# Inga Heiland

University of Oslo

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Personal Data

Date and Place of Birth: July 8<sup>th</sup> 1986, Ravensburg, Germany

Nationality: German

**Current Positions** 

Assistant Professor at the Department of Economics, University of Oslo, since 2017

Research Affiliate, ifo Institute, Munich, since 2017

Research Affiliate, CESifo, since 2016

## Research Interests

International Trade, International Macroeconomics and Finance, Trade Policy, Migration

**Education** 

2011–2016 Ph.D. in Economics, University of Munich and ifo Institute, Munich

Graduation (Dr. oec. publ., summa cum laude): November 2016

Thesis Title: Five Essays on International Trade, Factor Flows, and the Gains

from Globalization

2009–2011 M.Sc. in International Economics and Finance, University of Tuebingen

2010–2011 Academic exchange, University of Missouri, Columbia 2006–2009 B.Sc. in International Economics, University of Tuebingen

## Previous Academic Appointments and Research Visits

2011/06 - 2017/06	Economist, ifo Institute, Center for International Economics, Munich
2017/01 - 03	Visiting Researcher, Yale School of Management

2015/10 - 11 Visiting Researcher, Department of Economics, University of Colorado, Boulder

2014/01 - 12 Visiting Student Researcher, Department of Economics, Stanford University

# Grants, Scholarships, and Awards

2014	Fulbright Commission research grant for research stay at Stanford University
2012	Ifo Prize for outstanding attainments in externally funded research
2011	Graduate Award by the SEW-EURODRIVE Foundation for outstanding Master's Thesis
2011	KPMG Prize for Excellence in the Studies of Economics
2010	Scholarship by the German Academic Exchange Service for academic exchange year at the
	University of Missouri, Columbia

# Teaching

Spring 2018, 2019	International Macroeconomics, graduate level, lecture and seminar, University of Oslo
Summer 2010	Tutorial Principle of Economics, 1st year undergraduate level, University of Tuebingen
Winter 2009	Tutorial Quantitative Methods, 3rd year undergraduate level, University of Tuebingen

# Seminar and Conference Presentations

2018	CESifo Conference on Global Economy, NOITS Stockholm, University of Tuebingen, IFN
	Stockholm, EIIT Purdue, Quantagg Workshop ifo Munich
2017	University of Oslo, FRB San Francisco, JKU Linz
2016	CESifo Area Conference on Global Economy, University of Heidelberg, University of Mu-
	nich, European Trade Study Group Annual Meeting, German Economic Association Annual
	Meeting, Midwest International Economics Fall Meeting
2015	Auckland Finance Meeting, CU Boulder, Canadian Economic Association Annual Meeting,
	European Economic Association Annual Meeting, Midwest International Economics Spring
	Meeting
2014	Stanford University, UC Irvine
2013	${\bf Midwest\ International\ Economics\ Spring\ Meeting,\ }6th\ {\bf International\ Conference\ on\ Migration}$
	and Development, GEP-Ifo-CEPII Conference on Structural Change and Trade Efficiency,
	European Trade Study Group Annual Meeting, University of Munich
2012	European Economic Association Annual Meeting, European Trade Study Group Annual
	Meeting, German Economic Association Annual Meeting, University of Munich

# Refereeing for Academic Journals

Economic Journal, Journal of the European Economic Associatation, European Economic Review, The World Economy, Review of International Economics, Review of International Organizations, CESifo Economic Studies, Scandinavian Journal of Economics

# **Economic Counselling Projects**

2017	Economic Effect of a Brexit on the German and European Economy. German Federal Ministry for Economic Affairs and Energy
2017	Structural Analysis and Outlook of Baden-Wuerttemberg as a Business Location by National and International Comparison. The Baden-Wuerttemberg Ministery of Economic Affairs, Labour and Residential, in coorporation with IAW Tuebingen
2016, 2017	Evaluation of the Implementation of the Free Trade Agreement between the EU and its Member States and the Republic of Korea. European Commission Directorate General for Trade / Civic Consulting
2016	$TTIP$ - $Potential\ Effects\ on\ Norway.$ Norwegian Ministry of Trade, Industry and Fisheries, in cooperation with NUPI Oslo
2014	Potential impact of TTIP on developing and emerging countries. German Federal Ministry for Economic Cooperation and Development
2013	Development of an indicator for the intensity of international competition on the sector or product level. German Federal Ministry of Economic Affairs and Energy
2011	Evaluation of Federal Export Credit Guarantees – Hermes Credit Guarantees. German Federal Ministry of Economics and Technology.

# Participation in Further Third-Party Funded Research Projects

since 2019	Innovation, Productivity and Public Policy (Innoprod). Norwegian Ministry of Trade, Industry and Fisheries, Project leaders: Karen Helene Ulltveit-Moe, Andreas Moxnes
since 2017	The Global and Local Organization of Production (Global prod). European Research Council (ERC), Principal investigator: Andreas Moxnes
2015-2017	Dynamic Aspects of Offshoring. German Research Foundation (DFG), Project leaders: Prof. Dr. Wilhelm Kohler, Prof. Dr. Erdal Yalcin

#### References

#### Prof. Andreas Moxnes

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## Prof. Karen Helene Ulltveit-Moe

Professor of Economics University of Oslo

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# Prof. Gabriel Felbermayr, Ph.D.

Professor of Economics Christian-Albrechts-University Kiel President, Kiel Institute for the World Economy

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#### Prof. Andrew Bernard

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#### Prof. Dr. Wilhelm Kohler

Professor of Economics
Director, Institute for Applied Economic Research
Eberhard Karls University Tuebingen
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# List of Publications and Work in Progress

#### Publications in Academic Journals

- Where's the Value Added? Trade Liberalization and Production Networks (with Rahel Aichele)
  Journal of International Economics, 115, 2018, 130-144
- TTIP and Intra-European Trade: Boon or Bane? (with Rahel Aichele and Gabriel Felbermayr)

  Jahrbücher für Nationalökonomie und Statistik / Journal of Economics and Statistics, 236(6), 2016, 639–664

#### Working Papers

- Global Risk Sharing Through Trade in Goods and Assets, manuscript
- Heterogeneous Workers, Trade, and Migration (with Wilhelm Kohler)
  CESifo Working Paper No. 7355, 2018, submitted
- Undoing Europe in a New Quantitative Trade Model (with Gabriel Felbermayr and Jasmin Groeschl) ifo Working Paper No. 250, 2018
- TTIP Potential Effects on Norway (with Rahel Aichele, Gabriel Felbermayr, and Marina Steininger) ifo Working Paper No. 228, 2016
- Going Deep: The Trade and Welfare Effects of TTIP Revised (with Rahel Aichele and Gabriel Felbermayr) ifo Working Paper No. 219, 2016
- Export Market Risk and the Role of State Credit Guarantees (with Erdal Yalcin)
  CESifo Working Paper No. 5176, 2015, submitted
- Mitigating Liquidity Constraints: Public Export Credit Guarantees in Germany (with Erdal Yalcin and Gabriel Felbermayr) CESifo Working Paper No. 3908, 2012, R&R Review of International Economics

#### Other Publications

- Five Essays on International Trade, Factor Flows and the Gains from Globalization ifo Beiträge zur Wirtschaftsforschung 74, ifo Institute, 2017
- EEG und internationaler Wettbewerb: Ist die besondere Ausgleichsregelung haltbar? (w. Rahel Aichele and Gabriel Felbermayr), ifo Schnelldienst, ifo Institute, 2014, vol. 67(02), pages 23-29, 01.
- The Role of State Export Credit Guarantees for German Firms (w. Gabriel Felbermayr and Erdal Yalcin)
  CESifo Forum, ifo Institute, 2014, vol. 15(3), pages 52-55, 08.
- Der Wertschöpfungsgehalt des Aussenhandels: Neue Daten, neue Perspektiven (w. Rahel Aichele and Gabriel Felbermayr), ifo Schnelldienst, ifo Institute, 2013, vol. 66(05), pages 29-41, 03.
- Neues von der Basarökonomie (w. Rahel Aichele and Gabriel Felbermayr) ifo Schnelldienst, ifo Institute, 2013, vol. 66(06), pages 17-28, 03.
- Beschäftigungseffekte der Exportkreditgarantien der Bundesrepublik Deutschland ("Hermesdeckungen") (w. Gabriel Felbermayr and Erdal Yalcin), ifo Schnelldienst, ifo Institute, 2012, vol. 65(01), pages 20-30, 01.

# Work in Progress

Trade from Space (with Andreas Moxnes, Karen-Helene Ulltveit-Moe, and Yuan Zi)

 $Parameter\ Uncertainty\ in\ NQTT\ Models\ (with\ Gabriel\ Felbermayr)$ 

Value Added Gravity (with Rahel Aichele)

 $O\!f\!f\!shoring\ with\ Horizontal\ Skill\ Differentiation\ (with\ Wilhelm\ Kohler)$ 

# Research Agenda

My research focuses on three themes in international economics: Interactions of international goods markets with domestic or globally integrated markets for capital and labor, the effects of globalization on welfare and inequality, and the role of policy therein. Moreover, I aim to contribute to the set of methodologies currently used for policy analysis in the context of international economics. My research focuses on counterfactual analysis in general equilibrium models, accompanied by structural estimation or theoretically motivated reduced-form empirical analysis. In the following, I outline the main strands of my agenda (for a detailed list of published papers and work in progress please see the separately submitted document) and describe the milestones of each strand which will constitute the focal points of my planned research in the next five to ten years.

# 1 Quantitative Trade Models with Capital Markets and Nominal Frictions

# 1.1 International Trade and Capital Markets

In this strand of my research agenda, I aim to bridge the gap between the international finance literature and the international trade literature to analyze firms' internationalization choices under uncertainty.

#### Work in progress

In the paper titled "Global Risk Sharing through Trade in Goods and Assets: Theory and Evidence" I enrich a standard structural gravity model with endogenous capital flows determined by consumer-investor's consumption, savings, and risk-diversification decisions. The gravity model of international trade serves as the workhorse both for empirical analyses of the determinants of bilateral trade and for counterfactual analyses of trade policies in general equilibrium. However, the standard framework and most research in this field takes a highly simplified perspective on capital markets, neglecting the endogeneity of capital flows and the role of trade as a means for risk diversification. This paper shows that investors' risk aversion has important consequences for the pattern of bilateral trade, even in the presence of complete and globally integrated financial markets. The gravity model developed in this paper, with risk-averse investors choosing an intertemporally optimal allocation of wealth to consumption and (risky) investment opportunities, lends itself to a re-examination of the gains from trade under risk aversion and endogenous international capital flows. Moreover, it facilitates an analysis of the relative importance of trade as a means to risk diversification in the presence of a fully or partially integrated international financial market.

## 1.2 Quantitative Evaluation of Trade Policy

Building on the methodology that constitutes the "New Quantitative Trade Theory" (NQTT), together with my coauthors R. Aichele and G. Felbermayr, I developed a tractable computable general equilibrium model that facilitates quantitative ex ante evaluations of the potential effects of trade policies. This framework has served as a basis for multiple policy consulting projects conducted by the Center for International Economics at the ifo Institute in Munich. It also constitutes the center of the second strand of my research agenda, which aims at improving quantitative trade models for policy analysis, and is deeply intertwined with the first pillar of my research agenda discussed above.

#### Published papers and work in progress

In the paper "Where is the Value Added? Trade Liberalization and Production Networks" (with R. Aichele, published in the Journal of International Economics in 2018), we show how production fragmentation and production networks can be analyzed in the NQTT framework. Recent decades have seen a surge in trade along the value chain and the emergence of regional production networks in North America, Europe, and East Asia. Consequently, goods and services trade, as registered at customs, has become less informative about the country and sector from which the value added embodied in these flows originates. We develop a structural model for value added trade flows that can be used for counterfactual analyses of conventional measures of production fragmentation developed in the extant literature, such as the value added export to export ratio or the domestic and foreign value added content of exports.

In a current project titled "*Trade from Space*" (with A. Moxnes, K.H. Ulltveit-Moe, and Y. Zi), we exploit satellite data on ship movements to shed light on the importance of the global shipping network for international trade. We develop a methodology to characterize the position of countries in the container shipping network and analyze the global implications of local trade cost shocks that spread through the network.

In the paper titled "Going Deep: The Trade and Welfare Effects of TTIP Revised" (with G. Felbermayr and R. Aichele, published as Ifo Working Paper in 2016), we use the structural gravity model described above and data on trade flows and existing regional trade agreements (RTAs) to back out the average trade-cost reducing effect of different types of RTAs, which can then be used to simulate prospective RTAs based on the same model and data. We implement the model for 140 countries and 38 sectors to simulate the potential trade and welfare effects of the "Transatlantic Trade and Investment Partnership" (TTIP). In a follow-up study ("TTIP and Intra-European Trade: Boon or Bane?"), published in the Journal of Economics and Statistics in 2016, we apply the same framework to analyze the consequences of TTIP on intra-European trade flows in view of a possible enhancement of centrifugal forces within the European Union, acknowledging that trade integration with outsiders naturally leads to an erosion of intra-European trade preferences.

In another current project titled "Undoing Europe in a New Quantitative Trade Model" (with G. Felbermayr and J. Groeschl), we analyze in detail the trade and production effects of the individual steps of the European integration process. We estimate trade cost reductions caused by the creation of the Single Market, the European Monetary Union, the Schengen Agreement, and the formation of harmonized EU-third-party trade agreements. We then use these estimates to show how reversing individual or all those steps of the European integration would affect welfare in Europe based on a counterfactual analysis in a general equilibrium model calibrated to match the current level of trade and production in 30 European and 14 non-European countries or regions.

Lastly, in the project titled "Parameter Uncertainty in NQTT Models" (with G. Felbermayr), we analyze the impact of parameter uncertainty in counterfactual analyses that are based on models that are calibrated with estimated parameters. With structural estimation of unobserved model parameters constituting one of its building blocks, this issue naturally arises in the NQTT, but has largely been overlooked in the literature. We use a bootstrap to estimate the bias owing to the nonlinear relationship between counterfactual model outcomes and estimated parameters and to obtain confidence bounds for the model's predictions reflecting the degree of uncertainty surrounding the estimated parameters.

#### Milestones

A first milestone in this strand of my research agenda is the development of a tractable quantitative model that features both international trade and international capital flows. The lack of such tools for an integrated assessment of trade and investment policies severely constrains all state-of-the-art models used in evaluating economic integration agreements.

The next milestone consists of introducing capital market frictions and nominal rigidities into quantitative trade models. Both nominal rigidities and capital market frictions are central issues in macroeconomics and fundamental for analyzing economic policy in open economies. Nevertheless, they have barely made their way into international trade models. Likewise, micro-founded models of international macroeconomics have not kept up with developments in firm-level trade theory, featuring among other things granularity in the firm-size distribution, production and distribution networks, and trade along the value chain. Integrating these strands of literature will provide better tools to comprehensively analyze international trade and investment policy options in conjunction with fiscal and monetary policies of open economies.

# 2 International Trade and Labor Markets

Another strand of research on my agenda focuses on the effects of globalization on welfare and inequality, on interactions between goods markets and labor markets, and on the role of policy therein.

#### Work in progress

In the paper titled "Heterogeneous Workers, Trade, and Migration" (with Wilhelm Kohler), we analyze the interactions of goods and labor markets in a model with differentiated products and differentiated workers. The paper builds on the "New Trade Theory," which almost exclusively predicts positive welfare gains from trade in differentiated varieties. We show that acknowledging differentiation of skills in the workforce and their imperfect substitutability across firms reveals negative side effects of trade-driven specialization for the labor market. An opening up of labor markets to migration partly undoes these negative side effects of trade.

#### Milestone

The aforementioned theoretical paper underscores the importance of accounting for worker–firm matching patterns for assessing the welfare effects of globalization. Learning about the empirical prevalence of worker–firm matching patterns constitutes the next milestone on this research track. In a planned project, I aim to test the relationship between firms' choices with regard to exporting, offshoring, and hiring of foreign workers and the firm-worker match quality of their workforce by using Norwegian micro data. These empirical results will be valuable additions to the theoretical results and together they can inform the policy debate about the optimal design of economic integration agreements that go beyond the integration of goods markets.