Amrutha Manjunath November 13, 2024

Research Statement

I am an applied economist with research interests in *spatial economics*, *international trade*, *labor economics*, and *development economics*. The first strand of my research studies the aggregate implications of spatial, labor market, and climate frictions on internal migration in developing economies. The second strand of my research studies the aggregate implications of firm behavior in developing economies on international trade. In both strands of research, I combine the use of novel administrative datasets with structural methods in economic geography.

I. Migration and Development

My research agenda includes several projects at the intersection of migration and development.

First, in my job market paper, ***Language Barriers, Internal Migration, and Labor Markets in General Equilibrium***, I investigate the impact of language barriers on internal migration, inequality between skilled and unskilled workers, and welfare in multilingual countries. Using India's linguistic diversity as the setting, I combine novel[1] and disaggregated data on district-to-district migration from the Census of India (2001, 2011) with a quantitative spatial general equilibrium model to uncover how language shapes labor market outcomes and drives aggregate economic effects.

I document that language barriers affect labor market outcomes and exacerbate inequalities through four empirical facts: (1) workers migrate less often to locations where they face high language barriers, (2) migrants with language barriers are employed less often in speaking-intensive occupations, (3) migrants with language barriers receive a wage premium, and (4) these patterns are strongest for unskilled workers. To explain these facts, I develop and estimate a quantitative spatial general equilibrium model where language features as both a technological friction and a migration cost. The model reveals two key mechanisms: workers sort based on comparative advantage, and workers facing language barriers are more selected.

Using the estimated model, I show that removing language barriers would significantly increase internal migration, reduce inequality between skilled and unskilled workers, and enhance welfare. I further demonstrate that as economies shift towards services, language barriers increasingly impede aggregate gains due to the rising prevalence of speaking-intensive occupations. Finally, I evaluate the cost-effectiveness of implementing a language policy in India that would provide workers with language training opportunities. Results show that the welfare gains from such a policy far outweigh the costs, suggesting important implications for promoting inclusive economic growth in multilingual countries.

This paper has generated significant interest in academic and policy circles. I have presented this work at several conferences and seminars, including the Urban Economics Association European

1. I obtained this confidential data through a special agreement with the Census.

Meeting (Copenhagen, 2024), European Trade Study Group (Surrey, 2023), Canadian Economics Association (Winnipeg, 2023), Midwest Economics Association (Cleveland, 2023), and multiple brownbags at Federal Reserve Banks (Atlanta, Philadelphia). Disseminating research is a crucial aspect of my academic work, as I believe that effective communication of economic insights can drive informed policy decisions and contribute to addressing real-world challenges. These presentations reflect my commitment to articulating complex economic ideas to diverse audiences and fostering dialogue among researchers, policymakers, and practitioners.

Second, in joint work with Tim Dobermann (Director of Research for the International Growth Centre (IGC)) and Yinong Tan (graduate student at Penn State), I investigate the relationship between climate uncertainty and temporary migration in India in "***Climate Uncertainty and Temporary Migration***." We use district-to-district migration data from the Indian Census and show that locations with higher mean and variance of adverse climate conditions experience increased out-migration. We observe that among out-migrating households, temporary migration and household splits are common, with female members typically remaining behind.

To explain these patterns, we develop and estimate a dynamic spatial general equilibrium model of migration that incorporates agricultural productivity uncertainty, migration costs, and concave household utility functions. Our 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 our estimated model, we quantify the impact of climate variability on migration patterns and determine thresholds of uncertainty that trigger different household responses. This research provides crucial insights for guiding climate adaptation and mitigation policies in developing countries, suggesting that migration may serve as an effective strategy to combat climate-induced agricultural productivity losses.

Third, I have two projects in early development. The first is joint work with Kalyani Padmakumar (Assistant Professor at Florida State) and Jibin Jose (graduate student at Iowa State), in which we explore the relationship between migration and education with a focus on India's caste barriers. We examine how caste-based affirmative action policies affect inter-state migration and educational attainment across caste groups. Our research posits increased mobility as a potential channel for reducing social inequalities through these policies. We aim to quantify this mobility channel and investigate its complementarities with other policies that aim to increase internal migration, such as transportation improvements or targeted scholarships. This study seeks to identify effective policy combinations to address persistent caste-based disparities in education and social mobility.

The second builds on my job market paper, in which I examine the impact of language instruction in schools on college choice and migration for education. This study focuses on how the language of instruction (e.g., local languages vs. English) in primary and secondary schools influences students' decisions about higher education. Specifically, I investigate whether the language of instruction affects students' likelihood of pursuing college education, their choice of college location (local vs. distant), and their willingness to migrate for educational opportunities. This study aims to provide insights into the long-term consequences of language policies in education and their role in shaping

educational and migration trajectories in multilingual societies.

II. Trade and Development

In joint work with Prof. Kala Krishna and a research team at Penn State, I am constructing the first Indian firm-level transaction data on international trade. We matched Bill of Lading data to the CMIE Prowess database, resulting in a comprehensive dataset that offers unprecedented insights into Indian firms' international trade activities. This dataset has the unique potential to significantly advance our understanding of firm-level dynamics in international trade, particularly in the context of developing economies like India.

The creation of this dataset aligns with my research approach of utilizing novel data sources to address policy-relevant questions in international economics. The initial phase of the project focuses on data creation and validation and we have several future projects in progress that will leverage this rich data source. These upcoming studies aim to explore various aspects of firm behavior in international trade, potentially shedding light on topics such as firm-level trade patterns, the impact of trade policies, and the role of firms in global value chains.

III. Other Research

My research extends to the intersection of politics and economics, with a focus on the phenomenon of criminally indicted politicians in India. In "***Criminal Politicians, Political Parties, and Selection***," I investigate why criminally indicted candidates win elections three times more often than non-criminals upon nomination using data from four recent parliamentary elections in India. I develop a simple model of party nomination choice where the key trade-off from nominating criminally indicted candidates is between having access to their wealth and suffering a reputation loss. This model predicts that political parties nominate criminally indicted candidates only when they are needed to win and not otherwise. Using local linear regressions, I confirm this model prediction in the data. Specifically, I find that the predicted probability from the *ex post* decision to nominate a criminal has an inverse-U relationship with a party's *ex ante* margin of victory. This finding suggests an explanation for the higher success rate of criminal candidates: they are strategically selected by political parties to win in specific electoral contexts.

This research contributes to our understanding of political selection in developing democracies and the strategic considerations that drive party decisions. It also has implications for policy discussions on electoral reform and the quality of political representation. I have presented this work at several international conferences, including the International Economic Association World Congress in Medellin, Colombia (2023), the the Annual Conference on Economic Growth and Development at ISI Delhi, India (2022), and Midwest Political Science Association in Chicago (2022). These presentations have allowed me to engage with scholars across disciplines, including economics and political science, and fostering interdisciplinary dialogue on this important topic.