

Philipp Ludwig

National University of Singapore
Lee Kuan Yew School of Public Policy
469C Bukit Timah Road
Singapore 259772

Research Website: <https://pmludwig.com>
Email Address: p.ludwig@nus.edu.sg
Phone: +65 6516 3750

Research Interests

PRIMARY	International Trade, Environmental Economics
SECONDARY	Spatial Economics, Industrial Organization

Academic Positions

National University of Singapore Assistant Professor Lee Kuan Yew School of Public Policy	2025 - present
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Education

KU Leuven Doctor of Philosophy in Economics	2019 - 2025
Georgetown University Research affiliate	2022 - 2023
Lund University Master in International Economics Research visit: Fudan University (1 month)	2017 - 2018
KU Leuven Master in Economics	2016 - 2017
University of Tübingen Bachelor in International Economics and East Asian Studies Exchange semester: Tongji University (6 months)	2013 - 2016

Work Experience

S&P Global Market Intelligence Data Analytics Apprentice	2022 - 2023
National Bank of Belgium External Researcher	2020 - 2022
International Trade Centre (WTO and UNCTAD) Carlo Schmid Fellow	2018 - 2019

Working papers

Can Unilateral Policy Decarbonize Maritime Trade? (Job Market Paper)

The international shipping sector is a vital part of the global trading system but also a large emitter of carbon dioxide emissions. In the absence of a multilateral carbon policy for the shipping sector, different countries are starting to impose unilateral measures to decarbonize maritime trade. This paper investigates the impact of unilateral policy on global carbon emissions and welfare by introducing heterogeneous transport technology to a quantitative model of trade. The framework emphasizes the role of transport providers which allocate clean and dirty vessels to shipping routes and thereby determine trade flows, transport costs and emissions in the entire network. Unilateral policy interferes with the allocation process by altering the cost of transport or restricting port access to specific vessel types. Using unique data on ship-level fuel consumption and network traffic, I study the impact of upcoming unilateral policy in the EU. I find that carbon taxes can achieve sizeable emission savings as long as the supply of transport services is sufficiently elastic. Emission savings, however, are not large enough to compensate for lower levels of trade, resulting in an aggregate loss of welfare.

Exporters and Their Networks: The role of domestic network linkages in export entry

Revise and resubmit at Review of Economics and Statistics

Joint with Emmanuel Dhyne and Hylke Vandenbussche

In this paper, we move beyond individual firm characteristics to explain export participation and investigate whether firms' domestic network linkages can facilitate export entry. Using rich data on buyer-seller linkages in the Belgian production network, we find that network heterogeneity is a key determinant of the extensive margin of trade. Firms linked to experienced exporters via their business transaction network have a key advantage in accessing foreign markets. Network effects however do not scale with network size. Instead they decrease as the network becomes large. We show that this pattern is closely linked to negative assortative matching in the network formation process. This indicates that small instead of large firms benefit most from network effects on the extensive margin of trade.

Work in progress

Monopoly on the High Seas

Joint with Sharat Ganapati, Woan Foong Wong and Oren Ziv

Trade Dynamics in the Ownership Network

Joint with Jiewei Fang and Honghao Zheng

Taming Behemoths of the Sea: Towards an Optimal Carbon Policy for Maritime Trade

Fellowships and Awards

PhD Fellowship Fundamental Research, Research Foundation Flanders (FWO)	2020 - 2024
Doctoral Scholarship, KU Leuven	2019 - 2020
Carlo Schmid Fellowship, German Academic Scholarship Foundation and DAAD	2018 - 2019
Pinxten Award for Best Paper in Economics, KU Leuven	2018

Teaching Experience

National University of Singapore (Assistant Professor)

Introduction to Coding for Public Policy using R 2025 - present
Master in Public Policy (PP5531)

KU Leuven (Teaching Assistant)

Advanced Topics in International & Development Economics 2019 - 2022
Master of Advanced Studies in Economics (B-KUL-D0M42B)

European Economic Policy Seminar 2019 - 2024
Master of Economic Policy (B-KUL-D0N91A)

Professional Service

REFeree Journal of the European Economic Association, Journal of Political Economy Microeconomics, Environmental and Resource Economics, The World Economy

DISCUSSANT “China’s Manufacturing Pollution, Environmental Regulation and Trade”, by Dan Xie at QMUL Economics and Finance Workshop, 2022

”Tariff Wall Jumping at the China-Vietnam Border”, by Matthew Kahn, Wen-Chi Liao and Siqi Zheng at UEA Meeting 2024

”Power Decarbonization in a Global Energy Market: The Climate Effect of U.S. LNG Exports”, by Constanza Abuin at NC State University International Economics Workshop, 2025

Presentations (past and scheduled)

2025: Amsterdam School of Economics (Amsterdam), Sciences Po (Paris), NUS Lee Kuan Yew School of Public Policy (Singapore), NUS Department of Real Estate (Singapore), BI Norwegian Business School (Oslo), World Bank Annual Conference on Transport Economics (DC), World Bank Maritime Transport Group (DC), Melbourne Empirical Trade Conference (Melbourne), Swedish National Road and Transport Research Institute (Stockholm), SMU Trade Lunch (Singapore)

2024: GEP/CEPR Postgraduate Conference (Nottingham), Sciences Po Trade Lunch (Paris), CESifo Area Conference on Global Economy (Munich), Rocky Mountain Empirical Trade Conference (Banff), Chair of Applied Economics Seminar (Zurich), Paris I Young Researcher Seminar (Paris), European Trade Study Group (Athens), North American Meeting of the Urban Economics Association (DC), LSE Environment Week (London), Leuven-Louvain Trade Workshop (online), Georgetown Trade Lunch (DC)

2023: Georgetown Trade Lunch (DC), Leuven-Louvain Trade Workshop (online), ETSG (Surrey)

2022: National Bank of Belgium Internal Seminar (Brussels), RIEF Doctoral Meeting (Paris), EOS Conference (Namur), Spring Meeting of Young Economists (Orleans), Queen Mary University of London Economics and Finance Workshop (London), Workshop on International Economic Networks (Vienna), Georgetown Trade Lunch (DC), Maryland Trade Lunch (DC)

2021: UCD-LCIS PhD Workshop (Leuven), Leuven-Louvain Trade Workshop (online)