

# Philipp Hochmuth

## Contact information

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<https://phhoc.github.io>

## Personal information

CITIZENSHIP: Austria  
 DATE OF BIRTH: September 17, 1992

## CURRENT POSITION

**Oesterreichische Nationalbank**, Vienna  
 Economist in the Monetary Policy Section

Jul. 2024 – Present

## EDUCATION

<b>Stockholm University</b> , Institute for International Economic Studies (IIES)	Sep. 2018 – Jun. 2024
Ph.D. in ECONOMICS	
<b>Stockholm University</b>	Sep. 2015 – Jun. 2017
MSc. in ECONOMICS	
<b>Johannes Kepler University</b> , Linz/Austria	Oct. 2012 – Jul. 2015
BSc. in BUSINESS AND ECONOMICS	

## RESEARCH INTERESTS

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

## TEACHING EXPERIENCE

<b>Monetary Economics</b> , Ph.D. level	Spring 2022
Stockholm University, teaching assistant for Daria Finocchiaro, Andreas Westermark (both Riksbank).	
<b>Econometrics II</b> , Ph.D. level	Spring 2020 and Spring 2021
Stockholm University, teaching assistant for Konrad Burchardi, Arash Nekoei and David Schönholzer.	
<b>Macroeconomics I</b> , Ph.D. level	Spring 2020
Stockholm University, teaching assistant for Alexandre Kohlhas.	
<b>Labour Economics and Wage Setting Theory</b> , Masters level	Spring 2017
Stockholm University, teaching assistant for Lars Calmfors.	

## RESEARCH EXPERIENCE AND OTHER EMPLOYMENT

<b>Institute for International Economic Studies</b> , Stockholm	Jul. 2018 – Aug. 2020
Research assistant to Timo Boppert, Per Krusell and Kurt Mitman.	
<b>European Central Bank, Directorate General Research</b> , Frankfurt	Aug. 2017 – Jun. 2018
Research assistant (traineeship) supporting the senior management Oreste Tristani, Philipp Hartmann and Luc Laeven.	
<b>ifo Economic Research Institute</b> , Munich	Summer 2016
Summer intern supporting Bastian Schulz.	
<b>Johannes Kepler University</b> , Linz/Austria	Jan. – May 2015
Research assistant to René Böheim and Thomas Leoni.	

## PROFESSIONAL ACTIVITIES

<b>Referee</b> for <i>Empirica: Journal of European Economics</i>	2023
<b>Organizer</b> 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

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Technical University Vienna, Annual Meeting of the NOeG (Austrian Economic Association), Second Annual Czech National Bank Conference, VIII Workshop of the Spanish Macroeconomic Association, European Winter Meeting of the Econometric Society (EWMES) 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, European Winter Meeting of the Econometric Society (EWMES), 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

## PUBLICATIONS

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### A Distributional PCE Price Index From Aggregate Data

(with Markus Pettersson and Christoffer Weissert)

*Review of Income and Wealth*, 2025, vol. 71(4), pp. 1–18.

This article 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 expenditure distribution are sufficient to create a distribution of nonhomothetic cost-of-living indices. The cost-of-living indices nest the homothetic Törnqvist price index as a limit case and only contain one unknown parameter, which is identified from macro data without aggregation bias. Using US Personal Consumption Expenditure (PCE) data, we construct nonhomothetic PCE price indices covering 71 product groups for the period 1959 to 2023. These indices reveal a 0.41 percentage point gap in annual inflation rates between the poorest and richest ten percent since 1959 and a 1.3 percentage point gap throughout 2022, thus suggesting that poorer households are hit harder both in the long run and in the recent inflation surge.

## RESEARCH PAPERS

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### 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 Cost-of-Living Inequality

(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.

### 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, low-income 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 labour—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 106.4% tax on the fossil-based technology. The output losses from this tax are substantial, and GDP is 6.3% lower in the new steady state. The burden falls primarily on the lowest-income agent who represents the first income quintile and is 47% more worse off than the highest-income agent representing the fifth quintile. The output losses can almost be cut in half if the economy achieves a simultaneous 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.