

# LUKAS HACK

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ETH Zürich ◇ Chair of Applied Macroeconomics

Leonhardstrasse 21 ◇ 8092 Zürich ◇ Switzerland

## RESEARCH FIELDS

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**Macroeconomics, Monetary Economics, Public Finance**

## EMPLOYMENT

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ETH Zürich - Post-Doctoral Researcher

*Aug 2024 - present*

## EDUCATION

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University of Mannheim - Economics, Ph.D.

*Sep 2019 - July 2024*

University of Vienna - Economics, M.Sc.

*Oct 2018 - Oct 2019*

University of Vienna - Economics, B.Sc.

*Oct 2016 - Jul 2018*

DHBW Ravensburg - Business & Hotel Management, B.A.

*Oct 2013 - Sep 2016*

## RESEARCH

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**Identification of Systematic Monetary Policy**, *joint with Klodiana Istrefi (Banque de France) and Matthias Meier (U Mannheim)*, revise and resubmit at ***Review of Economic Studies***

We propose a novel identification design to estimate the effects of systematic monetary policy on the propagation of macroeconomic shocks. The design combines (i) a time-varying measure of systematic monetary policy based on the historical composition of hawks and doves in the FOMC with (ii) an instrument that leverages the FOMC rotation of voting rights. We apply our design to government spending shocks. We find that a dovish FOMC supports the expansionary effects of higher spending by delaying policy rate hikes, leading to large fiscal multipliers. GDP does not expand when the FOMC is hawkish, but inflation expectations are contained.

**The Systematic Origins of Monetary Policy Shocks**, *joint with Klodiana Istrefi (Banque de France) and Matthias Meier (U Mannheim)*

Conventional strategies to identify monetary policy shocks rest on the implicit assumption that systematic monetary policy is constant over time. We formally show that these strategies do not isolate monetary policy shocks in an environment with time-varying systematic monetary policy. Instead, they are contaminated by systematic monetary policy and macroeconomic variables, leading to contamination bias in estimated impulse responses. Empirically, we show that Romer and Romer (2004) monetary policy shocks are indeed predictable by fluctuations in systematic monetary policy. Instead, we propose a new monetary policy shock that is orthogonal to systematic monetary policy. Our shock suggests U.S. monetary policy has shorter lags and stronger effects on inflation and output.

### **Progressive Income Taxation and Inflation: The Macroeconomic Effects of Bracket Creep**

Under progressive taxation, inflation drives up tax rates if the schedule is not adjusted accordingly, leading to bracket creep effects. I propose a non-parametric decomposition of changes in tax rates to measure the empirical importance of bracket creep. Studying German administrative tax records, I show that bracket creep effects are of similar importance as discretionary tax changes. Bracket creep has decreased over time due to institutional changes, but the 2022 inflation surge led to a resurgence with sizeable bracket creep effects. Theoretically, I characterize the effects on labor supply and compute a theory-consistent measure of bracket creep — the indexation gap — that is used to discipline a New Keynesian model with incomplete markets. The model is used to study the propagation of inflationary shocks that partly propagate through bracket creep.

**Managerial Decision-Making and Monetary Policy**, *joint with Davud Rostam-Afschar (U Mannheim)*

We construct the *Daily Business Database* measuring intended managerial decisions and managerial beliefs based on German firm surveys at daily frequency. Using this data, we study how (fast) managerial decision-making is influenced by monetary policy during the recent inflation surge. The key outcome is a daily pricing intention index that has predictive power for future inflation. The index declines strongly and significantly within three days after a monetary policy shock that raises short-term interest rates, but not after forward guidance shocks that raise future interest rates. Intended R&D investment falls persistently in response to the short-term interest rate shock, consistent with long-run scarring effects of monetary policy. Finally, we study firm heterogeneity and managerial beliefs.

**Transmission of Monetary Policy in a Currency Area with Heterogeneous Households,**  
*joint with Hannes Tuieling (U Mannheim)*

Monetary policy has heterogeneous effects on real GDP and inflation across Euro Area member states. To investigate the underlying drivers we construct a two-region currency union model with idiosyncratic risk and cross-region household heterogeneity. The model matches household-level heterogeneity in homeownership rates, mortgage types, and the prevalence of hand-to-mouth households. These features account for 70% of the cross-region differences in GDP responses to monetary policy shocks. This is primarily driven by the interplay of demand amplification through hand-to-mouth households, and demand dampening through trade effects.

**WORKSHOPS AND CONFERENCES**

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- 2024 NBER Monetary Economics Program Spring Meeting (Chicago), Barcelona Summer Forum (Barcelona), Workshop in Empirical Macroeconomics (Innsbruck), ZEW Public Finance conference (Mannheim, scheduled), IAAE Greece 2024 (Thessaloniki), 4<sup>th</sup> Sailing the Macro Workshop (Siracusa, scheduled), Pavia Macro Forum 2024 (Pavia, scheduled) Verein für Socialpolitik Jahrestagung (Berlin, scheduled)
- 2023 Midwest Macroeconomics Meetings (Clemson), Macro Seminar at TSE (Toulouse), RGS Doctoral Conference (Bochum), NBER Heterogeneous-Agent Macro Workshop (Boston), ifo GETTSIM Workshop (Munich), 54<sup>th</sup> Annual Conference of the Money, Macro and Finance Society (Portsmouth), CRC TR2 224 Retreat (Montabaur), CRC TR 224 Young Researcher Workshop (Montabaur)
- 2022 North America Summer Meeting of the ES (Miami), 4<sup>th</sup> QMUL Economics and Finance Workshop for PhD & Post-doctoral Students (London), 2<sup>nd</sup> Sailing the Macro Workshop (Ventotene), Macro Seminar at University Carlos III (Madrid), NSEF PhD and Postdoc Workshop (Naples), 9<sup>th</sup> CRC TR 224 Young Researchers Workshop (Bonn), Mannheim-Frankfurt PhD Workshop (Frankfurt), PhD EVS (online)

**TEACHING**

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- DHBW Ravensburg - Economic policy (B.A.), Instructor *Spring 2018 - Present*
- University of Mannheim - Public Finance (B.Sc.), TA for Eckhard Janeba *Spring 2022 - 2024*
- HWG Ludwigshafen - Economic policy (B.A.), Instructor *Spring 2021*
- University of Mannheim - Intern. Macroeconomics (B.Sc.), TA for Andreas Gulyas *Fall 2020*

**RESEARCH ASSISTANCE**

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- University of Mannheim - RA for Matthias Meier *2021*
- University of Vienna - RA for Vienna Center for Experimental Economics *2017-2019*

## SCHOLARSHIPS AND PROFESSIONAL ACTIVITIES

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Refereeing: Oxford Economic Papers, EAYE Annual Meeting

Member of CRC-TR 224 Bonn/Mannheim (C05), German Research Foundation (DFG) *2022 - Present*

Coordinator of the ENTER network (organization of more than 20 invited seminars) *2021- 2024*

Ph.D. scholarship, German Research Foundation (DFG) *2019-2021*

Appreciation award for the best master degree, Federal Ministry of Education (Austria) *2020*

## OTHER

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Software: Matlab, Stata, Python, R, VBA, SQL

Citizenship: German

## REFERENCES

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