MARTIN B. SCHMITZ

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DEGREES

Vanderbilt University
Ph.D. in ECONOMICS, 2024 (expected)
M.A. in ECONOMICS, 2018

Julius Maximilian University of Würzburg
M.Sc. in ECONOMICS, 2015 (with distinction)
B.Sc. in BUSINESS MANAGEMENT and ECONOMICS, 2011

RESEARCH FIELDS

Economics of Innovation, Urban Economics, Economic History (primary)
Applied Econometrics, Empirical Microeconomics (secondary)

WORKING PAPERS AND WORK IN PROGRESS

"A Penny for Your Thoughts" with Walker Hanlon, Stephan Heblich, and Ferdinando Monte, (NBER Working Paper 30076, CEPR Discussion Paper DP17323)

"Conflict, Knowledge Access, and Cumulative Innovation: Evidence from the Republic of Letters"

"Dynamic Network Formation with Degree Heterogeneity" with Qi Xu

FELLOWSHIPS AND GRANTS

NSF Doctoral Dissertation Research Improvement Grant SES-2049808, 2021 - 2024

Russell G. Hamilton Graduate Leadership Institute Dissertation Enhancement Grant, 2021

Kirk Dornbush Summer Research Award, Department of Economics, Vanderbilt University, 2021

Graduate Student Summer Research Award, College of Arts and Science, Vanderbilt University, 2019, 2022

Exploratory Travel and Data Grant, Economic History Association, 2019

Council of Economic Graduate Students Research Grant, Vanderbilt University, 2019

Max Planck Society for the Advancement of Science Scholarship, Summer 2017, Summer 2018

Departmental Summer Research Grant, Department of Economics, Vanderbilt University, 2017

Vanderbilt University Economics Fellowship, 2016 - 2022

PROMOS Scholarship, German Academic Exchange Service (DAAD), 2012

Julius Maximilian University of Würzburg exchange with the University of Texas at Austin 2012 - 2013

RESEARCH VISITS AND NON-DEGREE STUDIES

Max Planck Institute for Innovation and Competition
Department of Innovation and Entrepreneurship Research, 6/2017 - 7/2017, 6/2018 - 7/2018, 5/2019 - 7/2019

Julius Maximilian University of Würzburg
Undergraduate studies in MATHEMATICS, 9/2014 - 7/2016

University of Texas at Austin
International exchange student, 8/2012 - 5/2013

Hawai'i Pacific University, Honolulu
International student, 9/2009 - 1/2010

Teaching Experience

Chapman University (Instructor)
Principles of Microeconomics, Fall 2023

Vanderbilt University (Teaching Assistant)
Econometric Methods, Spring 2019, Spring 2022
Applied Econometrics, Spring 2020
Strategic Analysis, Fall 2020, Spring 2021
Principles of Microeconomics, Spring 2018, Fall 2019
Principles of Macroeconomics, Fall 2017, Fall 2018, Fall 2021

Julius Maximilian University of Würzburg (Instructor)
Tutorials in Macroeconomics II, four hours per week, Winter 2011/2012
Tutorials in Applied Computer Science, four hours per week, Summer 2010

Related Experience

Smith Institute for Political Economy and Philosophy, Chapman University
Research Associate, 8/2023 - 2/2024

Center for Genetic Privacy and Identity in Community Settings, Vanderbilt University
Research Assistant for Prof. Myrna Wooders, 8/2022 - 10/2022

Department of Economics, Julius Maximilian University of Würzburg
Research Assistant for Prof. Norbert Berthold, 5/2011 - 8/2012 and 9/2013 - 8/2014

Federal Ministry of Finance of the Federal Republic of Germany, Berlin
Intern at division IC2 - Macroeconomic Country Analyses and Bilateral Relations, 3/2012 - 4/2012

Halle Institute for Economic Research, Halle (Saale), Germany
Intern at the Department of Structural Change, 9/2010 - 10/2010 and 4/2011 - 5/2011

Languages and Software

German (native), English (fluent), French (basic), STATA, Python, Mathematica, MATLAB, ArcGIS, LaTeX

Presentations

2023: Johannes Gutenberg University Mainz, Vanderbilt University, Western Kentucky University
2022: NYU Abu Dhabi, Max Planck Institute for Innovation and Competition, Vanderbilt University
2021: Vanderbilt University (3x)
2020: Vanderbilt University
2019: Economic History Association Annual Meeting (poster), Max Planck Institute for Innovation and Competition, Vanderbilt University (2x)

Discussant

2018: TIME Colloquium, Ludwig Maximilian University Munich

Media and Press Coverage

The Visible Hand Podcast "Episode 55 (Job Market Edition)", 12/2022

"Communication Costs, Science, and Innovation" with Walker Hanlon, Stephan Heblich, and Ferdinando Monte, VoxEU column, 7/15/2022

References

William J. Collins	william.collins@vanderbilt.edu
W. Walker Hanlon	whanlon@northwestern.edu
Ariell Zimran	ariell.zimran@vanderbilt.edu
Matthew Zaragoza-Watkins	mdzwatkins@ucdavis.edu

Abstracts

"A Penny for Your Thoughts" with Walker Hanlon, Stephan Heblich, and Ferdinando Monte, (NBER Working Paper 30076, CEPR Discussion Paper DP17323)

How do communication costs affect the production of new ideas and inventions? To answer this question, we study the introduction of the Uniform Penny Post in Great Britain in 1840. This reform replaced the previous system of expensive distance-based postage fees with a uniform low rate of one penny for sending letters anywhere in the country. The result was a large spatially-varied reduction in the cost of communicating across locations. We study the impact of this reform on the production of scientific knowledge using citation links constructed from a leading academic journal, the *Philosophical Transactions* and the impact on the development of new technology using patent data. Our results provide quantitative causal estimates showing how a fall in communication costs can increase the rate at which scientific knowledge is exchanged and new ideas and technologies are developed. This evidence lends direct empirical support to an extensive theoretical literature in economic growth and urban economics positing that more ideas can emerge from communication between individuals.

"Conflict, Knowledge Access, and Cumulative Innovation: Evidence from the Republic of Letters"

How does knowledge production respond to conflict-related changes in knowledge access? To answer this question, I exploit war-induced disruptions in postal services between Britain and the European continent during the pivotal two decades of scientific advancement that followed the 1687 publication of Isaac Newton's (1642-1727) *Principia*. In this period, the Nine Years' War (1688-1697) and the War of the Spanish Succession (1701-1714) interrupted the packet boat service across the English Channel that connected the British and the French postal systems and facilitated the bilateral exchange of ideas within a correspondence-based network of scholars called *Republic of Letters*. I reconstruct this network using citation links from the leading scientific journal of the time, the *Philosophical Transactions*. This allows me to interpret relative changes in citation counts as relative changes in the number of follow-on innovations. Considering each possible pair of post towns as a separate cross-sectional unit, aggregating the bilateral citation counts to this level, and comparing the pre- to post-period changes in the citation counts of unaffected and affected post-town pairs provides causal estimates showing how conflicts impact knowledge production.

"Dynamic Network Formation with Degree Heterogeneity" with Qi Xu

This chapter generalizes a Generalized Method of Moments (GMM) approach for dynamic panel logit models with fixed effects to logit network formation models with degree heterogeneity. The proposed moment conditions do not depend on the degree heterogeneity parameters, making it possible to leave the distribution of these parameters unspecified. The approach is applicable to panel and cross-sectional network data, sparse or dense, directed or undirected networks and applies to a range of network formation models for which consistent and computationally feasible estimators were previously unavailable. The wide applicability comes at the price of a common distributional assumption in network formation models with degree heterogeneity. Conditional on the previous link structure, the exogenous regressors, and the degree heterogeneity parameters, the distribution of the error term is assumed to be i.i.d. standard logistic across dyads and over time. Consistency and asymptotic normality follow from standard GMM theory. Computationally inexpensive estimation is achieved by employing analytical derivates of the proposed moment conditions.