Research Statement

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One of the oldest questions in economics is why some countries are so much poorer than others.

I study this question through the lens of firm organization in developing countries. My research agenda centers on two broad themes:

1. **The first examines firm productivity and growth in developing countries**, using micro data to study heterogeneity in firm behavior and the aggregate implications of this heterogeneity for trade and macro models. I focus on two mechanisms underlying firm productivity:
   (a) the internal organization of firms
   (b) policy-induced distortions that lead to the misallocation of resources across firms.
2. **The second theme studies how new technologies, in particular, artificial intelligence (AI), shape state capacity in developing countries** using two large-scale RCTs in partnership with over 1,500 courts and more than 500 tax officers in India [news article]. Weak state capacity—from overburdened courts to inefficient bureaucracies—prevents markets from functioning efficiently and directly constrains firm growth. By examining how AI can strengthen these institutions, this theme is closely linked to the first.

These themes reflect a common motivation: understanding how organizational choices, markets, and state capacity determine productivity and long-run economic development.

My research is built on large-scale institutional partnerships spanning multiple government ministries and judicial systems across India. These include ongoing collaborations with India's Ministry of Corporate Affairs, Ministry of Statistics, Labor Bureau, and tax authorities, as well as 9 State High Courts in India and new partnerships with the Supreme Courts in Ghana and Zambia. These partnerships have enabled me to found and direct the India Data Lab Initiative to harmonize unit-level micro data from India's premier household and firm surveys. IDLI's primary goal is to make these datasets more accessible by harmonizing and integrating them into a unified online platform, enabling users to seamlessly merge various surveys using common geographical and industry identifiers.

1 Firm Productivity and Growth in Developing Countries

Internal Organization of Firms in Developing Countries. A central part of my research agenda looks within firms to understand how managerial choices shape productivity. In my job market paper, *When Competition Compels Change: Trade, Management, and Firm Productivity*, I examine how import competition induces family-managed firms in India to professionalize their top management. Family management often restricts the pool of senior leadership to kin, privileging family ties over talent. I exploit a previously unstudied, product-specific import competition shock in India, assembling novel data on family-managed firms—the predominant form of corporate governance worldwide—with tenure records and family ties for over 6 million company executives and directors. This data collection was made possible due to a 4-year ongoing partnership with India's Ministry of Corporate Affairs. Using an event-study design, I show that the least productive firms respond to import competition by replacing family managers with non-family professional executives. Firms that

professionalize experience productivity gains of over 30 percent. I then embed these micro findings into a Melitz-style trade model with an endogenous managerial choice, showing that within-firm organizational adjustments can account for a substantial share of the aggregate productivity gains from trade. The broader implication is that markets alone, through competitive pressure, can partially correct inefficient managerial practices that stem from taste-based preferences such as kinship, caste, or gender.

Building on this, I am working with Nick Bloom, Pete Klenow, and co-authors to link survey data on 3,000 Indian firms' management practices (collected in the style of the World Management Survey) with my administrative data on firm directors. Merging these unique datasets allows us to directly test how family involvement on boards of directors affects management quality. The results provide a deeper understanding of why management quality is lower in developing countries and complement the mechanisms documented in my job market paper.

A related project, *Meritocracy Across Countries*, also examines how taste-based preferences shape the allocation of talent. My co-authors Oriana Bandiera, Ilse Lindenlaub, Chris Moser, Andrea Prat, and I investigate whether worker-job matching is based on productive attributes or on idiosyncratic traits unrelated to productivity. We show that richer countries, where productive matches are more strongly rewarded, exhibit greater meritocracy in labor markets. Together with my work on family firms in India, this project highlights how non-productive preferences can distort talent allocation both within firms and in the broader labor market, and how market incentives can mitigate these distortions.

In related work with Namrata Kala and Utkarsh Saxena, we study how bans on foreign direct investment (FDI) from China affected Indian firms. FDI does not only provide financing but also transfers managerial know-how. By examining how ownership and organizational structures change after the ban, this project sheds light on how international capital flows shape firm organization in emerging economies.

Firm- or Market-Level Distortions. A second strand of my work studies distortions in the allocation of resources across firms. In *How Much Do Firms Save? Financial Frictions and the Microeconomic Implications of the Euler Equation*, I test a standard prediction of growth models with financial frictions: constrained firms should self-finance in order to relax borrowing limits. Using Indian firm-level data and a staggered financial liberalization reform, I show that treated firms do not behave in accordance with this canonical prediction. This matters for how we interpret evidence on capital misallocation. In the work-horse models with standard parameter values, aggressive self-financing should push capital toward high marginal product firms and compress cross-sectional dispersion in marginal products. Yet the misallocation literature, exemplified by the work of Hsieh and Klenow, documents large and persistent dispersion in marginal products. My evidence suggests that the mechanism that would mitigate these wedges through internal saving may be weak in developing countries.

In *Labor Market Frictions, the Organization of Labor, and Structural Change*, with Chinmay Lohani and Utkarsh Saxena, I exploit a 1982 amendment to India's Industrial Disputes Act that lowered the threshold for mandatory government approval of layoffs from 300 to 100 workers. Digitizing plant-level data on over 50,000 factories per year, we show that this reform reduced labor demand disproportionately in labor-intensive sectors. The results suggest that rigid labor laws may have tilted India's growth path away from labor-intensive manufacturing toward services, bypassing the

industrialization stage typically seen in development.

Finally, in *Aggregate Impacts of Command-and-Control Environmental Policy*, my coauthors Utkarsh Saxena and Henry Zhang, and I study court-ordered mining bans in India as a form of distortionary regulation. We show that even temporary bans cause persistent declines in employment, capital, and borrowing among downstream firms, illustrating how blunt enforcement tools can misallocate resources through production networks. This work highlights the importance of regulatory design in shaping aggregate productivity, especially in settings with weak state capacity.

2 Artificial Intelligence and State Capacity in Developing Countries

Technological change not only transforms firms but also the state. In many developing countries, weak state capacity hampers markets from functioning efficiently. My second theme investigates how AI tools can strengthen bureaucratic and judicial capacity in India in collaboration with governments and courts. This work combines large-scale field partnerships with cutting-edge questions regarding the political economy of technology adoption.

In *AI and Bureaucratic Decision Making: Evidence from India*, with Daron Acemoglu and Utkarsh Saxena, we study the use of an AI-based decision-support tool that predicts litigation outcomes for Indian customs officers. The tool is trained on case law and statutory provisions and generates probabilistic assessments of the success of an appeal. We implement this tool in partnership with India's customs authority to test whether it reduces unnecessary appeals and improves bureaucratic efficiency. This project will provide some of the first rigorous evidence on the role of AI in shaping bureaucratic incentives and efficiency in developing countries.

In *AI and Judicial State Capacity in India*, Utkarsh Saxena and I study the deployment of Adalat AI, a nonprofit providing AI-powered transcription, translation, and case management tools in Indian courts. India's judiciary faces a backlog of over 50 million cases, and trials often last for more than a decade. Working with over 1,500 district courts in multiple Indian states, we evaluate whether AI tools that automate clerical tasks accelerate case resolution and expand access to justice. These tools are already operational in thousands of courtrooms across India, making this one of the largest natural experiments on AI adoption in public institutions worldwide.

Future Research Agenda

My long-term research agenda advances both themes in parallel. On firms and productivity, I plan to deepen the integration of micro-level data on managerial practices with structural models of trade and growth, extending my India-based work to cross-country settings. I am especially interested in how organizational choices within firms interact with distortions across firms to shape aggregate outcomes. On AI and state capacity, my future work will test how governments can harness technology to improve service delivery in contexts ranging from courts to taxation to healthcare. By combining administrative partnerships, new data, and theory-driven empirical analysis, my aim is to provide a unified understanding of how both firms and states in developing countries can be organized more efficiently to foster productivity and long-run growth.

Teaching Statement

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Teaching is one of the most fulfilling parts of my academic career. What excites me most about being in the classroom is the challenge of making rigorous economic research accessible and relevant to students from very different backgrounds. My experience spans large undergraduate lectures, small group seminars, and interactive online courses. Across these settings, I have learned that the key to effective teaching is to break down complex material into core ideas while maintaining the precision and richness of the original research.

Students have described me as *"the most engaging class teacher this term... clearly passionate and knowledgeable about the material"* and that they *"always feel that [they] understand the paper substantially more after classes"* because I *"ensure not only to answer problem set questions but also to provide wider context and intuition."*

This philosophy has been recognized through *consistently outstanding student evaluations of over 4.7/5*, which is among the highest at LSE. I was also awarded the LSE Teaching Award in 2021-22, which is typically given to only 6–8 out of 80 departmental TAs.

EC307 at LSE, Undergraduate Development Economics. My main teaching experience has been as a class teacher for EC307, LSE's flagship undergraduate course in development economics, taught by Professors Oriana Bandiera and Robin Burgess for over 25 years. The course is a cornerstone of the undergraduate program, attracting around 250 students each year, including both final-year economics majors and students from other disciplines who meet the quantitative prerequisites. I taught this course in 2020, 2021, and 2024, leading six sections of roughly 20–30 students each year.

The course is designed around applied empirical papers, about 60 in total, that illustrate the canonical designs for causal inference. Students encounter randomized controlled trials, difference-in-differences, event studies, regression discontinuity, and instrumental variables methods, all through reading and discussing frontier research papers. A central challenge in teaching this course is the diversity of student preparation. In one class, I might have an economics major who has already seen these methods in econometrics coursework, alongside a geography or management student for whom these designs are entirely new. My teaching, therefore, emphasizes intuition: I often work through simplified versions of equations on the board, trace the logic of identification strategies step by step, and connect the econometrics back to the research questions. **At the same time, I highlight the breadth of economics that these papers touch upon: finance, health, environmental economics, macro-development, and organizational economics, so that students can see how methods and insights travel across fields.** This has made the course not only a training ground in econometric techniques but also an entry point into the wider landscape of research in economics. I was the recipient of the LSE Teaching Award in 2021, which is awarded each year to 6–8 out of 80 departmental TAs.

STEG Graduate Macro-Development Course (Heterogeneous Agent Macroeconomics and Computational Macro Methods. My teaching has also extended to graduate students through the Structural Transformation and Economic Growth (STEG) program, where I served as a TA for Professor Benjamin Moll's course on heterogeneous-agent macroeconomics. The students were typically early-stage PhD candidates who had only seen representative-agent macro models before. **My responsibility was to bridge that gap by running coding sessions in MATLAB. We implemented standard heterogeneous-agent models such as Aiyagari-Huggett–Bewley, solving for general equilibrium and tackling numerical solution techniques that arise in heterogeneous-agent models.** These sessions were intentionally hands-on: students coded along with me, encountered computational bottlenecks, and learned how to debug and interpret their results. The goal was not only to teach the theory but also to equip them with the practical tools needed to engage with modern macro-development research. Many students commented that the coding sessions transformed abstract lectures into something tangible that they could use in their own work.

IZA/FCDO Development Economics Course for Sub-Saharan Africa. In 2021, I also taught in an online development economics course organized by Professors Oriana Bandiera and Robin Burgess and facilitated by the UK Government's Foreign, Commonwealth & Development Office for undergraduate students across Sub-Saharan Africa. This course was similar in structure to EC307 but placed a greater emphasis on policy implications. It attracted over 1,400 participants from 43 countries, and the discussions were particularly lively, as participants frequently asked how the research papers connected to the economic realities of their countries. Teaching in this setting was a powerful experience. It forced me to think harder about how abstract research findings can be translated into lessons that are meaningful in various institutional and economic environments. It also deepened my appreciation of the importance of inclusive pedagogy, where students feel that their perspectives and local knowledge enrich the discussion.

Future Teaching. I am prepared to teach undergraduate, MBA, and graduate courses in development economics, finance, international trade, and most areas of applied economics. In the longer term, I would like to design a course on firms and markets in developing countries that integrates themes from trade, development, and organizational economics.

Conclusion. Teaching is, for me, not just about transmitting knowledge but about building intellectual confidence in students. Whether guiding undergraduates through their first research paper or introducing graduate students to computational tools, I aim to make economics both rigorous and approachable. The enthusiasm of my students in London, across Africa, and online has been a continual reminder that good teaching can broaden horizons and shape careers. I look forward to bringing the same energy and dedication to my teaching at your university.