

# Amrutha Manjunath

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## EDUCATION

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Ph.D. in Economics, Pennsylvania State University, 2019-2025 (expected)

*Dissertation Committee:* Fernando Parro (Chair), Kala Krishna, James Tybout, Jingting Fan

B.A. (Honours) in Economics and Mathematics, Ashoka University, 2015-2019

## RESEARCH INTERESTS

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Spatial Economics, International Trade, Labor Economics, Development Economics

## WORKING PAPERS

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### [1] [Language Barriers, Internal Migration, and Labor Markets in General Equilibrium \(JMP\)](#)

*Abstract:* This paper studies how language barriers impact internal migration, inequality between skilled and unskilled workers, and aggregate welfare using rich microdata from India applied to a quantitative spatial general equilibrium framework. I first document four empirical facts: (1) workers migrate less often to locations where they face high language barriers; (2) migrants with high language barriers are employed less often in speaking-intensive occupations; (3) migrants with high language barriers get a wage premium in comparable occupations; and (4) these patterns are strongest for unskilled workers. To explain these facts, I then develop and estimate a static migration model in which heterogeneous workers sort across occupations and locations by skill and language, with wages accounting for worker selection and adjusting in general equilibrium. I show through the lens of the model how language barriers, by increasing worker sorting and selection, significantly obstruct internal migration, augment the skill premium, and reduce aggregate welfare. As economies shift towards services, language barriers increasingly impede aggregate gains due to the rising prevalence of speaking-intensive occupations. In the absence of language barriers—relative to observed changes—structural change would have increased aggregate welfare by 1.9 percent. Finally, I calibrate costs of both program provision and learning languages to evaluate potential benefits of language programs for unskilled migrants. Using the calibrated model, I argue that welfare benefits of implementing language programs would outweigh costs.

*Presentations:* [2024] Federal Reserve Bank of Philadelphia Brownbag, Federal Reserve Bank of Atlanta Brownbag, 13<sup>th</sup> European Meeting of the Urban Economics Association (Copenhagen, Denmark), Trade and Development Brownbag (PSU); [2023] Federal Reserve Bank of Philadelphia PFMAP Brownbag, European Trade Study Group (Surrey, UK), Canadian Economics Association (Winnipeg, Canada), Midwest Economics Association (Cleveland), Trade and Development Brownbag (PSU), Applied Microeconomics Brownbag (PSU)

### [2] [Criminal Politicians, Political Parties, and Selection](#)

*Presentations:* [2023] International Economic Association World Congress (Medellin, Colombia); [2022] Annual Conference on Economic Growth and Development (ISI Delhi, India), Midwest Political Science Association Conference (Chicago), Trade and Development Brownbag (PSU), Applied Microeconomics Brownbag (PSU)

## RESEARCH ACTIVITIES

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- Co-authored work with Kala Krishna and research team (2023-present) to create the first Indian firm-level international trade transaction data by matching Bill of Lading to Prowess. Future projects in progress.
- CSWEP-AEA Summer Economics Fellowship, Federal Reserve Bank of Atlanta, 2024
- Philadelphia Fed Mentoring & Advancing PhDs Program, Federal Reserve Bank of Philadelphia, 2023
- Research Assistant, Pennsylvania State University
  - Fernando Parro, 2023; Shoumitro Chatterjee, 2021; Joris Pinkse, 2020

## WORK IN PROGRESS

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### [3] **Climate Uncertainty and Temporary Migration**, with Tim Dobermann and Yinong Tan

*Abstract:* Using district-to-district migration data from the Indian Census, we demonstrate that locations with higher mean and variance of adverse climate conditions experience increased out-migration. Among out-migrating households, temporary migration and household splits are common, with female members typically remaining behind. To explain these patterns, we develop a dynamic spatial general equilibrium model of migration incorporating agricultural productivity uncertainty, migration costs, and concave household utility functions. The model predicts that, controlling for mean income, greater agricultural income uncertainty increases rural out-migration. It also suggests that moderate uncertainty leads to more household splits, as location diversification aids risk sharing, while high uncertainty promotes whole-household migration. Using the estimated model, we quantify the impact of climate variability on migration patterns, determining thresholds of uncertainty that trigger different household responses. Our analysis of household splitting behavior provides crucial insights for guiding mitigation policies in developing countries. We argue that migration may serve as an effective strategy to combat climate-induced agricultural productivity losses, and inform targeted climate adaptation measures.

## HONORS AND AWARDS

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- Graduate Economics Scholarship, Pennsylvania State University 2019-2025
- RGSO Dissertation Award (\$5000), Pennsylvania State University, 2023
- Dean's List, Ashoka University, 2015–2019
- Rhodes Scholarship Finalist, India, 2018

## TEACHING EXPERIENCE

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- Lecturer, Pennsylvania State University
  - Introductory Microeconomic Analysis and Policy, 2022
- Teaching Assistant, Pennsylvania State University
  - Migration and Development, 2022-2024
  - Political Economy, 2022
  - Introductory & Intermediate Microeconomic Analysis, 2019-2021
  - Statistical Foundations for Econometrics, 2020

## SOFTWARE AND LANGUAGE SKILLS

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*Software:* Stata, R, MATLAB

*Languages:* English (native), Kannada (native), Hindi (advanced)

## REFERENCES

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### **Fernando Parro (Chair)**

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