

# Joep Lustenhouwer

## Personal Data

Date of Birth: August 14, 1989  
Gender: Male  
Nationality: Dutch  
E-mail: joep.lustenhouwer@uni-bamberg.de

## Research Interests

Macroeconomics, Bounded rationality, Monetary policy, Fiscal policy, Experimental macroeconomics

## Current Appointment

2017 - present Postdoctoral Fellow, Otto-Friedrich-Universität Bamberg

## Education

2014 - 2017	<b>PhD in Economics (Cum Laude, highest Dutch distinction)</b> University of Amsterdam Thesis Supervisor: Prof. Cars Hommes Thesis Title: " <i>Monetary and Fiscal Policy under Bounded Rationality and Heterogeneous Expectations</i> "
2013 - 2014	<b>2nd Year of Research Master Economics and Econometrics</b> Tinbergen Institute GPA over two years: 8.3 (out of 10) Specializations: Macroeconomics and Behavioral Economics
2012 - 2013	<b>Fast Track for 1st Year of Research Master Economics and Econometrics</b> Tinbergen Institute
2012 - 2013	<b>MSc Econometrics (Cum Laude)</b> University of Amsterdam GPA: 8.25 (out of 10)
2008 - 2012	<b>BA Econometrics and Operations Research (Cum Laude)</b> University of Amsterdam GPA: 8.45 (out of 10) Specialization: Econometrics Electives in: Macroeconomics, Psychology, Operations Research

## Awards and Grants

2015	H.K. Nieuwenhuis Thesis award 2014 for best MSc thesis, Faculty Economics and Business, University of Amsterdam
2014 - 2017	NWO (Netherlands Organisation for Scientific Research) Research Talent grant for PhD research
2013 - 2014	Full scholarship conditional on performance, granted by Tinbergen Institute

## **Teaching Experience and Training**

2018	<b>Advanced Macroeconomics</b> at University of Bamberg, Lecturer
2018	<b>Programming in Python for Macroeconomists</b> at University of Bamberg, Lecturer
2017 - 2018	Seminar course: <b>Advanced Topics in Behavioral Macroeconomics</b> at University of Bamberg
2017	<b>Mathematics IV</b> , Course in Bachelor in Econometrics at University of Amsterdam, Teaching Assistant
2014 - 2016	<b>Mathematics</b> , Course in Bachelor in Economics at University of Amsterdam, Teaching Assistant
2016	Attended a 5 week Didactic course for PhD students (15 contact hours)
2012 - 2013	Individual Tutoring in Mathematics and Statistics

## **Conference Presentations**

2018	23 <sup>th</sup> Spring meeting of young economists in Mallorca; 23 <sup>rd</sup> CEF conference in Milan; International Congress on Economics in Quito; First Behavioral Macroeconomics Workshop in Bamberg; BEAM-ABEE Workshop in Amsterdam;
2017	21 <sup>th</sup> Conference of the Forum for Macroeconomics and Macroeconomic Policies (FMM) in Berlin; 32 <sup>th</sup> Annual Congress of the European Economic Association (EEA) in Lisbon; 70 <sup>th</sup> European Meeting of the Econometric Society (ESEM) in Lisbon; 23 <sup>rd</sup> CEF conference in New York;
2016	4 <sup>th</sup> annual GENED meeting in Bamberg; Learning conference: <i>Expectations in Dynamic Macroeconomic Models</i> at Dutch National Bank (poster); 22 <sup>nd</sup> CEF conference in Bordeaux; second Annual Dissemination Conference of MACFINROBODS at National Bank of Belgium (poster); QED jamboree in Amsterdam; 21 <sup>th</sup> Spring meeting of young economists in Lisbon;
2015	Second Annual workshop of MACFINROBODS in Barcelona (poster); Behavioral Macro workshop in Amsterdam; 30 <sup>th</sup> Annual Congress of the European Economic Association (EEA) in Mannheim; first Annual Dissemination Conference of MACFINROBODS at National Bank of France (poster); QED Jamboree in Cardiff.

## **Invited Seminars**

2018	Free University Berlin
2017	Humboldt-University of Berlin and Technical University Berlin (Schumpeter Seminar)

## **Experiences**

02/2011 - 02/2012	<b>Secretary of the board of study association VSAE</b> Responsible for the day to day management of the study association for Econometrics and Actuarial Sciences and the organization of e.g. conferences and career days (40 hours per week).
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## **Professional Services**

Referee	Journal of Economic Behavior & Organization; Macroeconomic Dynamics; Journal of Economic Interaction and Coordination.
Discussion	Learning conference: <i>Expectations in Dynamic Macroeconomic Models</i> at Dutch National Bank; Conference: <i>Learning, Heterogeneity and Networks in Macroeconomic Models</i> at University of Surrey.

## **Publications**

***Inflation Targeting and Liquidity Traps under Endogenous Credibility*** (with Cars Hommes)

"Accepted with minor revisions" at *Journal of Monetary Economics*

We derive policy implications for an inflation targeting central bank, whose credibility is endogenous and depends on its past ability to achieve its targets. We do this in a New Keynesian framework with heterogeneous agents and boundedly rational expectations. We find that the region of allowed policy parameters is strictly larger under heterogeneous expectations than under rational expectations. Furthermore, with theoretically optimal monetary policy, global stability of the fundamental steady state can be achieved, implying that the system always converges to the targets of the central bank. This result however no longer holds when the zero lower bound (ZLB) on the nominal interest rate is accounted for. Self-fulfilling deflationary spirals can then occur, even under optimal policy. The occurrence of these liquidity traps crucially depends on the credibility of the central bank. Deflationary spirals can be prevented with a high inflation target, aggressive monetary easing, or a more aggressive response to inflation.

**Fiscal Consolidations and Heterogeneous Expectations** (with Cars Hommes and Kostas Mavromatis)

*Journal of Economic Dynamics and Control, 2018*

We analyze fiscal consolidations using a New Keynesian model where agents have heterogeneous expectations and are uncertain about the composition of consolidations. We look at spending-based and tax-based consolidations and analyze their effects separately. We find that the effects of consolidations and the output multipliers are sensitive to heterogeneity in expectations before and after implementation of a specific fiscal plan. Depending on the beliefs about the type of consolidation prior to implementation, we show that heterogeneity in expectations may lead to optimism in the economy improving thus the performance of a specific fiscal plan, or can work towards the opposite direction leading to pessimism, amplifying the contractionary effects of the consolidation. Interestingly, we find that wrong beliefs about the composition of fiscal consolidation may improve or harm the effectiveness of the latter, depending on the degree of heterogeneity.

**Working Papers**

**Managing Unanchored, Heterogeneous Expectations and Liquidity Traps**  
(with Cars Hommes, revise and resubmit at *Journal of Economic Dynamics and Control*)

We study the possibility of (almost) self-fulfilling waves of optimism and pessimism and self-fulfilling liquidity traps in a New Keynesian model with a continuum of heterogeneous expectations. In particular, all agents choose, based on past forecasting performance, expectation values out of a distribution around the targets of the central bank. This framework allows us to explicitly model the "anchoring" of expectations as the variance of this distribution of possible expectation values. We find that when the zero lower bound on the nominal interest rate is not binding, adequate monetary policy can prevent waves of optimism and pessimism and exclude near unit root dynamics, even when expectations are unanchored. However, as shocks bring the economy to a situation with a binding zero lower bound, there is a danger of a long lasting self-fulfilling liquidity trap that can take the form of a deflationary spiral. This can be prevented if expectations are strongly enough anchored to the targets, or if the inflation target is high enough.

**Fiscal Stimulus in an Expectation Driven Liquidity Trap**  
(Submitted at *the Economics Journal*)

I study expectation driven liquidity traps in a model where agents have finite planning horizons and heterogeneous expectations. There are backward-looking agents, who base their expectations on past observations, and forward-looking agents, who observe the expectations of backward-looking agents, and use model equations within their planning horizon to make forecasts. Expectation driven liquidity traps arise when the presence of backward-looking agents leads to a wave of pessimism after a single, non-persistent, negative preference shock. I find that fiscal stimulus in the form of an increase in government spending or a cut in consumption taxes can be very effective in mitigating the liquidity trap. Moreover, an adequate response of these measures is found to always be able to prevent deflationary spirals, that can arise when

there is a large fraction of backward-looking agents with a longer planning horizon. A positive inflation target furthermore reduces the fiscal stimulus required to resolve a liquidity trap for any given size of the negative preference shock. In contrast, fiscal stimulus in the form of labor tax cuts is deflationary and hardly effective in mitigating liquidity traps.

**Fiscal Consolidations and Finite Planning Horizons** (with Kostas Mavromatis, submitted at *Journal of Money Credit and Banking*)

We analyze fiscal consolidations using a New Keynesian model where agents have finite planning horizons. Both consumers and firms are infinitely lived, but only plan and form expectations up to  $T$  periods into the future. Agents' planning horizons play an important role in determining how spending cuts or tax increases affect output and inflation. We find that for both short and long planning horizons, tax based consolidations reduce debt faster than spending based consolidations. However, the relative performance of spending based consolidations is improved when monetary policy is more aggressive, or when there is less debt in the economy.

**Unanchored Expectations: Self-reinforcing Liquidity Traps and Multiple Steady States**

(Submitted at *Macroeconomic Dynamics*)

We study a New Keynesian model with bounded rationality, where agents choose their expectations heterogeneously from a discrete choice set. The range of their set of possible expectation values can be interpreted as the anchoring of expectations. In the model, multiple locally stable steady states can arise that reflect coordination on particular expectation values. Moreover, bad shocks to the economy can trigger a self-reinforcing wave of pessimism, where the zero lower bound on the nominal interest rate becomes binding, and agents coordinate on a locally stable liquidity trap steady state. When we let the anchoring of expectations evolve endogenously, it turns out that the anchoring of expectations at the time the bad shocks hit the economy is crucial in determining whether the economy can recover from the liquidity trap. Finally, we find that a higher inflation target makes it less likely that self-reinforcing liquidity traps arise.

**The Stabilizing Role of Forward Guidance: A Macro Experiment**

(with Steffen Ahrens and Michele Tettamanzi, submitted)

Expectations are among the main driving forces for economic dynamics. Therefore, managing expectations has become a primary objective for monetary policy seeking to stabilize the business cycle. In this paper, we study if central banks can manage market expectations by means of forward guidance in a New Keynesian learning-to-forecast experiment. Forward guidance takes the form of inflation forecasts that are published each period by the central bank. Subjects in the experiment observe this forecast along with the historic development of the economy and subsequently have to submit their own inflation forecasts. In this context, we find that central banks can significantly manage market expectations through forward guidance and that this management strongly supports monetary policy in stabilizing the economy. Furthermore, we find that forward guidance drastically reduces the probability of a deflationary spiral after a strong negative shock to the economy.

**Research in progress**

"Heterogeneous Expectations: Policy Coordination and Inequality" (joint with Tim Hagenhoff)

"A Bayesian Estimation of Planning horizons" (joint with Kostas Mavromatis, Giorgio Motta and Mike Tsionas)

"Planning Horizons and Fiscal Shocks: Evidence from the Lab" (joint with Isabelle Salle)

"Wealth Effects of Expected Sovereign Default when Agents have Finite Planning Horizons" (joint with Dennis Bonam)

"Are Some People More Equal than Others? Experimental Evidence on Group Identity and Income Inequality" (joint with Tomasz Makarewicz, Juan Carlos Peña and Christian Proaño )