Enrico Wegner

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enweg.github.io

Last updated July 15, 2024

Research Interests

Time Series Econometrics, Macroeconometrics, Causality, Bayesian Econometrics

Employment

Feb. 2022. - Aug. 2022 **External Consultant to the Trade and Productivity Statistics Unit**
Organisation for Economic Co-operation and Development (OECD)

- Developed trade indicators based on AIS satellite data.

Feb. 2022 - Aug. 2022 **Research Assistant**
School of Business and Economics Maaastricht
Research Assistant to Nalan Basturk

- Conducted research on Bayesian Neural Networks (BNN) in Finance for financial risk and Realised Volatility forecasting.
- Developed a Julia library for BNN research: BayesFlux.jl.
- Developed a *R* library for BNN research: BayesFluxR.

Jul. 2021 - Jan. 2022 **Intern in the Trade and Productivity Statistics Unit**
Organisation for Economic Co-operation and Development (OECD)

- Updated and evaluated the methodology for International Transport and Insurance Cost (ITIC) database.
- Contributed to the update of the Merchandise Trade Price Index database.

Apr. 2021 - Jul. 2021 **Student Assistant**
School of Business and Economics Maastricht
Student Assistant to Ines Wilms

- Improved R library *bigtime*.
- Developed interactive notebooks on VAR models and *bigtime* for teaching.

Oct. 2020 - Apr. 2021 **Teaching Assistant**
School of Business and Economics Maastricht

Education

Feb. 2023 - present **PhD in Econometrics**
School of Business and Economics Maastricht
Research topic: Causal inference in macroeconomics.

Sep. 2020 - Feb. 2023 **MSc. Economic and Financial Research - specialisation Econometrics**
School of Business and Economics Maastricht
Graduated Summa Cum Laude (GPA 9.43/10)

Sep. 2017 - Aug. 2020 **BSc. Econometrics and Operations Research**
School of Business and Economics Maastricht
Graduated Summa Cum Laude (GPA 9.49/10)

Teaching Experience

Tutoring 2023 / 2024 **Probability Theory for BSc. Econometrics and Operations Research**
Average tutor grade across tutorials: 9.27/10

Quantitative Methods 3 for BSc. International Business
Average tutor grade across tutorials: 8.35/10

Macroeconomics for BSc. Econometrics and Operations Research
Average tutor grade across tutorials: 9.15/10

Tutoring 2022 / 2023 **Probability Theory for BSc. Econometrics and Operations Research**
Average tutor grade across tutorials: 9.23/10

Quantitative Business (Statistics) for BSc. Economics and Business Economics
Average tutor grade across tutorials: NaN (not evaluated due to course structure)

Tutoring 2020 / 2021 **Statistics for BSc. Business Analytics**
Average tutor grade across tutorials: 9.73/10

Statistics for BSc. Business Engineering
Average tutor grade across tutorials: 9.37/10

Publications

Recent trends in transport and insurance costs and estimates at disaggregated product level

with Guannan Miao
OECD Statistics Working Papers

Abstract: This paper updates the OECD International Transport and Insurance Cost (ITIC) of Merchandise Trade database, which covers more than 180 countries and partners, and over 1000 products from 1995 to 2020. Transport and insurance costs, also known as CIF-FOB margins, are estimated using a gravity model. A cross-validation procedure is used to evaluate model performance. In addition to describing the methodology, the paper highlights that transport and insurance costs are declining as a fraction of trade value, but this reduction has been flattening out in more recent years. However, an alternative measure, the explicit CIF-FOB margins per kilogramme imported, suggests that transport and insurance costs have been actually rising since 2002. Both CIF-FOB margins and cost per kilogramme imported show increases in 2020 when compared to 2019. This is robust to corrections for compositional changes. The methodology is used to produce the International Transport and Insurance Costs of Merchandise Trade data base and the data is made publically available on .Stat under the International Trade and Balance of Payments heading.

Using unit value indices as proxies for international merchandise trade prices

with Guannan Miao
OECD Statistics Working Papers

Abstract: In light of the need for detailed and timely internationally comparable trade price indices, this paper describes a multi-tiered methodology to mitigate many of the empirical challenges associated with using customs data, to provide more robust estimates of unit value indices (UVIs) by country and product. UVIs are available for both exports and imports, by reporting country and the CPA 2-digit level of classification. Although the approach cannot capture changes in the quality of products nor compositional changes happening at a lower than HS 6-digit classification, the results indicate that at higher levels of aggregation (SITC 1-digit level), estimated UVIs closely follow price changes obtained from other sources. This is observed both for products with significant and rapid quality changes, such as hi-tech products, and for products with a low rate of quality changes, such as commodities, other primary and low-tech goods. Furthermore, products where little quality change occurs over time show similarity between UVIs and price changes from other sources at lower levels of disaggregation. The methodology is used to produce the Merchandise Trade Price Index and the data is made publically available on .Stat under the International Trade and Balance of Payments heading.

Professional Experiences

Refereeing	Journal of Computational and Graphical Statistics, Empirical Economics, Theory and Decision
Presentations	MILE Seminar Maastricht University (2023), European Seminar on Bayesian Econometrics (2022), Maastricht University Econometrics Seminar (2022)
Posters	The Netherlands Econometric Study Group (2023), European Seminar on Bayesian Econometrics (2023)

Bachelor and Master Thesis Supervision	Supervising of theses in BSc. and MSc. Econometrics and Operations Research. Topics included the use of Bayesian Neural Networks for financial risk forecasting, the use of econometric and machine learning techniques for Mixed Marketing Modelling, as well as macroeconometric analysis of monetary policy.

Skills

Software Engineering	• Developed in Python, R, and Julia. • Took projects from research to deployment.
Big Data and Data Bases	• Handled large trade data sets (millions of observations). • Developed PySpark applications and pipelines. • Proficient in SQL.