

David D. Shin

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213 Social Sciences Box 90097, Durham, NC 27708

EDUCATION

Duke University <i>PhD in Economics</i>	May 2025 (Expected) Durham, NC
Duke University <i>Master of Arts in Economics</i>	December 2022 Durham, NC
University of Michigan <i>Bachelor of Science in Economics, Minor in Mathematics (with High Distinction)</i>	April 2017 Ann Arbor, MI

RESEARCH AND TEACHING INTERESTS

International Economics, Environmental Economics, Macroeconomics

JOB MARKET PAPER

Climate Policies under Dynamic Factor Adjustment

WORKING PAPER

Understanding Trade Imbalances

WORK IN PROGRESS

Commodities Trade Fragmentation and Market Power

with Chiara Maggi and Alexandre Balduino Sollaci

RESEARCH AND WORK EXPERIENCE

PhD Graduate Assistant <i>Duke University</i> <ul style="list-style-type: none">Research Assistant to Professor Rafael Dix-Carneiro	August 2021 - Present Durham, NC
Dissertation Fellow <i>Federal Reserve Bank of St. Louis</i> <ul style="list-style-type: none">Dissertation Research	August 2024 St. Louis, MO
Ph.D. Summer Intern <i>Federal Reserve Bank of New York</i> <ul style="list-style-type: none">Dissertation Research	June 2024 - August 2024 New York, NY
Fund Internship Program (FIP) <i>International Monetary Fund (IMF)</i> <ul style="list-style-type: none">PhD intern at the Research Department (World Economic Studies Division)	June 2023 - September 2023 Washington, DC
Short-Term Temporary (STT) <i>World Bank</i> <ul style="list-style-type: none">Analyzed the impact of trade facilitation policies on consumer prices in Brazil	September 2021 - November 2021 Durham, NC
Military Interpreter/Teaching Assistant <i>Republic of Korea Army (ROKA)</i> <ul style="list-style-type: none">Compulsory Military Service	July 2017 - March 2019 Republic of Korea
Undergraduate Research Assistant <i>University of Michigan</i> <ul style="list-style-type: none">Research Assistant to Professor James R. Hines Jr.	October 2014 - April 2017 Ann Arbor, MI

TEACHING EXPERIENCE

Certificate in College Teaching (CCT) <i>Duke University</i>	Spring 2025 (Expected) <i>Durham, NC</i>
• Multi-year, university-level program focused on systematic pedagogical training in college teaching	
Macroeconomic Analysis II (PhD) <i>Duke University</i>	Spring 2021 <i>Durham, NC</i>
• Teaching Assistant to Professor Andrea Lanteri and Professor Francesco Bianchi	
Macroeconomic Analysis I (PhD) <i>Duke University</i>	Fall 2020 <i>Durham, NC</i>
• Teaching Assistant to Professor Craig Burnside and Professor Cosmin Ilut	

SEMINAR AND CONFERENCE PRESENTATIONS

2024

Duke University; Mid-Atlantic International Trade Workshop (Federal Reserve Board); Federal Reserve Bank of New York; Federal Reserve Bank of St. Louis; Economics Graduate Student Conference (WUSTL)

2023

Duke University; Federal Reserve Bank of Richmond; International Monetary Fund; Economics Graduate Student Conference (WUSTL); Midwest International Trade & Theory Conference (Georgia Tech)

HONORS, SCHOLARSHIPS, AND FELLOWSHIPS

Graduate School Tuition Scholarship <i>Duke University</i>	<i>2019 - Present</i>
Summer Research Fellowship <i>Duke University</i>	<i>2020, 2021, 2022</i>
Phi Beta Kappa <i>University of Michigan</i>	<i>April 2017</i>
James B. Angell Scholar <i>University of Michigan</i>	<i>April 2016</i>
William J. Branstrom Freshman Prize <i>University of Michigan</i>	<i>April 2015</i>

PERSONAL INFORMATION

Citizenships: Republic of Korea, USA
Programming Skills: Stata, MATLAB, Dynare
Languages: Korean (Native), English (Fluent)

REFERENCES

Rafael Dix-Carneiro (Chair) Department of Economics Duke University rafael.dix.carneiro@duke.edu	Daniel (Yi) Xu Department of Economics Duke University daniel.xu@duke.edu
Andrea Lanteri Department of Economics Duke University andrea.lanteri@duke.edu	Laura Castillo-Martinez Department of Economics Duke University l.castillo-martinez@duke.edu

Climate Policies under Dynamic Factor Adjustment

Abstract: This paper develops and estimates a dynamic general equilibrium model of the global economy to investigate how imperfect and gradual adjustments of capital and labor across sectors affect the effectiveness of climate policies in reducing global emissions. The model's estimates indicate that both capital assets and workers exhibit low responsiveness to changes in climate policies, limiting the policies' ability to permanently and swiftly shift capital and labor out of the sector that extracts and processes raw fossil fuels. I demonstrate that a counterfactual subsidy implemented by China on non-fossil fuel energy sources would boost consumption and investment in the targeted sector but may inadvertently raise global emissions due to increased aggregate output and investment. Imperfect factor mobility amplifies this effect by limiting the reallocation of capital and labor away from the sector that produces fossil fuels. My findings underscore the need to (i) combine a subsidy on non-fossil fuel energy sources with a carbon tax and (ii) improve capital and labor mobility to both reduce global emissions and enhance aggregate consumption.

Understanding Trade Imbalances

Abstract: Are persistent trade imbalances signs of distortions? This paper investigates the drivers of persistent trade imbalances in eight advanced and emerging economies from 2000 to 2014. Using a dynamic general equilibrium framework, I rationalize the observed imbalances as outcomes of six key forces commonly discussed in the literature: (i) productivity growth, (ii) trade costs, (iii) financial frictions, (iv) life expectancy, (v) population growth, and (vi) economy-specific intertemporal distortions. The findings highlight that economy-specific intertemporal distortions, particularly in the United States, are the most significant driver of global imbalances. Additionally, changes in trade costs between China and its trading partners—the China shock—had a substantial impact on the trade imbalances of both China and the U.S. The results suggest that, without the China shock, the U.S. would have sustained persistent trade surpluses, while China would have experienced persistent deficits, emphasizing the importance of bilateral trade frictions in understanding global imbalances.

Commodities Trade Fragmentation and Market Power

with Chiara Maggi and Alexandre Balduino Sollaci

Abstract: Amid escalating tensions between the US and China, coupled with the conflict in Ukraine, concerns over the trade fragmentation of commodities intensified. This paper presents a novel framework to evaluate the potential welfare losses resulting from such fragmentation, with a focus on the unique characteristics of commodities, including their high geographical concentration, upstream nature, and limited substitutability. Using a quantitative general equilibrium model incorporating international trade, firm heterogeneity, variable markups, inter-sectoral linkages, and unique commodity characteristics, we assess the welfare implications of hypothetical persistent disruptions in commodity trade between hypothetical US and China blocs. The model delivers five distinct welfare costs arising from commodity trade fragmentation: (i) declining foreign demand, (ii) increased imported input costs, (iii) competition-driven productivity reduction, (iv) a decline in the number of upstream suppliers, and (v) the increased market power of regional suppliers. We find that the reduction in upstream suppliers and the concurrent rise in regional market power significantly amplify the welfare costs associated with commodity trade fragmentation.