

Research Statement

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My research examines how institutions shape the movement of knowledge, the adoption of technology, and the distribution of economic opportunity. My doctoral research at Clemson University investigated skilled return migration and innovation in India. At the Hoover Institution at Stanford University, I have extended this interest to university technology transfer, public programs, and AI governance. The common question is how policy and institutional arrangements influence whether knowledge becomes productive economic activity. I combine applied econometrics with original data construction, computational text analysis, and survey-based research to investigate these mechanisms.

Doctoral research on migration and innovation

I completed my PhD in Economics at Clemson University in 2025. My dissertation, Essays on Macroeconomics, provided the foundation for my research on the international movement of human capital and its consequences for entrepreneurship. A central project from this work, “Mama, I’m Coming Home: Brain Gain through Brain Circulation in India,” asks whether founders with foreign education or work experience contribute to innovation after returning to India. It examines a potential benefit of skilled emigration for the origin country: the return of knowledge and experience that can support new firms.

For this project, I constructed a dataset combining startup profiles, founders’ education and employment histories, and Indian patent records. Linking these sources makes it possible to distinguish local, returnee, and mixed founding teams and examine their innovative activity. The analysis summarized in my current working paper finds that returnee-led startups file approximately 18 percent more patents on average. I also investigate whether mixed teams combine international experience with knowledge of local markets. These questions move beyond counting returning workers to examining how their experience is used within firms.

Selection is a central challenge: people who acquire experience abroad may differ from other founders before they migrate. My empirical work uses founder and firm characteristics, count-data methods, and an instrumental-variable approach based on U.S. immigration policy changes. The credibility of that approach depends on whether the policy variation affects Indian startup innovation through return migration rather than through other channels. I therefore distinguish descriptive patterns from estimates that rely on stronger identifying assumptions. The contribution of this work includes the linked data and a framework for studying how international and local experience interact within entrepreneurial teams.

I am extending this doctoral agenda through longitudinal professional records that trace education, employment, and return pathways between India and the United States. The next questions concern the timing of return, changes in employers and occupations, and subsequent entrepreneurship. This extension would allow me to examine how immigration uncertainty changes the allocation of skills across countries. Future designs would test the comparability of workers with different policy exposure and account for differences in the coverage of professional-profile data. The objective is to connect individual mobility decisions with innovation outcomes in both origin and destination economies.

University policies and the commercialization of research

My research at Hoover develops the institutional side of this agenda. In “Communication as Governance: Evidence from University Intellectual Property Policies,” I assemble and analyze a historical corpus of U.S. university policies to study how institutions communicate the rules of commercialization. The project develops a Policy Communication Index using computational text analysis and documents differences across institutions and over time. It asks whether formal policies explain responsibilities clearly enough to support coordination among inventors, administrators, and technology-transfer offices.

Related work examines changes in policy definitions and the relationship between policy communication and technology transfer. The next empirical step is to connect institutional measures with patenting, licensing, and startup outcomes. Universities may revise policies in response to changes in research activity or administrative capacity, so a simple association cannot establish the effects of policy design. I would examine the timing and content of revisions and assess whether particular reforms provide credible comparisons. This program connects my doctoral interest in knowledge circulation with the organizational rules governing how research reaches potential users.

AI trust and accountability

My work on AI governance examines another setting in which institutional arrangements shape the use of knowledge. In “Artificial Intelligence, Trust, and Accountability in a Low-Capacity State,” with I. Giri and R. N. Shrestha, we use original survey data from 343 professionals across eight sectors in Nepal. The working paper documents a positive association between perceived risk and trust in AI, alongside substantial sectoral differences. Its analysis suggests that expectations of accountability can operate as a basic condition for adoption. These findings motivate a distinction between confidence in a technology and confidence in the institution deploying it.

I would extend this research through comparative surveys and experimental variation in governance features, including human review, explanations of responsibility, and opportunities to challenge decisions. Outcomes would include comprehension, willingness to rely on a system, and responses to evidence about its performance. Comparisons across occupations and institutional settings would help assess whether a safeguard addresses users’ actual concerns. My work on AI benefit sharing and my participation in the OECD expert group on AI augmentation and the future of work inform the policy questions I bring to this agenda.

Measurement for economic and policy research

With Tiancheng Wang, I study “AI-Assisted Economic Measurement from Surveys: Evidence from Public Employee Pension Choice.” This project develops an iterative language-model approach to examining the measurement structure of survey instruments and distinguishing beliefs from constraints in pension decisions. It connects computational methods with a familiar economic problem: whether the available measures capture the mechanisms a researcher intends to study. Further work would compare automated and human assessments, test sensitivity to model choices, and examine whether measurement errors differ across groups. The goal is a transparent, reproducible method whose limitations can be evaluated.

A broader foundation in applied economics

My wider research provides complementary experience in policy analysis and empirical methods. Published work on quantitative easing and foreign holdings of U.S. Treasuries studies macro-financial relationships while explicitly maintaining a descriptive interpretation. Research on agricultural mechanization, rental markets, and remittances in Nepal examines access to productive assets and differences in the returns to technology. My collaborative research on social media and stock returns brings computational analysis to financial behavior. These projects inform my current agenda by keeping attention on heterogeneity, institutional context, and the distinction between measured associations and causal effects.

Work on regulatory migration in digital-asset markets provides a further link between policy and the location of economic activity. With K. R. Bhatt and I. Giri, I examine the reallocation of initial coin offerings toward Europe following U.S. securities enforcement. The project studies how activity can move across jurisdictions when capital and technology are mobile. My ongoing projects on the timing of decisions in SBIR and STTR and on subsequent startup fundraising extend this interest to public support and private capital. Together, they raise questions about how regulatory and financing arrangements affect the continuation of innovative activity.

My collaboration with the Pascal Geldsetzer Lab at Stanford has broadened my experience with applied causal inference and large-scale health records. Working across disciplines has reinforced the importance of understanding how data are generated and what a proposed comparison can establish. I bring this approach to innovation and technology-policy research, where attractive datasets do not automatically provide a credible answer to the economic question.

An independent research agenda

As a faculty member, I would prioritize completing the return-migration and university-policy papers while developing a focused empirical study of AI accountability. In the first two years, I would concentrate on validating the existing measures and data linkages, strengthening the empirical designs, and preparing the resulting manuscripts for publication. Subsequent work would extend the mobility analysis to career transitions and broaden the AI research to comparative institutional settings. This sequence builds on work already underway and allows new data collection to follow a well-defined question.

Student involvement would be organized around projects with clear intellectual ownership. Students could validate classifications of university policy language, study a defined migration pathway, or examine a specific governance feature in an AI survey. I would provide training appropriate to their preparation and discuss credit and authorship at the outset. Collaboration with scholars in public policy, law, and computer science would help evaluate institutional mechanisms, while the economic questions and empirical standards would remain explicit.

The continuity across my doctoral and current research is the study of how knowledge and productive opportunities move through institutions. Returnee founders carry experience across borders, universities govern the commercialization of discoveries, and public organizations determine how AI enters consequential decisions. My long-term aim is to explain which arrangements help these processes generate useful innovation and broader access to its benefits. This agenda would support research and teaching in economics, public policy, and the governance of technology.