

SUPRABHA BANIYA

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EDUCATION

Ph.D., Department of Economics, Purdue University 2017
Dissertation: Effects of Timeliness on the Trade Pattern; *Advisors:* David Hummels and Thomas Hertel
M.S., Department of Economics, Purdue University [3.82/4.0] 2014
M.A., Department of Mathematics, SUNY Potsdam [4.0/4.0; Distinction] 2012
B.A., State University of New York at Potsdam [3.96/4.0] 2012
Majors: Economics and Mathematics; Minor: Physics [Summa cum Laude; University Honors]

SELECTED HONORS/AWARDS

Distinguished Graduate Student Paper (MVEA Meetings) 2017
Distinguished/Outstanding Instructor (Purdue University) 2013, 2015
Departmental Scholar (Department of Economics, SUNY Potsdam) 2012
Vasily Cateforis Mathematics Award (SUNY Potsdam) 2012
Clarence F. Stephens Mathematics Scholar (SUNY Potsdam) 2011
The John Rezelman Economics Award (SUNY Potsdam) 2010, 2011
Alumni Award for Excellence in Mathematics (SUNY Potsdam) 2009, 2010
Thomas Jones-Travano Memorial Economics Award (SUNY Potsdam) 2009
International Initiative Grant, SUNY Potsdam 2008-2012

CURRENT EMPLOYMENT

Assistant Professor of Economics; Clark University, Worcester, MA 2017-present
Research Interests: International Trade, Transportation, Microeconomics and Labor Economics
Research Methods: Econometrics, CGE Analysis and GIS Analysis
Major Teaching: International Trade (PhD and Undergraduate Levels)

OTHER RESEARCH POSITIONS

Economist - Consultant; Overstock.com Inc, Midvale, UT 2021-present
Core Machine Learning Department - Experimentation Science Group
Research Project: Effects of Discount Coupons and Site Sales on Gross Merchandise Sales (on Sabbatical)

Economist - Consultant; Asian Development Bank, Manila, Philippines 2018-2021
Economic Research and Regional Cooperation Department
Research Project: Trade and Spatial Effects of Transportation Infrastructure Reforms in the CAREC Region: A General Equilibrium Analysis (Onsite Work - Summer, 2018)

Research Consultant; World Bank Group, Washington, DC 2016-2018
Trade and Competitiveness Global Practice; Global Trade and Regional Integration Unit
Research Project: Trade Effects of the Belt and Road Initiative of China (Onsite Work - Summer, 2016)

Research Intern - FIP; International Monetary Fund, Washington, DC summer, 2015
Research Projects: IMF Economist Program and Flexible Work Arrangement Practices

Research Assistant; Department of Economics, Purdue University 2012-2017
Research Assistant to Dr. Anson Soderbery, Dr. Chong Xiang and Dr. Matthew Hoelle

Research Aide; Potsdam Institute for Applied Research, SUNY Potsdam 2009-2012

JOURNAL PUBLICATIONS

Baniya, S., Rocha, N., Ruta, M. (2020). "Trade Effects of the New Silk Road: A Gravity Analysis," *Journal of Development Economics*, Volume 146, 102467, ISSN 0304-3878, <https://doi.org/10.1016/j.jdeveco.2020.102467>.

Previous version: Baniya, S., Rocha, N., Ruta, M. (2019). "Trade Effects of the New Silk Road: A Gravity Analysis." World Bank Policy Research Working Paper; No. WPS 8694.

WORKING PAPERS

Baniya, S., and Taniguchi, K. (2021). "Trade and Spatial Effects of Transportation Infrastructure Reforms in the CAREC Region: A General Equilibrium Analysis," Asian Development Bank.

Baniya, Suprabha (2017). "Effects of Timeliness on the Trade Pattern between Primary and Processed Goods," IMF Working Paper No. 17/44. March.

Baniya, S. and Z. Akgul (2017). "Effects of Transportation Infrastructure on the Export Participation and Composition: A CGE Analysis." Global Trade Analysis Project Resource Paper # 5042.

WORK IN PROGRESS

Worldwide Optimal Trading Times in the Presence of Multimodal Transport Networks: A GIS Analysis, with Muhammad Ramzan, Clark University.

Effects of Trading Times on Firm Migration and Outcomes, with Cong Peng, Harvard University.

Effects of Discount Coupons and Site Sales on Gross Merchandise Sales, Overstock.com Inc.

OTHER RESEARCH

Baniya, S. (2015). "What Factors Present at the Time of Recruitment Determine the Eventual Success of Economists." IMF Internal Report, International Monetary Fund.

Baniya, S. (2015). "The Effects of Flexible Work Arrangement Practices on the Labor Productivity." IMF Internal Report, International Monetary Fund.

Baniya, S. and F. P. Shu (2010). "Determining the Causes of the Recent U.S. Recessions and the Economic Slowdown in China." *Proceedings of the New York State Economics Association*. vol. 3, Sept 2010, p. 4-9.

TEACHING EXPERIENCE

Assistant Professor; Department of Economics, Clark University 2017-present

- *PhD Courses Taught:*

International Trade (fall only)

- *Undergraduate Courses Taught:*

International Economics (spring only); Principles of Economics; Intermediate Microeconomics (fall, 2019)

Teaching Assistant; Department of Economics, Purdue University 2012-2017

- *PhD Courses:*

Teaching Assistant for Time Series Econometrics (spring, 2015)

Teaching Assistant for Macroeconomics (fall, 2013 - spring, 2014)

- *Masters Courses:*

Teaching Assistant for International Trade (summer, 2017)

- *Undergraduate Courses:*

Course Instructor for Macroeconomics (summer, 2014 and fall, 2014)

Recitation Instructor for Principles of Economics (fall, 2012)

Teaching Assistant for International Trade (fall, 2015 to spring, 2017)

Teaching Assistant for Game Theory (spring, 2013)

Teaching Assistant; State University of New York, Potsdam 2009-2012
 Recitation Instructor for Calculus 1 (fall, 2011); Economics Lab TA for Micro and Macroeconomics
 Math Lab TA for Calculus 1-3, Differential Equations, Linear Algebra, and Set Theory and Logic

SELECTED CONFERENCE/SEMINAR PRESENTATIONS

2020: ASSA Meetings (San Diego, CA)
2019: Midwest Economics Association Conference (St. Louis, MO); Eastern Economics Association Conference (New York, NY); Southern Economics Association Conference (Fort Lauderdale, FL)
2018: ASSA Meetings (Philadelphia, PA); Midwest International Trade Conference (Vanderbilt University); Asian Development Bank - Research Department Seminar (Manila, Philippines); Midwest Economics Association Conference (Evanston, IL); Eastern Economics Association Conference (Boston, MA)
2017: RAND Conference on U.S. Pivot to Asia (Santa Monica, CA) [**Featured Media Coverage**]; Association for Social Economics/ICAPE Conference (Chicago, IL); Purdue University Departmental Seminar; University of Rhode Island; Clark University
2016: Southern Economics Association Conference (Washington, DC); Missouri Valley Economic Association Conference (St. Louis, MO); International Monetary Fund Departmental Seminar (WHD); Annual Global Economic Analysis Conference (World Bank); Applied Economics, Regional and Urban Studies Conference (UIUC); Purdue University Departmental Seminar
2015: International Monetary Fund Senior Planning Meeting (EP Committee); Midwest International Trade Conference (Penn State University); Purdue University Departmental Seminar
2014: Purdue University Departmental Seminar

UNIVERSITY OR PROFESSIONAL SERVICE

PhD Research Advising, Clark University 2018-present

Xiaocong Xu (Committee Member): Placement- Assistant Professor of Economics, Nanjing University
Elizabeth Hanke (Committee Member): On the Job Market
Ramzan Muhammad: Effects of Trading Times on Firm Productivity
Michael Endale: Effects of Infrastructure and Landlockedness on Trade
Hye Young Lee: Effects of Time Cost and Trade Agreements on Location Choice of Multinational Firms

Undergraduate Honors Thesis Advising, Clark University 2018-present

Jacky Wang: Effects of Announcements of Clinical Trial Results on Pharmaceutical Stock Return
Gyulnara Shakhaliyeva: Effects of Exchange Rates on CIS Economies
Juliet Kyaw: Effects of Agriculture Yield-Index Insurance on India's Small-holder Farmer Welfare
Jose Castillo: Trade and Welfare Effects of Pacific Alliance and Mercosur Regional Trade Agreements

Other Clark University Services

Economics PhD Admissions Committee 2019-2020
 Departmental Seminar Organization 2018-present
 Undergraduate Major Advising and Academic Advising 2018-present

Other Professional Services

Editorial Board Member for NPPR, Policy Research Institute of Government of Nepal 2020-present
 Reviewer for Nepal Public Policy Review (NPPR), Policy Research Institute of Government of Nepal 2020
 Reviewer for Journal of International Economics (JIE) 2019
 Abstract Reviewer for Purdue University - GTAP Conference 2017; 2019
 Invited Presentation on Economic Geography at Nichols College, Worcester, MA November, 2019
 Featured Speaker on U.S.- China Trade War at Worcester Chamber of Commerce February, 2019
 Guest Speaker for Pi Mu Epsilon Induction at SUNY Potsdam - Mathematics Department April, 2018
 Conference Discussant at SEA, MEA and EEA 2017-2019
 Contributor to the Trade Integration in Latin America Cluster Report; International Monetary Fund 2016

SKILLS

Computer Knowledge: STATA, MATLAB, R, ArcGIS, Python, GEMPACK, GTAP software, LaTeX.

PROFESSIONAL MEMBERSHIP

Global Trade Analysis Project, Midwest International Economics Group, American Economic Association, Agricultural and Applied Economic Association, Midwest Economic Association.

RESEARCH ABSTRACTS

Effects of Timeliness on the Trade Pattern between Primary and Processed Goods

This paper examines the effect of indirect time costs on trade in primary and processed goods. Indirect time costs are those incurred while accessing intermediate inputs, and they are constructed using the input usage drawn from the U.S. input-output table and Hummels and Schaur (2013)'s calculations of consumers' willingness to pay for faster delivery. I find that processed goods producers face significantly larger indirect time costs than do primary goods producers. This implies that countries with a greater ability to transport goods on time have a comparative advantage in goods that highly value timely delivery of their inputs, and this comparative advantage pattern is stronger for processed goods as opposed to primary goods. I use countries' physical geography features as instruments for transportation infrastructure to address the endogeneity between trade and infrastructure.

Effects of Transportation Infrastructure on the Export Participation and Composition

This paper examines the effect of timeliness in trade on the extensive and intensive margins of trade using a computable general equilibrium (CGE) analysis. To do this, we use the GTAP firm-heterogeneity CGE model (Akgul et al., 2016) complemented with the GTAP database version 9. We model the infrastructure reforms as an efficiency change in the variable and fixed export costs using the econometric estimates of the two-part model in Baniya (2017). The direct impacts on export costs arise from the improved ability to access intermediate inputs and to deliver final products on time. Implementing a targeted shock in the transportation infrastructure quality of South and East Asia region (with low LPI) in the CGE model, we compare the resulting general equilibrium trade impacts across primary and processed goods.

The Trade Effects of the New Silk Road

This paper takes a first look at the trade effects of China's Belt and Road Initiative on the 71 countries potentially involved. The initiative consists of several infrastructure investment projects to improve the land and maritime transportation in the BRI region. The analysis first uses geo-referenced data and geographical information system (GIS) analysis to compute the bilateral time to trade before and after the BRI. Then, it estimates the effect of improvement in bilateral time to trade on bilateral export values and trade patterns, using a gravity model and a comparative advantage model. Finally, we combine the estimates from the econometric analysis with the results of the GIS analysis to quantify the potential trade effects of the BRI. The paper finds that (i) the BRI increases trade flows among participating countries by up to 4.1 percent; (ii) these effects would be three times as large on average if trade reforms complemented the upgrading in transport infrastructure, and (iii) products that use time sensitive inputs, and countries that are highly exposed to the new infrastructure and integrated in global value chains have larger trade gains. We use the physical geography features of transit countries along any trade route as instruments for bilateral trade time to address the endogeneity between trade and infrastructure.

REFERENCES

David Hummels

Dean and Professor of Economics
Purdue University
Email: hummelsd@purdue.edu

Michele Ruta

Lead Economist
World Bank Group, MTI
Email: mruta@worldbank.org

Thomas Hertel

Distinguished Professor of Ag Economics
Purdue University
Email: hertel@purdue.edu

Valerie Cerra

Assistant Director and Division Chief
International Monetary Fund, ICD
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