

# 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, Macroeconomic History, Public Finance**

## EMPLOYMENT

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ETH Zürich - Post-Doctoral Researcher *Aug 2024 - present*

University of Mannheim - 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*

## WORKING PAPERS

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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.

**Which Macroeconomic News Matter for Price-Setting?**, *joint with Davud Rostam-Afschar (U Mannheim)*

We examine how macroeconomic news affects firms' extensive-margin price-setting plans in a survey that we rolled out with randomized daily invitations. These plans predict future realized inflation. Using a high-frequency event study framework, we find that inflation and employment surprises imply significant and sizable revisions in firms' pricing plans. There is a limited role for news about the trade balance, but no significant role for other commonly studied data releases, e.g., industrial production. We also study news coverage and agents' news search behavior, finding that the intensive-margin response of media coverage and news search may partly drive our main results.

## **Understanding Firm Dynamics with Daily Data**, *joint with Davud Rostam-Afschar (U Mannheim)*

How do firms' plans and expectations respond to macroeconomic shocks? We run a daily survey of German firms over the past three years. We randomize daily invitations, delivering a stable composition of firms. This allows constructing daily time series and estimating dynamic aggregate causal effects. These estimates capture firms' responsiveness conditional on the recent economic environment, making them informative for policymakers. We examine oil supply, monetary policy, and forward guidance shocks, finding that firms' plans, especially price-setting plans, respond within days to oil supply and monetary policy shocks but not to forward guidance. Finally, we investigate firm heterogeneity and expectations.

## **Progressive Income Taxation and Inflation: The Macroeconomic Effects of Bracket Creep**, *received the 2024 Reinhard Selten Award*

Under nominal progressive taxation, inflation drives up tax rates if the schedule is not adjusted, leading to bracket creep. To isolate bracket creep from other sources of tax rate changes, I propose a non-parametric decomposition approach. Applying the decomposition to German administrative tax records, I find sizeable bracket creep episodes. While the overall importance of bracket creep has decreased over time due to institutional changes, the post-Covid inflation surge led to a resurgence. Theoretically, I show how bracket creep affects labor supply decisions in a partial equilibrium framework and estimate a theory-consistent measure of bracket creep, the indexation gap, which is used to discipline a New Keynesian model with incomplete markets. The model predicts that bracket creep leads to a transitory steepening of the Phillips curve arising endogenously in response to a monetary shock. Such a steepening may alleviate the output costs of monetary disinflation.

## **Loanly Governments: Sovereign Debt in the Wake of Credit Rating Downgrades**, *joint with Lukas Diebold (U Carlos III Madrid)*

This paper studies the funding structure of governments, examining financing beyond traditional sovereign bond markets. We document significant heterogeneity in the use of bonds and loans, and in the composition of foreign and domestic creditors. We relate this heterogeneity to sovereign credit ratings and present three key findings. First, sovereigns adjust the composition of financing instruments when credit ratings change. Second, not all rating changes and countries are alike. We find strong evidence for substitution from bonds to loans only when (i) credit ratings decrease for (ii) countries that have been rated sufficiently low. Third, the substitution toward loans is primarily financed through the domestic financial sector via foreign funds, and associated with a subsequent increase in financial distress, raising financial stability concerns. Finally, we show that the documented loan-bond substitution is also accompanied by a reduction in real GDP, primarily driven by a decline in investment, suggesting real adverse consequences.

## **WORK IN PROGRESS**

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### **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.

## **OTHER PUBLICATIONS**

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**Ist die Schuldenbremse eine Investitionsbremse?**, *joint with Eckhard Janeba (U Mannheim)*, *Perspektiven der Wirtschaftspolitik*, 2025 (policy article in German; translation: "Is the debt brake holding back public investment?")

**Auswirkungen des Verfassungsgerichtsurteils auf die öffentlichen Investitionen**, *joint with Eckhard Janeba (U Mannheim)*, *Wirtschaftsdienst* 105(5), p.349-353, 2025 (policy article in German; trans-

lation: “Impacts of the Constitutional Court ruling on public investments”)

**Die Steuerbelastung durch Inflation**, *FAZ Guest Article*, 2024 (newspaper article in German; translation “The tax burden through inflation”)

**Hawkish or dovish central bankers: does it matter for fiscal shocks?**, joint with Klodiana Istrefi (Banque de France) and Matthias Meier (U Mannheim), *SUERF Policy Brief 334*, 2024

**Hawkish or dovish central bankers: Different flocks and fiscal shocks**, joint with Klodiana Istrefi (Banque de France) and Matthias Meier (U Mannheim), *VoxEU Column*, 2023

## SEMINARS AND CONFERENCES

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- 2025 ifo Center for Macroeconomics and Surveys (Munich), 32nd Symposium of the SNDE (San Antonio), Bundesbank Spring Conference on Expectations of Households and Firms (Eltville), St. Gallen University, Tübingen University, Hitotsubashi University and Kyoto University (online), Public Finance Workshop (Mannheim, scheduled), SSES Annual Congress (Zurich, scheduled)
- 2024 NBER Monetary Economics Program Spring Meeting (Chicago), CEPR Annual Monetary Economics and Fluctuations Symposium (Gerzensee), Barcelona Summer Forum (Barcelona), ZEW Public Finance conference (Mannheim), IAAE Greece 2024 (Thessaloniki), 4<sup>th</sup> Sailing the Macro Workshop (Siracusa), Pavia Macro Forum 2024 (Pavia), Workshop in Empirical Macroeconomics (Innsbruck), Verein für Socialpolitik Jahrestagung (Berlin), 27<sup>th</sup> Annual DNB Research Conference (Amsterdam), CRC TR 224 Retreat (Frankfurt)
- 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 (Venetotene), 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)

## CONFERENCE DISCUSSIONS

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Are We Fragmented Yet? Measuring Geopolitical Fragmentation and Its Causal Effects, by Jesús Fernández-Villaverde, Tomohide Mineyama, and Dongho Song, 27th Annual DNB Research Conference, 2024

The Role of Tax Preparers in Individual Tax Optimization, by Hadar Avivi, Katarzyna Bilicka, Jakob Brounstein, Felipe Lobel, and Alexander Yuskavage, ZEW Public Finance Conference, 2024

Monetary Policy, Investment and Business Cycles in the Data Economy, by Carl-Christian Groh and Oliver Pfäuti, Bonn-Mannheim CRC Retreat, 2023

Global Spillover of Asset Price Booms: Who Benefits from the End of Privilege?, by Timothy Meyer, 16th RGS Doctoral Conference in Economics, 2023

Term structure of dividends: What can we learn about Monetary Policy?, by Leandro Gomes and Marcelo Sena, 1st NSEF PhD and Postdoc Workshop, 2022

Identifying Monetary Policy Shocks Through External Variable Constraints, by Francesco Fusari, 4th QMUL Economics and Finance Workshop, 2022

## SHORT ACADEMIC VISITS

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University Carlos III in Madrid (scheduled)	<i>December 2025 - January 2026</i>
University Pompeu Fabra in Barcelona (scheduled)	<i>November 2025</i>
University of Texas in Austin	<i>March 2025</i>

## TEACHING

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ETH Zürich - International Monetary Economics (M.Sc.), Instructor	<i>Spring 2025 - Present</i>
DHBW Ravensburg - Economic policy (B.A.), Instructor	<i>Spring 2018 - Present</i>
University of Mannheim - Public Finance (B.Sc.), TA for Eckhard Janeba	<i>Spring 2022 - 2024</i>
HWG Ludwigshafen - Economic policy (B.A.), Instructor	<i>Spring 2021</i>
University of Mannheim - Interm. Macroeconomics (B.Sc.), TA for Andreas Gulyas	<i>Fall 2020</i>

## SCHOLARSHIPS AND PROFESSIONAL ACTIVITIES

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Refereeing: European Economic Review, Econometrics and Statistics, Oxford Economic Papers, EAYE Annual Meeting	
German Thesis Award Finalist, Körber Foundation	<i>2025</i>
Reinhard Selten Award, Verein für Socialpolitik	<i>2024</i>
Member of CRC-TR 224 Bonn/Mannheim (C05), German Research Foundation (DFG)	<i>2022 - 2024</i>
Coordinator of the ENTER network (organization of more than 20 invited seminars)	<i>2021 - 2024</i>
Ph.D. scholarship, German Research Foundation (DFG)	<i>2019 - 2021</i>
Appreciation Award for Outstanding Master Degree, Federal Ministry of Education (Austria)	<i>2020</i>

## OTHER

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Contributed Code: Stata package *Poor Men's Parallel*

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

Personal: German, married, and one son

## REFERENCES

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Prof. Eckhard Janeba  
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