Lakshmi Iyer
Research Statement

Overview

My research fields are development economics and political economy. One strand of my research focuses on the role of property rights institutions — the laws, rules and norms that govern how property is allocated, how property can be transferred, and how property is secured. The second strand focuses on political institutions: the constraints and rules governing policy makers, and the representation of disadvantaged groups (e.g. women) in electoral office. A final set of research papers identifies the link between economic conditions and the occurrence of political conflict.

Many social scientists have emphasized the importance of institutions, defined by Douglass C. North as the “rules of the game in a society,” in explaining cross-country differences in growth and development. In contrast to a broad literature focused on institutional differences across countries, I exploit within-country differences in specific institutional features in order to trace out causal effects of institutional change, and shed light on the mechanisms by which broad institutional changes translate into better development outcomes. My research further highlights the costs of institutional change, and the limitations of changing only formal institutions or only one set of rules, and the limits to effectiveness of specific policy changes such as increased political representation.

My research has been published in several leading academic journals. The new and unique data sets created for my papers have proved a useful resource for other researchers, with at least a dozen other papers using these data sets. I have also authored a series of case studies focusing on the policy risks faced by business leaders in emerging markets, which have been used in several business schools around the world.

Property Rights Institutions

My research sheds new light on the relationship between property rights and economic development. I find that while making property more secure encourages long-term investment and labor mobility, it does not result in more entrepreneurship or greater access to credit. This suggests that the impact of more secure property rights on growth and investment is limited if other complementary institutional changes are not carried out. I find that the distribution of property rights also has immense long run implications: areas where property rights in land were historically concentrated among a few people are less productive over the long run than areas where property rights were more widely distributed. However, changing economic institutions involves significant costs in terms of time and resources, and might even lead to under-investment in other productive opportunities. My work has analyzed specific policy experiments from several developing countries: India during the colonial period, the Philippines during the early 20th century, rural Vietnam in the 1990s and urban China in the late 1980s and 1990s. I now describe some of these studies in more detail.

The paper “History, Institutions and Economic Performance: The Legacy of Colonial Land Tenure Systems in India” finds that an unequal allocation of property rights has negative consequences for growth and productivity in the long run.1 In this paper, Abhijit Banerjee and I compare the present-day economic performance of different districts across India, which were placed under different land revenue systems by British colonial rulers as a result of certain historical accidents. Land revenue, or land tax, was the major

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1 “History, Institutions and Economic Performance: The Legacy of Colonial Land Tenure Systems in India,” with Abhijit Banerjee, American Economic Review, 95(4), 1190-1213, 2005. This paper was awarded the inaugural Michael Wallerstein Award by the Political Economy Section of the American Political Science Association.
source of government revenue during the colonial period. The British made different arrangements for the collection of land revenue in different parts of India. In some areas, the revenue liability for a village or a group of villages lay with a single landlord. These revenue-collecting rights could be bequeathed, as well as bought and sold. In this sense, the landlord effectively had property rights on the land. In other areas, arrangements for land revenue collection (and de facto property rights) were made directly with the cultivators of the land.

We show that districts in India where the collection of land revenue from the cultivators was assigned to a class of landlords systematically underperform the districts where this type of intermediation was avoided, after controlling for a wide range of geographical differences. The differences show up in agricultural investment and yields, in various measures of public investment in education and health, as well as in health and educational outcomes. For example, the average yield of wheat is 23% higher and infant mortality is 40% lower in non-landlord districts.

This paper is considered a seminal contribution to the literature on historical institutions, and generated several important insights. First, our results mean that the distribution of property rights (more concentrated versus widely dispersed) is a key determinant of aggregate growth and productivity. Factors beyond the security of property (or expropriation risk) are important. Second, the land revenue systems introduced by the British departed with the British: there are no direct taxes on agricultural incomes in independent India. Our results therefore tell us that the system for land revenue collection established by the British 150 years ago or more continues to have an effect long after it was abolished. This underscores how hard it is to reform the institutional environment, even if formal rules are changed. Third, a key reason for the agricultural productivity differential is the slower adoption of new agricultural technologies in the landlord-based areas. Instead, states with a greater proportion of landlord-dominated land tenure systems devoted much of their time and resources to enacting land reform measures in response to citizen demands. Far fewer resources were allocated for other types of development expenditures, leading to adverse development outcomes. In other words, historical institutions matter for long-run development not through their own persistence or their effects on political participation or electoral competition, but through their impact on policy choices made by elected governments.\(^2\)

The difficulty of institutional reform is highlighted in a study with Noel Maurer, which examines three major reforms introduced in the Philippines by the United States in the early 20th century: the redistribution of large estates to their tenants, the creation of a system of secure land titles, and a homestead program to encourage cultivation of public lands. We document that the implementation of these reforms was very slow during the first phase of American occupation (1898-1918), and identify two primary causes for the slow progress of reform. One was the high cost of surveying and distributing formal land titles. The Philippines government did not have the resources to subsidize this program, and the cost was more than what many peasants were willing or able to pay. In addition, the government was reluctant to evict delinquent or informal cultivators, especially on public lands, due to the need to prevent major rebellions. As a consequence, tenure insecurity increased over this period, and the distribution of farms by size remained extremely unequal.\(^3\)

How large are the effects of making private property more secure? Scholars such as Hernando De Soto have argued that formalizing property rights would release trillions of dollars tied up in extra-legal

\(^2\) In a separate paper, we find that the differences in public goods provision across landlord-based and non-landlord areas cannot be explained by the differences in electoral participation. In terms of electoral competition, landlord areas look very similar to non-landlord areas in measures such as the number of people contesting the election or average vote margins. “Colonial Land Tenure, Electoral Competition and Public Goods in India,” with Abhijit Banerjee, in Jared Diamond and James Robinson eds., *Natural Experiments in History*, Harvard University Press, 2010.

and insecure real estate in the developing world.\textsuperscript{4} I examine specific policy experiments in China and Vietnam that increased the security of private property rights. The Chinese urban housing reforms of the late 1980s and 1990s are probably the largest reforms to urban property rights, potentially affecting 90 million people in China’s cities. Residents of state-owned housing, typically a benefit offered to employees of state-owned companies, were given the right to buy their apartments from the state in the 1990s. In the paper “Economic Transition and Private-Sector Labor Demand,” (with Xin Meng, Nancy Qian and Xiaoxue Zhang),\textsuperscript{5} we exploit the variation in the timing of this reform across individual cities and find that this untying of housing allocations from employment decisions makes it significantly easier for households to move to the private sector. Housing reforms account for about 29% of the overall movement of the labor force from the state sector to the private sector. However, we do not find any major effect of this reform on the probability of households undertaking entrepreneurial activities. One possibility is that restrictions on buying and selling housing, and the lack of a well-functioning credit market in the 1990s, limited the extent to which households could capitalize their newly acquired housing asset. In addition to creating an entirely new database of city-level housing reforms, this project sheds light on a hitherto unexplored source of China’s economic growth: the increase in labor market flexibility.

The need for complementary reforms is also highlighted in my study of Vietnam’s 1993 Land Law.\textsuperscript{6} This law changed the property rights regime by giving households the rights to mortgage, rent, bequeath, buy and sell land. Formal property titles were distributed to 11 million rural households in order to strengthen property rights. Using province level variation in the speed of title distribution, Quy-Toan Do and I find that formal titles induce households to undertake longer-term investments such as planting multi-year commercial crops instead of rice, but do not have any effect on households’ ability to tap credit markets. In Vietnam, the ability of banks to repossess rural land was limited by the lack of clear regulations as well as the political difficulties inherent in seizing land.

**Political Institutions: Delegation of Policy Authority**

In many countries, policy authority is typically divided among different levels of government, and among different types of government agents. Does it matter if policy authority is delegated to subnational levels or local agents? Should some functions of government be under the purview of appointed bureaucrats rather than elected politicians? How long-lasting are the effects of such institutional arrangements? Understanding the internal structure and working of governments can greatly enhance our understanding of the policy process, similar to the progress made from research on the internal organization of firms.

The paper “Direct versus Indirect Colonial Rule” examines the long-term consequences of the government structures put in place during the colonial period.\textsuperscript{7} The impact of colonial policies on subsequent economic growth is a hotly debated topic, with some scholars emphasizing the negative effects of colonial rule due to factors like excessive exploitation by colonial powers, and others highlighting the positive role of colonial powers in securing peace and encouraging international capital movements. During the nearly two centuries of British colonial rule in India, a quarter of the population had remained under


\textsuperscript{7} “Direct versus Indirect Colonial Rule in India: Long-term Consequences,” *Review of Economics and Statistics* 92 (4), 693-713, 2010. This paper was among the top ten most downloaded articles from the journal.
“indirect” colonial rule, in the sense that native Indian rulers retained a great deal of autonomy in internal policy matters, though they lost their power over defense and foreign policy.

I find that indirect colonial rule is associated with better long-term outcomes in terms of public goods provision in the post-colonial period. I employ an innovative way to control for the potential “selection bias” in British colonial policy, by exploiting the fact that Governor-General Dalhousie followed the unusual rule of annexing Indian kingdoms where the king died without a natural son. My instrumental variables estimates find that areas ruled indirectly continue to be 36% more likely to have access to a middle school, 45% more likely to have a road and 75% more likely to have a health center. Post-colonial policies of equal access to public goods help to erase some of these differences, but they are still apparent more than three decades after the end of colonial rule.

The long-run effects of indirect colonial rule cannot be explained by differences in colonial property rights institutions, the degree of extractive taxation, or differences in the characteristics of the local population such as village size or population heterogeneity, which might influence the degree of collective action in the community.¹⁸ Rulers in indirectly ruled areas are, however, more likely to have better incentives to provide public goods compared to British administrators in the directly ruled areas. British administrators typically had much shorter tenures than native Indian rulers and might have felt lesser affinity with the local population. They also did not face any significant penalty for delivering poor outcomes, while Indian kings could be deposed by the British for particularly poor quality of government.

I plan to further investigate the role of policy maker incentives by taking advantage of the partial democratization reforms introduced in India during the colonial period. Together with Guilhem Cassan, I am collecting data on the gradual expansion of the franchise during the early 20th century, as well as the creation of separate electorates on the basis of religion. We will examine the impact of these initiatives on voter behavior, electoral competition, the identity of elected representatives and subsequent policy choices and development outcomes.

An important aspect of government structure is the division of policy authority between elected politicians and appointed bureaucrats. One primary goal of having such unelected officials is precisely to avoid the politicization of policy implementation. Consider the case of inter-state transfers in a federal country. Using data from India, I find that fiscal transfers that are mandated (by an explicit bureaucratic formula) to be geared towards poorer states indeed show a strong pro-poor tendency, but transfers that are not subject to such explicit rules are obtained disproportionately by richer states, possibly because they have the resources to successfully present their case for such schemes. Subsidies on food, fertilizer and fuel, ostensibly meant to help the poor, are also more likely to be captured by richer states.¹⁹

In order to maintain bureaucrats’ political neutrality, many countries limit the ability of politicians to hire and fire them. How might politicians react to such restrictions in their ability to control bureaucrats? In “Traveling Agents,” Anandi Mani and I analyze this question both theoretically and empirically.¹⁰ In the

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¹⁸ “History, Social Divisions and Public Goods in Rural India,” with Abhijit Banerjee and Rohini Somanathan, *Journal of the European Economic Association* 3, nos. 2-3: 639-647, 2005. In a different paper, my coauthors and I find that the impact of factors such as community size or population heterogeneity on collective action is theoretically ambiguous, suggesting that the conflicting results in the prior literature can be reconciled in a generalized framework. We then review the empirical literature on local collective action from several different countries, and find that many major expansions in access to health and education have been driven by “top-down” government interventions rather than “bottom-up” collective action. “Public Action for Public Goods,” with Abhijit Banerjee and Rohini Somanathan, in T. Paul Schultz and John Strauss eds., *Handbook of Development Economics Volume 4*, 3117-3154, 2008.


absence of the ability to hire or fire bureaucrats, we posit that politicians will reassign bureaucrats across posts of varying importance or status to generate incentives for bureaucrats to align their actions with politicians’ priorities. In turn, this will skew bureaucrats’ incentives to invest in skill acquisition. Our model highlights how the interaction of politicians and bureaucrats can lead to two types of inefficiency. First, the most skilled bureaucrats are not always appointed to the most important positions, due to political considerations. Second, knowing that such considerations exist, some bureaucrats will prefer to invest in developing a reputation for loyalty to specific politicians rather than a reputation for politically neutral expertise.

We then use a unique data set on the career histories of Indian bureaucrats to test the predictions of this framework. We find strong empirical evidence that politicians use frequent reassignments (transfers) of bureaucrats across posts of varying importance to control bureaucrats. As our model predicts, high-skilled bureaucrats face less frequent political transfers and lower variability in the importance of their posts. We find evidence of two alternative paths to career success: officers of higher initial ability are more likely to invest in skill, but caste affiliations with the politician’s party base also helps secure important positions. A specific implication of our analysis is that reducing the power of politicians to transfer bureaucrats, or making bureaucrats’ job assignments less dependent on politician preferences, is likely to improve bureaucrat incentives to invest in competence and thereby improve development outcomes. In November 2013, India’s Supreme Court passed an order directing the government to ensure that civil servants have a certain minimum length of tenure in a given post.

Redistricting of electoral constituencies is an area where non-politicization might be particularly important, since these policies can affect future electoral outcomes and the composition of legislatures. In 2008, the boundaries of national and state electoral constituencies in India were redrawn for the first time in three decades, affecting more than 700 million voters. The new boundaries were demarcated by a non-partisan commission composed of career bureaucrats. The commission was advised by a committee of incumbent politicians in each state, so that the possibility of politician influence cannot be ruled out.

In “Redrawing the Lines,” Maya Reddy and I examine the extent of politician influence on the process of electoral redistricting. We used detailed demographic and electoral data to construct measures of the extent of redistricting in a given constituency. We find that the electoral redistricting process was remarkably politically neutral. Members of any specific party (incumbent or otherwise) or powerful politicians such as ministers had no advantage in avoiding adverse redistricting outcomes for their constituencies, such as large changes in the demographic characteristics of voters or their constituencies being set aside (“reserved”) for members of lower castes and tribes under India’s political affirmative action programs. Only the few members of the advisory committee had a slight advantage in generating better redistricting outcomes for their specific constituencies.

Political Institutions: Representation of Disadvantaged Groups

The second aspect of political institutions I examine is the political representation of specific groups. Can political representation of socially and economically disadvantaged sections of society be a means to reduce such disadvantages? If politicians always represented the interests of the median voter, then changing the identity of the elected officials should make no difference to policy outcomes. Several factors, including limited information among voters about the performance of politicians, social fragmentation among voters, and the lack of credibility of political promises, might prevent the interests of

voters from being implemented by elected politicians. In this case, there is room for politicians to act on their personal preferences.

I first show that broad-based economic growth alone may not bridge social inequalities. In “Caste and Entrepreneurship in India,” (joint work with Tarun Khanna and Ashutosh Varshney), I document that differences in enterprise ownership across caste groups are very persistent. In 2005, members of the lowest castes (called “Scheduled Castes” in India) owned 9.8% of all enterprises, well below their 16.4% share in the total population. This low share of enterprise ownership had not increased since 1990, despite the high national economic growth rates in the intervening years. Enterprises owned by Scheduled Caste members continue to be less likely to employ labor from outside the family, more likely to belong to the informal or unorganized sector, and less likely to access institutional sources of finance.

I then show that political representation of certain disadvantaged groups does help to improve development outcomes. In a recent paper, my coauthors and I put together the first nationwide data on Muslim political representation in India’s state assemblies. Muslims are the largest religious minority in India and are, on many fronts, as disadvantaged a minority group in India as the lower caste population. Our data show that Muslims are under-represented in state governments relative to their population share. We then use these data to examine the effects of Muslim political representation on human development outcomes. To identify causal impacts of politician identity when electoral outcomes may in general be correlated with constituency level voter preferences or characteristics that make religion salient, we exploit the results of close elections between Muslim and non-Muslim (primarily Hindu) politicians. This allows us to examine the policy consequences of the personal religious identity of legislators, controlling for voter preferences and the party affiliation of the politician.

We find that raising the share of Muslims elected from a district to the state legislature leads to improved health and education outcomes in the district, measured by declines in infant mortality rates and increases in the years of primary schooling. Importantly, we find no significant difference in the impact of Muslim political representation on Muslim compared with non-Muslim households. Possible reasons for this might be that Muslim politicians are unable to target public services purely towards their co-religionists (Muslims are more likely to live in densely populated urban areas), or that electoral considerations require them to deliver services beyond a minority community.

Women in India are significantly disadvantaged on many fronts. India was ranked 132 out of 146 countries on the UNDP’s Gender Inequality Index in 2013. Violence against women, and the state’s inadequate response to such violence, is an issue of major public concern. Women are also significantly under-represented in political office, accounting for 11% of the national parliament in 2014. Such under-representation is common across the world: women account for only 18% of the United States Congress and 22% of the United Kingdom’s House of Commons.

In an effort to rectify these low levels of political representation, a 1993 constitutional amendment made it mandatory for Indian states to set aside one-third of all positions in local government councils for women. In “The Power of Political Voice,” my co-authors and I exploit the fact that the legislation was implemented at varying dates across Indian states. We find that the introduction of mandated political representation for women leads to a large and statistically significant increase in the number of documented crimes against women. Across all categories, crimes against women rose by 46%, rapes increased by 23%

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and the kidnapping of women showed a 13% increase. There is no change in the kidnapping of men following the reform, or in any categories of crime not specifically targeted by gender (e.g. property crimes), suggesting that there is no overall deterioration in law and order conditions. The 1993 constitutional amendment also mandated political representation for lower castes in proportion to their population share. Similar to the results for women, we find a significant increase in the number of caste-based crimes reported to the police (such as violations of their civil rights).

We argue that this documented increase in crimes is in fact good news because it reflects improvements in reporting rather than a rise in actual crimes. Crimes where reporting biases are expected to be minimal, such as murders or suicides of women, show no increases after the introduction of women’s political reservation. Data from an individual-level crime victimization survey show that women express greater willingness to report crimes to the police in villages where the village council head position is reserved for women. Most importantly, the police become more responsive, with women reporting a higher degree of satisfaction in their interactions with police, and arrests for crimes against women rising significantly. This is particularly notable because the women leaders at village and district levels do not have any formal power over the police force; law and order is under the jurisdiction of state level government.

Despite these positive results, there are limits to the effectiveness of political representation. In ongoing research with Sonia Bhalotra and Irma Clots-Figueras, we examine whether religious violence can be reduced by increasing political representation for religious minorities, a dimension not emphasized in the literature on ethnic conflict. For this, we combine our data on Muslim political representation with newly collected data on inter-religious violence from newspaper reports, since official crime data do not identify inter-religious incidents. Our preliminary results suggest that political representation of Muslims in legislative institutions has very little impact on the occurrence of religious violence, suggesting that we need further policy intervention to reduce such types of conflict.16

Increasing Women’s Political Representation

The work described earlier has demonstrated that the political representation of disadvantaged groups is an important determinant of policy outcomes. How then is such representation to be achieved? In the case of women, more than 100 countries have implemented some form of quotas in their political systems. But quotas might create other distortions, such as the election of less qualified (or less experienced) leaders, or they may generate a backlash against leaders who are elected due to quotas. Both of these factors might prevent the achievement of the improved policy outcomes. Can we instead rely on the “role model” effect of demonstrated success to encourage greater participation of women in politics? Can quotas at lower levels of government be effective in grooming effective leaders for the highest levels? These questions have relevance well beyond Indian politics. For instance, several European countries have imposed a 40% quota for women on corporate boards and the European Union is seriously considering a proposal to require this throughout the EU. It is far from clear that this is the best way to achieve better corporate governance or to advance women’s business careers.

In “Pathbreakers: How Does Women’s Political Participation Respond to Electoral Success?” (joint with Sonia Bhalotra and Irma Clots-Figueras), we first establish that political candidacy is an important barrier to women holding political office.17 Using data from India’s state assembly elections over three decades (1980-2007), we find that while women comprised 5.5% of state legislators over the period, only 4.4% of electoral candidates were women. Does women’s political candidacy respond to the

“demonstration effects” of women winning office? We use a regression discontinuity design to compare women’s candidacy and turnout in constituencies where women won in close elections against men with those in which women lost in close elections against men.

We find that a woman winning office leads to a large and significant increase in the presence of female candidates in the subsequent election. The increase in women’s candidacy is driven primarily by the increased propensity of prior candidates to contest again (rather than the entry of new female candidates), is limited to the incumbent party (not the opposition), and is associated with a reduction in the vote share of new women. There is hence little evidence that mechanisms such as a reduction in voter bias or the entry of more qualified women are driving our results. We also find that female winners are significantly more likely to run from re-election from the same party, compared to male winners (who are more likely to switch parties), suggesting that winning improves the intra-party environment for women more than for men. Further, there are no spillover effects: a woman’s electoral victory does not increase women’s candidacy in nearby constituencies, nor does it increase the chances of a woman winning the next election.

In contrast to the ineffectiveness of the “demonstration effect,” I find that political quotas at the “pipeline” stages are very effective in generating viable women candidates at the state legislature level.18 I exploit the fact that the Bharatiya Janata Party (BJP), a major national political party in India, implemented a one-third quota for women in all party organizational positions starting in 2008. In elections after 2008, I find that the share of women candidates from the BJP was 2 percentage points higher than other national or major regional parties. Most of this increase is due to the participation of new female candidates, suggesting that organizational quotas are an effective means of preparing women for higher levels of leadership. The introduction of women’s quotas for local councils also increases women’s candidacy in subsequent state level elections by 2 percentage points, and nearly half of this increase is attributable to the entry of new women.

Economic Determinants of Crime and Political Conflict

In a series of papers, I have also explored the consequences of economic backwardness for political and security outcomes. Using detailed district level data from both Nepal and India, I show that poorer areas have a much higher incidence of internal conflict. In Nepal, a 10 percentage point increase in the proportion of people under the poverty line is associated with 23-25 additional deaths in their decade-long civil war, while factors such as caste or linguistic divisions in society are not significant predictors of conflict intensity.19 In recent work, Petia Topalova and I investigate whether this relationship with economic outcomes is a causal one, by using two independent and exogenous shocks to household income in rural India: the dramatic reduction in import tariffs in the early 1990s and rainfall variations.20 We find that trade shocks, previously shown to raise relative poverty, also increased the incidence of violent crimes and property crimes, and that the relationship between trade shocks and crime is similar to the observed relationship between rainfall shocks and crime.

Teaching, Case Writing and Professional Service

I have taught a variety of courses to varied audiences. At HBS, I taught the first-year MBA course “Business, Government and the International Economy (BGIE)” for several years. This course teaches MBA students the basics of macroeconomics, international economics, development economics and political economy. For the past few years, I have taught an advanced elective course, “Institutions,
Macroeconomics and the Global Economy (IMaGE),” to second-year MBA students. These courses are taught using the case method, which has made me proficient in conveying rigorous economic insights to audiences with varied backgrounds and levels of exposure to economic formalism. This case study approach can be fruitfully incorporated into undergraduate and masters level economics courses.

Since 2013, I have been teaching a module entitled “Globalization and Public Policy” in the Program for Leadership Development (PLD), an executive education program. I have lengthened and deepened the participant experience in this program by introducing webinars, assigning a macroeconomics textbook and requiring participants to take an online quiz to ensure understanding of core concepts. Prior to joining HBS, I taught development economics and applied econometrics to undergraduate and graduate students at MIT, and mid-career public policy students at the Harvard Kennedy School.

As part of my case-writing responsibilities at HBS, I have written more than a dozen cases about economic and political institutions in countries as diverse as India, China, Indonesia and the United Kingdom. My case writing is geared to help students understand the role of specific economic and political institutions in shaping the business environment, and to enable them to manage firms in ways that avoid, ameliorate or solve problems created by poor government functioning. Many cases are motivated by my academic research. For instance, the case on “Dharavi” discusses the pros and cons of property rights reforms in urban slums, while “Indonesia’s OJK” encourages students to discuss whether monetary policy should be under the control of elected politicians or appointed bureaucrats. Many of my cases will appear together in a book entitled Institutions, Institutional Change and Economic Performance in Emerging Markets, currently under contract with a publisher.

I have had the pleasure of organizing a range of research activities at Harvard. Since 2012, I have co-organized the Harvard University Development Faculty Retreat, which brings together development economics from all parts of Harvard (HBS, HKS, FAS, HSPH, GSE) to present early stage research. Within HBS, I co-organized the BGIE Unit’s International Foundations of Capitalism (IFC) seminar series from 2004 to 2008, a Unit brown bag lunch series in 2009 and 2010, and the BGIE Conference in 2013. I serve on the Program Committee for the NEUDC conferences and on the editorial board of the Journal of Comparative Economics.