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Philipp Hochmuth

Contact information
philipp.hochmuth@oenb.at
https://phhoc.github.io

Personal information
Citizenship: Austria
Date of Birth: September 17, 1992

Current Position

Oesterreichische Nationalbank, Vienna — Jul. 2024 – Present
Economist in the Monetary Policy Section

Education

Stockholm University, Institute for International Economic Studies (IIES) — Sep. 2018 – Jun. 2024
Ph.D. in Economics

Stockholm University — Sep. 2015 – Jun. 2017
MSc. in Economics

Johannes Kepler University, Linz/Austria — Oct. 2012 – Jul. 2015
BSc. in Business and Economics

Research interests

Macroeconomics, Inflation, Nonhomothetic Preferences, Monetary Economics, Labor economics, Entrepreneurship

Teaching experience

Monetary Economics, Ph.D. level — Spring 2022
Stockholm University, teaching assistant for Daria Finocchiaro, Andreas Westermark (both Riksbank).

Econometrics II, Ph.D. level — Spring 2020 and Spring 2021
Stockholm University, teaching assistant for Konrad Burchardi, Arash Nekoei and David Schönholzer.

Macroecnomics I, Ph.D. level — Spring 2020
Stockholm University, teaching assistant for Alexandre Kohlhas.

Labour Economics and Wage Setting Theory, Masters level — Spring 2017
Stockholm University, teaching assistant for Lars Calmfors.

Research experience and other employment

Institute for International Economic Studies, Stockholm — Jul. 2018 – Aug. 2020
Research assistant to Timo Boppart, Per Krusell and Kurt Mitman.

European Central Bank, Directorate General Research, Frankfurt — Aug. 2017 – Jun. 2018
Research assistant (traineeship) supporting the senior management Oreste Tristani, Philipp Hartmann and Luc Laeven.

ifo Economic Research Institute, Munich — Summer 2016
Summer intern supporting Bastian Schulz.

Johannes Kepler University, Linz/Austria — Jan. – May 2015
Research assistant to René Böheim and Thomas Leoni.

Professional Activities

Referee for *Empirica: Journal of European Economics* — 2023

Organizer of the "Macro Group", internal seminar series at the IIES — Sep. 2020 – Jun. 2022

Skills

Programming: Python, R, Matlab, Stata.
Languages: German, English, Swedish.

Presentations

Technical University Vienna 2025

Uppsala University, University of Exeter, Sveriges Riksbank, Oesterreichische Nationalbank, EALE Conference in Bergen, Vienna Macroeconomic Workshop (Vienna Macro Café), Macro Breakfast at the University of Vienna, Econometric Society Winter Meeting, 6th Winter Meeting of the NOeG (Austrian Economic Association) 2024

2nd PhD Workshop in Money and Finance (Sveriges Riksbank), PSE-CEPR Policy Forum, 5th Winter Meeting of the NOeG (Austrian Economic Association) 2023

Swedish Conference in Economics, Annual Meeting of the NOeG (Austrian Economic Association), 14th Nordic Summer Symposium in Macroeconomics 2022

Stockholm-Uppsala Doctoral Student Workshop in Economics 2021, 2023

Research papers

Declining Hours Worked Among Entrepreneurs

In this paper I show that, over the last 35 years, hours worked by entrepreneurs have fallen substantially: by five hours more than for workers. This decline accounts for the bulk of the fall in total hours worked and is present in all available sub-groups (gender, age, education, number of children, occupation or industry). It is robust to adjusting for compositional effects and occurred without noticeable changes in the relative hourly income of entrepreneurs. The decline originates from the top of the hours distribution: the share of entrepreneurs working many hours has dropped significantly. I interpret these facts using a Roy model of occupational choice, augmented with an intensive labor supply margin. The model allows the marginal return of working an additional hour to depend on the level of hours. I estimate the model at two points in time and find that a fall in the relative marginal return at higher hours worked is key for explaining the drop in hours and the drop in the share of entrepreneurs. I show that changes in the market structure of the goods or services that entrepreneurs sell can account for this.

A Nonhomothetic Price Index and Inflation Heterogeneity

(with Markus Pettersson and Christoffer Weissert)

We derive a nonhomothetic generalization of all superlative price indices and document cost-of-living inequality in the United States. When necessities and luxuries are separable in the expenditure function, this generalization eliminates the need to estimate a complete demand model. Using CEX-CPI data from 1995 to 2020, we find no differences in average inflation rates across the expenditure distribution, but 2.5 times higher inflation volatility for the bottom decile than the top decile, stemming from a larger exposure to food, gasoline, and utilities. Our analysis challenges inequality measurements using group-specific homothetic price indices and suggests an income-effect bias in these estimations.

A Distributional PCE Price Index From Aggregate Data

(with Markus Pettersson and Christoffer Weissert)

This paper proposes a method to measure individual and aggregate changes in the cost of living when consumer behavior is nonhomothetic and microdata on consumption expenditures are not available. Aggregate prices and expenditure shares together with a single cross-sectional distribution of expenditures are sufficient to create a distribution of nonhomothetic cost-of-living indices with this approach. The cost-of-living indices derive from PIGL preferences, generalize the Törnqvist price index, and only contain one unknown parameter. Because PIGL preferences aggregate consistently, this parameter can be identified from aggregate data. Using US Personal Consumption Expenditure (PCE) data, we apply the method to obtain a nonhomothetic PCE price index covering 71 product groups for the period 1959 to 2023. This index reveals a 0.37 percentage point gap in average annual inflation rates between the poorest and richest ten percent since 1959 and a 1.8 percentage point gap throughout 2022, thus suggesting that poorer households are hit harder both in the long run and in the recent inflation surge.

Distributional Consequences of Becoming Climate-Neutral

(with Per Krusell and Kurt Mitman)

The EU has embarked on an ambitious path toward climate neutrality. How difficult will this transition be for the population as a whole and different subsets of consumers? This paper investigates this question using a dynamic general equilibrium model that captures a key feature of energy consumption: the relative energy content in one's consumption basket falls significantly as a function of one's relative income. Thus, poorer consumers are expected to be hit harder by the higher energy prices that we anticipate over the next few decades. In the model, energy—a complementary input to capital and labor—can be produced either using fossil fuel or a "green" technology. We represent the EU policy in terms of a tax on fossil fuel and show that the European Commission's Fit-for-55 package implies a 168% tax on the fossil-based technology. The output losses from this tax are substantial, and GDP is 9.3% lower in the new steady state. The burden falls primarily on the poor agent who is 50% more worse off than the rich agent. The output losses can be compensated for if the economy achieves a 1.49% annual increase in energy efficiency as outlined in the Fit-for-55 package.

Getting Real About Wages: A Nonhomothetic Wage Deflator

(with Saman Darougheh, Markus Pettersson and Márcia Silva-Pereira)

Conventional real wages—nominal wages divided by a consumption deflator—are biased from a welfare perspective when households value leisure and exhibit nonhomothetic consumption behavior. We derive a true wage deflator, shown to be a multiplicative adjustment to the consumption deflator, that can be estimated nonparametrically using cross-sectional data. Applying our framework to US data from 1984 to 2019, we find that standard measures understate real wage growth by 8–36 percent and welfare growth by 5–17 percent across the income distribution. Our deflator does not alter the compression of the wage distribution during the recent high-inflation period, however.