- ARROW, Kenneth J.; DEBREU, Gerard [1954]: *Existence of an Equilibrium for a Competitive Economy*. In: *Econometrica*, Vol. 22, Issue 3, pp. 265-290.
- ARROW, Kenneth J.; HAHN, Frank H. [1971]: *General Competitive Analysis*. San Francisco, Düsseldorf, Johannesburg a. o. (Holden-Day) (= Mathematical Economic Texts. 6).
- BAUMOL, William J. [1977]: *Say's (at Least) Eight Laws, or What Say and James Mill May Really Have Meant*. In: *Economica*, Vol. 44, pp. 145-161.
- BLAUG, Mark (ed.) [1991]: *Jean-Baptiste Say (1776-1832)*. Hants (England) and Vermont (USA) (Edward Elgar). (= Pioneers in Economics. Section II: The Golden Age of Classical Economics. 15).
- BLAUG, Mark [2003]: *The Formalist Revolution of the 1950's*. In: *Journal of the History of Economic Thought*, Vol. 25, Issue 2, pp. 145-156.
- BROWN, Vivienne [1997]: *"Mere Inventions of the Imagination": A Survey of Recent Literature on Adam Smith*. In: *Economics and Philosophy*, Vol. 13, pp. 281-312.
- CLOWER, Robert W. [1989]: *How Economists Think. Or, Why Economists Shouldn't Use Contemporary Economic Theory to Justify Programs of Social Reform and Economic Control*. In: *Business & Economics Review*, Oct.-Dec. 1989, pp. 9-17.
- CLOWER, Robert W. [1994]: *The Fingers of the Invisible Hand*. In: *Brock Review*, Vol. 3, Issue 1, pp. 3-13.
- CLOWER, Robert W. [1995]: *Axiomatics in Economics*. In: *Southern Economic Journal*, Vol. 62, Issue 2, pp. 307-319.
- CLOWER, Robert W. [1998]: *Three Centuries of Demand and Supply*. In: *Journal of the History of Economic Thought*, Vol. 20, Issue 4, pp. 397-409.
- CLOWER, Robert W. [2003]: *Trashing J. B. Say: The Story of a Mares Nest*. Draft dated May 4, 2003.
- CLOWER, Robert W.; DUE, John F. [1972]: *Microeconomics*. Homewood (Illinois) (Richard D. Irwin).



- CLOWER, Robert W.; HOWITT, Peter [1996]: *Taking Markets Seriously: Groundwork for a Post Walrasian Macroeconomics*. In: Colander, D. (ed.) [1996]: *Beyond Micro-foundations: Post Walrasian Macroeconomics*. New York (Cambridge University Press). pp. 21-37.
- CLOWER, Robert W.; HOWITT, Peter [1997]: *Money, Markets and Coase*. In: D'Autume, A.; Cartelier, J. (eds.) [1997]: *Is Economics Becoming a Hard Science?* Cheltenham (UK) and Brookfield (US) (Edward Elgar). pp. 189-203.
- COASE, Ronald H. [1977]: *The Wealth of Nations*. In: *Economic Inquiry*, Vol. 15, Issue 3, pp. 309-325.
- COSTA, Manuel L. [1998a]: *General Equilibrium Analysis and the Theory of Markets*. Cheltenham (UK) and Northampton (MA, USA) (Edward Elgar).
- COSTA, Manuel L. [1998b]: *Walras and the NeoWalrasian Diversion*. In: *Journal of the History of Economic Thought*, Vol. 20, Issue 1, pp. 51-69.
- DEBREU, Gerard [1976]: *Theory of Value. An Axiomatic Analysis of Economic Equilibrium. Seventh Printing 1976*. New Haven and London (Yale University Press). (= Cowles Foundation Monographs. 17).
- EATWELL, John; MILGATE, Murray; NEWMANN, Peter (eds.) [1988]: *The New Palgrave. A Dictionary of Economics*. London (Macmillian Press Limited). 4 Volumes.
- FRIEDMAN, Daniel [1989]: *Producers' Markets. A Model of Oligopoly with Sales Costs*. In: *Journal of Economic Behavior & Organization*, Vol. 11, Issue 3, pp. 381-398.
- GIDE, Charles; RIST, Charles [1913]: *Geschichte der volkswirtschaftlichen Lehrmeinungen. Translation of the Second French Edition*. Jena (Gustav Fischer).
- GIDE, Charles; RIST, Charles [(1915) 2000]: *A History of Economic Doctrines. Translation of the Second French Edition*. London and New York (Routledge).
- GRAMPP, William D. [2000]: *What did Smith Mean by the Invisible Hand?* In: *Journal of Political Economy*, Vol. 108, Issue 3, pp. 441-465.
- HEYNE, Paul T. [2000]: *The Economic Way of Thinking. Ninth Edition*. Upper Saddle River (New Jersey) (Prentice-Hall).
- HICKS, John R. [1974]: *Value and Capital. An Inquiry into some Fundamental Principles of Economic Theory. Second Edition*. Oxford (Oxford University Press).
- HIRSHLEIFER, Jack [1973]: *Exchange Theory: The Missing Chapter*. In: *Western Economic Journal*, Vol. 11, Issue 2, pp. 129-146.
- HOBSON, John A. [(1894) 1965]: *The Evolution of Modern Capitalism. A Study of Machine Production. Thirteenth Impression*. London (George Allen & Unwin).
- HOWITT, Peter [2002]: *Beyond Search: Fiat Money in Organized Exchange*. Unpublished Working Paper.
- HOWITT, Peter; CLOWER, Robert [2000]: *The Emergence of Economic Organization*. In: *Journal of Economic Behavior & Organization*, Vol. 41, pp. 55-84.
- HUME, David [(1752) 1955]: *Of Money*. Reprinted in: ROTWEIN, E. (ed.) [1955]: *David Hume. Writings on Economics*. (University of Wisconsin Press).
- JOHNSON, Ivan C. [2001]: *A Reappraisal of the Say's Law Controversy*. In: *The Quarterly Journal of Austrian Economics*, Vol. 4, Issue 4, pp. 25-53.

- KATES, Steven [1998]: *Say's Law and the Keynesian Revolution: How Macroeconomic Theory Lost its Way*. Cheltenham (UK) and Northampton (Massachusetts, USA) (Edward Elgar).
- KATES, Steven [2003]: *Two Hundred Years of Say's Law: Essays on Economic Theory's most Controversial Principle*. Northampton.
- KNIGHT, Frank H. [1967]: *The Economic Organization. With an Article 'Notes on Utility and Cost'*. New York (Harper & Row).
- KOOLMAN, G. [1971]: *Say's Conception of the Role of the Entrepreneur*. In: *Economica*, Vol. 38, Issue 151, pp. 269-286.
- LANGE, Oscar [1942]: *Say's Law: A Restatement and Criticism*. In: Lange, O.; McIntyre, F.; Yntema, T. O. (eds.) [(1942) 1976]: *Studies in Mathematical Economics and Econometrics*. New York (Plainview). (Essay Index Reprint Series). pp. 49-68.
- LAVINGTON, Frederick. [1925]: *The Trade Cycle: An Account of the Causes Producing Rhythmical Changes in the Activity of Business*. London (P. S. King & Son). (Girdler's Lecturer in the University of Cambridge).
- LEIJONHUFVUD, Axel [1973]: *Effective Demand Failures*. In: *Swedish Economic Journal*, March 1973, pp. 103-130.
- LEIJONHUFVUD, Axel [1981]: *Information and Coordination. Essays in Macroeconomic Theory*. New York and Oxford (Oxford University Press).
- LEIJONHUFVUD, Axel [2000]: *Macroeconomic Instability and Coordination. Selected Essays of Axel Leijonhufvud*. Cheltenham (UK) and Northampton (MA, USA) (Edward Elgar). (= Economists of the Twentieth Century).
- MILL, James [1805]: *Review of the "Traité d'Economie Politique"*. In: *Literary Journal*, Vol. 5, pp. 412-425.
- MILL, James [1966]: *James Mill. Selected Economic Writings. Introduced and Edited by Donald Winch*. Edinburgh and London (Oliver & Boyd). (= Scottish Economic Classics).
- NIEHANS, Jürg [1994]: *A History of Economic Theory. Classic Contributions 1720 - 1980*. London and Baltimore (Maryland) (The John Hopkins Press Ltd.).
- PALMER, R. R. [1997]: *J.-B. Say. An Economist in Troubled Times*. Princeton (Princeton University Press).
- SAMUELSON, Paul A. [1983]: *Foundations of Economic Analysis. Enlarged Edition*. Cambridge (MA) and London (England) (Harvard University Press). (= Harvard Economic Studies. 80).
- SAY, Jean-Baptiste [1803]: *Traité d'Économie Politique ou Simple Exposition de la Manière dont se Forment, se Distribuent, et se Consomment les Richesses*. Paris. (= Tome I & II (Volume 1 & 2)).
- SAY, Jean-Baptiste [1807]: *National-Oekonomie oder einfache Darstellung der Art und Weise, wie die Reichthümer entstehen, vertheilt und verzehrt werden*. Halle and Leipzig (Ruffische Verlagshandlung).
- SAY, Jean-Baptiste [(1834) 1964]: *A Treatise on Political Economy or the Production, Distribution and Consumption of Wealth*. New York (Augustus M. Kelley). (= Reprints of Economic Classics).

- SKINNER, Andrew S. [1988]: *Smith, Adam (1723-1790)*. In: Eatwell, J.; Milgate, M.; Newmann, P. (eds.) [1988]: *The New Palgrave. A Dictionary of Economics*. London (Macmillian Press Limited). Vol. 4, pp. 357-375.
- SMITH, Adam [(1776) 1979]: *An Inquiry into the Nature and Causes of the Wealth of Nations*. Oxford (Clarendon Press). (= The Glasgow Edition of the Works and Correspondence of Adam Smith. II).
- SMITH, Adam [1980]: *Essays on Philosophical Subjects*. Oxford (Clarendon Press). (= The Glasgow Edition of the Works and Correspondence of Adam Smith. III)
- SOWELL, Thomas [1972]: *Say's Law. An Historical Analysis*. Princeton (New Jersey) (Princeton University Press).
- SPULBER, Daniel F. [1999]: *Market Microstructure. Intermediaries and the Theory of the Firm*. New York (Cambridge University Press).
- STARR, Ross M. [1972]: *Notes on Transactions Costs and the Analysis of Microeconomic Monetary Theory*. Yale University. Cowles Foundation. Discussion Paper No. 332. March 6, 1972.
- STIGLER, George J. [1953]: *Sraffa's Ricardo*. In: *American Economic Review*, Vol. XLIII, Sept. 1953. Reprinted in: STIGLER, G. (ed.) [1965]: *Essays in the History of Economics*. Chicago and London (The University of Chicago Press). pp. 302-325.
- WALKER, Donald A. [1997]: *Advances in General Equilibrium Theory*. Cheltenham (UK) and Lyme (US) (Edward Elgar). (= The Hennisman Lectures).
- WALRAS, Léon [1965]: *Elements of Pure Economics or The Theory of Social Wealth*. London (George Allen and Unwin Ltd.).



## BERG Working Paper Series on Government and Growth

---

- 1 Mikko **Puhakka** and Jennifer P. **Wissink**, Multiple Equilibria and Coordination Failure in Cournot Competition, December 1993
- 2 Matthias **Wrede**, Steuerhinterziehung und endogenes Wachstum, December 1993
- 3 Mikko **Puhakka**, Borrowing Constraints and the Limits of Fiscal Policies, May 1994
- 4 Gerhard **Illing**, Indexierung der Staatsschuld und die Glaubwürdigkeit der Zentralbank in einer Währungsunion, June 1994
- 5 Bernd **Hayo**, Testing Wagner's Law for Germany from 1960 to 1993, July 1994
- 6 Peter **Meister** and Heinz-Dieter **Wenzel**, Budgetfinanzierung in einem föderalen System, October 1994
- 7 Bernd **Hayo** and Matthias **Wrede**, Fiscal Policy in a Keynesian Model of a Closed Monetary Union, October 1994
- 8 Michael **Betten**, Heinz-Dieter **Wenzel**, and Matthias **Wrede**, Why Income Taxation Need Not Harm Growth, October 1994
- 9 Heinz-Dieter **Wenzel** (Editor), Problems and Perspectives of the Transformation Process in Eastern Europe, August 1995
- 10 Gerhard **Illing**, Arbeitslosigkeit aus Sicht der neuen Keynesianischen Makroökonomie, September 1995
- 11 Matthias **Wrede**, Vertical and horizontal tax competition: Will uncoordinated Leviathans end up on the wrong side of the Laffer curve? December 1995
- 12 Heinz-Dieter **Wenzel** and Bernd **Hayo**, Are the fiscal Flows of the European Union Budget explainable by Distributional Criteria? June 1996
- 13 Natascha **Kuhn**, Finanzausgleich in Estland: Analyse der bestehenden Struktur und Überlegungen für eine Reform, June 1996
- 14 Heinz-Dieter **Wenzel**, Wirtschaftliche Entwicklungsperspektiven Turkmenistans, July 1996
- 15 Matthias **Wrede**, Öffentliche Verschuldung in einem föderalen Staat; Stabilität, vertikale Zuweisungen und Verschuldungsgrenzen, August 1996

- 16 Matthias **Wrede**, Shared Tax Sources and Public Expenditures, December 1996
- 17 Heinz-Dieter **Wenzel** and Bernd **Hayo**, Budget and Financial Planning in Germany, February 1997
- 18 Heinz-Dieter **Wenzel**, Turkmenistan: Die ökonomische Situation und Perspektiven wirtschaftlicher Entwicklung, February 1997
- 19 Michael **Nusser**, Lohnstückkosten und internationale Wettbewerbsfähigkeit: Eine kritische Würdigung, April 1997
- 20 Matthias **Wrede**, The Competition and Federalism - The Underprovision of Local Public Goods, September 1997
- 21 Matthias **Wrede**, Spillovers, Tax Competition, and Tax Earmarking, September 1997
- 22 Manfred **Dauses**, Arsène **Verny**, Jiri **Zemánek**, Allgemeine Methodik der Rechtsangleichung an das EU-Recht am Beispiel der Tschechischen Republik, September 1997
- 23 Niklas **Oldiges**, Lohnt sich der Blick über den Atlantik? Neue Perspektiven für die aktuelle Reformdiskussion an deutschen Hochschulen, February 1998
- 24 Matthias **Wrede**, Global Environmental Problems and Actions Taken by Coalitions, May 1998
- 25 Alfred **Maußner**, Außengeld in berechenbaren Konjunkturmodellen – Modellstrukturen und numerische Eigenschaften, June 1998
- 26 Michael **Nusser**, The Implications of Innovations and Wage Structure Rigidity on Economic Growth and Unemployment: A Schumpeterian Approach to Endogenous Growth Theory, October 1998
- 27 Matthias **Wrede**, Pareto Efficiency of the Pay-as-you-go Pension System in a Three-Period-OLG Modell, December 1998
- 28 Michael **Nusser**, The Implications of Wage Structure Rigidity on Human Capital Accumulation, Economic Growth and Unemployment: A Schumpeterian Approach to Endogenous Growth Theory, March 1999
- 29 Volker **Treier**, Unemployment in Reforming Countries: Causes, Fiscal Impacts and the Success of Transformation, July 1999
- 30 Matthias **Wrede**, A Note on Reliefs for Traveling Expenses to Work, July 1999
- 31 Andreas **Billmeier**, The Early Years of Inflation Targeting – Review and Outlook –, August 1999

- 32 Jana **Kremer**, Arbeitslosigkeit und Steuerpolitik, August 1999
- 33 Matthias **Wrede**, Mobility and Reliefs for Traveling Expenses to Work, September 1999
- 34 Heinz-Dieter **Wenzel** (Herausgeber), Aktuelle Fragen der Finanzwissenschaft, February 2000
- 35 Michael **Betten**, Household Size and Household Utility in Intertemporal Choice, April 2000
- 36 Volker **Treier**, Steuerwettbewerb in Mittel- und Osteuropa: Eine Einschätzung anhand der Messung effektiver Grenzsteuersätze, April 2001
- 37 Jörg **Lackenbauer** und Heinz-Dieter **Wenzel**, Zum Stand von Transformations- und EU-Beitrittsprozess in Mittel- und Osteuropa – eine komparative Analyse, May 2001
- 38 Bernd **Hayo** und Matthias **Wrede**, Fiscal Equalisation: Principles and an Application to the European Union, December 2001
- 39 Irena Dh. **Bogdani**, Public Expenditure Planning in Albania, August 2002
- 40 Tineke **Haensgen**, Das Kyoto Protokoll: Eine ökonomische Analyse unter besonderer Berücksichtigung der flexiblen Mechanismen, August 2002
- 41 Arben **Malaj** and Fatmir **Mema**, Strategic Privatisation, its Achievements and Challenges, Januar 2003
- 42 Borbála **Szüle** 2003, Inside financial conglomerates, Effects in the Hungarian pension fund market, January 2003
- 43 Heinz-Dieter **Wenzel** und Stefan **Hopp** (Herausgeber), Seminar Volume of the Second European Doctoral Seminar (EDS), February 2003
- 44 Nicolas Henrik **Schwarze**, Ein Modell für Finanzkrisen bei Moral Hazard und Überinvestition, April 2003
- 45 Holger **Kächelein**, Fiscal Competition on the Local Level – May commuting be a source of fiscal crises?, April 2003
- 46 Sibylle **Wagener**, Fiskalischer Föderalismus – Theoretische Grundlagen und Studie Ungarns, August 2003
- 47 Stefan **Hopp**, J.-B. Say's 1803 *Treatise* and the Coordination of Economic Activity, July 2004