

# SEED 2025

## Symposium on Evidence of Economic Development

Hosted by

Economics Area

Indian Institute of Management Bangalore

June 28-29, 2025



## PROGRAM SCHEDULE

DAY 1: June 28, 2025 (Saturday) Venue: Classroom N-001		
8:45 – 9:00	Inauguration by Prof. U Dinesh Kumar, Dean (Faculty), IIM Bangalore	
Session 1 – Development 1		
9:00 – 9:50	Tarun Jain IIM Ahmedabad	"When Science Feels Like Math: The Role of Quantitative Framing in Science Gender Gaps"
9:50 – 10:40	Yatish Arya Ashoka University	"Green Spaces for Saffron Growth?"
10:40 – 11:00	Coffee Break	
Session 2 – Behavior 1		
11:00 – 11:50	Moumita Roy Ahmedabad University	“Achieving Peace in Conflicts with Spillovers”
11:50 - 12:40	Jeevant Rampal IIM Ahmedabad	“Bureaucrat Assignment Mechanisms: Theory and Evidence”
12:40 – 2:00	Lunch at MDC	
Session 3 – Firms 1		
11:00 - 11:50	Abhishek Shaw Azim Premji University	"Consumption and Borrowing: Land-holding Inequality and the Effects of Cash Transfers"
11:50 - 12:40	Manini Ojha Jindal Global University	"Banning the bottle, shifting the balance: Causal evidence from Bihar's Alcohol Ban”
3:40 – 4:00	Coffee Break	
Session 4 – Firms 2		
4:00-4:50	Vidhya Soundararajan CAFRAL	"Credit Supply Shocks, Firm Performance, and Aggregate Productivity Growth"
4:50 – 5:40	Kunal Dasgupta IIM Bangalore	"Trade Costs and Industrialization"
7:30pm	Symposium Dinner	
DAY 2: June 29, 2025 (Sunday) Venue: Classroom N-001		
Session 5 – Development 2		
9:00 – 9:50	Tanika Chakraborty IIM Calcutta	"The Roads to Hospital and Healthcare Access"
9:50 – 10:40	Shilpa Aggarwal ISB	A Road for all Seasons: Market Access and Inter-temporal Arbitrage in Rural India
10:40 – 11:00	Coffee Break	
Session 6 – Development 3		
2:00 – 2:50	Debi Prasad Mohapatra UMass Amherst	"Spillover effects in complementary markets: A study of the Indian cellphone and wireless service markets"
2:50 – 3:40	Akhil Ilango IIM Bangalore	"Identity, Market Access, and Demand-led Diversification"
12:40 – 2:00	Lunch at MDC	

## DETAILED PROGRAM

Session 1 – Development 1	Abstracts
<p><b>"When Science Feels Like Math: The Role of Quantitative Framing in Science Gender Gaps"</b></p> <p>Tarun Jain &amp; Divyanshu Jain</p> <p>IIM Ahmedabad</p> <p><a href="https://www.iima.ac.in/faculty-research/faculty-directory/tarun-jain">https://www.iima.ac.in/faculty-research/faculty-directory/tarun-jain</a></p>	<p>This paper investigates the role of math-intensive evaluation in driving science gender gaps. Using question-level data from a large standardized exam conducted annually from grade 3 to 10 in India, we find that (i) boys outperform girls in mathematics in each grade, (ii) girls outperform boys in science in initial grades, match in grade 6, and underperform in grades 7 to 10, and (iii) the gender gap in science entirely explained by underperformance on quantitatively framed questions. Girls perform comparably to boys on non-quantitatively framed science questions, but underperform on quantitatively framed science questions across all grades. These findings highlight the importance of how science tests are framed and evaluated in explaining gender differences in science performance in school, and possibly on the transition to science-related occupations.</p>
<p><b>"Green Spaces for Saffron Growth?"</b></p> <p>Yatish Arya</p> <p>Ashoka University</p> <p><a href="https://www.ashoka.edu.in/profile/yatish-arya/">https://www.ashoka.edu.in/profile/yatish-arya/</a></p>	<p>Religious and cultural organizations are increasingly influential in shaping political landscapes across the globe, yet little is known about the spatial and infrastructural conditions that enable their growth. This paper examines how access to public gathering spaces affects the organizational capacity of such groups, focusing on the Rashtriya Swayamsevak Sangh (RSS)—a Hindu nationalist organization in India and the ideological backbone of the Bharatiya Janata Party (BJP). Using novel data collected across 162 localities in Delhi between 2016 and 2019, we document a strong positive relationship between the availability of public parks and the presence of RSS neighborhood assemblies (shakhas). We show that an additional park per 10,000 people is associated with an 8% increase in the number of RSS shakhas per capita. To address concerns about endogeneity, we exploit historical city planning documents from 1962 that proposed park locations independent of contemporary political dynamics. Using these proposals as an instrument, we confirm a causal link between park availability and RSS activity. Furthermore, we demonstrate that local RSS presence is a strong predictor of BJP electoral success. Our findings highlight how urban infrastructure, though often associated with developmental benefits, can also shape political mobilization in significant and unintended ways.</p>

Session 2 – Behavioral 1	
<p><b>“Achieving Peace in Conflicts with Spillovers”</b></p> <p>Moumita Roy</p> <p>Ahmedabad University</p> <p><a href="https://ahduni.edu.in/academics/schools-centres/amrut-mody-school-of-management/faculty/moumita-roy/">https://ahduni.edu.in/academics/schools-centres/amrut-mody-school-of-management/faculty/moumita-roy/</a></p>	<p>In conflicts with spillovers, agents’ efforts have a positive or negative spillover on the rival’s payoff. Although many studies have studied conflict resolution mechanisms, little is known about which type of conflict resolution mechanism can reduce conflict in conflicts with spillovers. We use a novel laboratory experiment and a guiding theoretical framework to report data from augmented two-player Tullock contests. In particular, our experiment provides participants with either a binding mechanism, in which players choose a level of investment towards establishing a peace-keeping agency, or a non-binding mechanism, where players communicate to achieve peace between themselves. We define peace as a situation where neither player exerts any effort in the conflict. Our model predicts that the binding mechanism but not the non-binding mechanism is effective in maintaining peace. Our experimental results show that although neither of the mechanisms is effective in maintaining peace, the non-binding mechanism is significantly more effective in reducing conflict. Our findings provide evidence of the benefits of a welfare-enhancing costless resolution mechanism in dealing with the challenges of conflicts in business, social, and political environments.</p>
<p><b>“Bureaucrat Assignment Mechanisms: Theory and Evidence”</b></p> <p>Jeevant Rampal</p> <p>IIM Ahmedabad</p> <p><a href="https://www.iima.ac.in/faculty-research/faculty-directory/jeevant-rampal">https://www.iima.ac.in/faculty-research/faculty-directory/jeevant-rampal</a></p>	<p>We study matching mechanisms used to assign top-tier Indian bureaucrats to cadres across India. In 2018, the Government of India changed the pre-2018 serial-dictatorship mechanism to the current mechanism with the stated intention to improve national integration. We show that this current mechanism is theoretically vulnerable to strategic misreporting of preferences over cadres, and in equilibrium it can improve national integration only when one’s examination rank is uncertain at the time of reporting preferences. We propose an alternative mechanism that can achieve the goal of national integration while being strategy proof and envy free. We conduct surveys and artefactual experiments with aspirants who reported their preferences to the government, before these aspirants received their cadre assignment. These surveys and experiments yield the causal impact on misreporting and national integration of the pre-2018 policy, the current policy, and our proposed policy. We also survey Indian Administrative Service officers from pre and post 2018 batches to study the impact of the assignment policy change on different measures of job satisfaction.</p>

Session 3 – Firms 1	
<p><b>"Consumption and Borrowing: Land-holding Inequality and the Effects of Cash Transfers"</b></p> <p>Abhishek Shaw</p> <p>Azim Premji University</p>	<p>A rich literature shows that in developed countries, cash windfalls increase consumption and are often used to pay off debt. Does inequality influence how cash transfers affect consumption and borrowing? In this paper, we study an unconditional cash transfer program for agricultural landowners in India in a quasi-natural experiment set up. In aggregate, cash transfers led to an increase in consumption alongside increase in borrowings on the extensive margin. Farmers with large land holdings increased only bank borrowings, whereas small and marginal farmers increased both consumption and borrowing from banks – with heterogeneous effects across quartiles. There are no effects on landless agricultural laborers. These effects appear after cash disbursement and not when the announcement was made. Our results suggest that as landholding size increases, households tend to respond more through borrowing than consumption.</p>
<p><b>"Banning the bottle, shifting the balance: Causal evidence from Bihar's Alcohol Ban"</b></p> <p>Manini Ojha</p> <p>Jindal School of Government and Public Policy</p> <p><a href="https://jgu.edu.in/jsgp/faculty/dr-manini-ojha">https://jgu.edu.in/jsgp/faculty/dr-manini-ojha</a></p>	<p>This paper examines the causal impact of Bihar's 2016 alcohol prohibition on women's empowerment using data from two rounds of the nationally representative NFHS data. Employing a difference-in-differences strategy, we find that the ban led to significant improvements in women's agency, specifically, increased decision-making power regarding health care, large household purchases, family visits, and the use of husbands' earnings, with estimated effects ranging from 9.7 to 14.2 percentage points. We also find evidence of greater autonomy in mobility, with improvements of 4 to 8 percentage points, and a decline in barriers to seeking medical care, including a reduction in needing permission. A key mechanism of our effects appears to be a decline in husbands' alcohol consumption following the ban. Our findings are robust to alternative estimation techniques, alternative measures of the outcome variables, different treatment-control definitions, falsification analysis, and placebo tests. We further document heterogeneity in effects by social group, wealth, and residence, highlighting the potential of alcohol control policies to improve women's agency particularly in the poor, backward social group and rural households.</p>

Session 4 – Firms 2	
<p><b>"Credit Supply Shocks, Firm Performance, and Aggregate Productivity Growth"</b></p> <p>Vidhya Soundararajan</p> <p>Research Director at CAFRAL</p> <p><a href="https://www.vidhyasrajan.com/">https://www.vidhyasrajan.com/</a></p>	<p>We examine India's Prompt Corrective Action (PCA) framework, a regulatory intervention aimed at restoring bank health. Under this policy, banks in poor health are imposed restrictions in lending, expansion, and management compensation provision. We analyze PCA's impact on firms borrowing from affected banks, assessing whether they face credit reductions and if they can substitute with alternative lenders like shadow banks. Our analysis covers the period from 2013 to 2019, during which 12 banks entered PCA. Given that PCA banks accounted for approximately 19% of total bank lending, their restrictions posed a significant financial shock to firms. Using comprehensive data on collateralized loans and a staggered difference-in-differences (DiD) design, we find that PCA banks significantly reduced lending to risky firms. In contrast, safe firms experienced higher credit. This credit reallocation led to broader shifts in sales, capital, and labor from high-risk to low-risk firms. These results are robust after controlling for the firm-demand channel, an instrumental variables approach, using new DiD estimators accounting for heterogeneous treatment effects, and addressing other potential endogeneity concerns. Industries with higher share of affected firms witness decongestion as the policy shifted productive resources from lower to higher-productivity firms.</p>
<p><b>"Trade Costs and Industrialization"</b></p> <p>Kunal Dasgupta</p> <p>IIM Bangalore</p> <p><a href="https://sites.google.com/site/dasguptakunal/home">https://sites.google.com/site/dasguptakunal/home</a></p>	<p>We examine how industrialization in a country is shaped by the interaction of internal and external trade costs. Using organized manufacturing sector data for India, we show that between the years 1994 and 2000, regions close to international cargo ports grew slower than those farther away. This trend reversed after 2000, however. Regardless of the period, manufacturing activity in the regions farther from the ports remained depressed. These industrialization patterns can be rationalized in a spatial model that features both domestic and international trade. Guided by the model, we argue that the observed reallocation in manufacturing activity was driven by two major events during this period: a decline in external trade costs triggered by trade liberalization that caused movement away from the ports, and a subsequent decline in internal trade costs due to a major highway project that caused movement toward the ports.</p>

Session 5 – Development 2	
<p><b>"The Roads to Hospital and Healthcare Access"</b></p> <p>Tanika Chakraborty</p> <p>IIM Calcutta</p> <p><a href="https://www.iimcal.ac.in/users/tanika">https://www.iimcal.ac.in/users/tanika</a></p>	<p>Adoption and utilization of social insurance programs remain low in India despite high out-of-pocket health costs. In this paper, we study the role of complementarity between different public goods that could explain this puzzling evidence. While social insurance programs subsidize private tertiary healthcare for the poor, a majority of the poor households live in rural regions with limited geographic access to private hospitals which are mostly urban. In this paper, we estimate the extent to which rural road connectivity mitigates the barriers to accessing, Arogyasri. Using the rural road construction program under the Pradhan Mantri Gram Sadak Yojana (PMGSY) program, we estimate the effect of road connectivity on utilization of Arogyasri - India's pioneering public health insurance program, introduced in erstwhile Andhra Pradesh in 2007. Using habitation level road construction data, a population-threshold based road allocation rule, and administrative insurance claim records from Arogyasri, we find that access to a new road increases the likelihood of making an insurance claim by 6.9 percentage points, from a baseline mean of 18%. At the intensive margin, our results suggest that a village registers approximately 0.86 more health-insurance claim when connected by a new road, a remarkable increase considering a baseline mean of 0.91 claim per village per year. These findings are also supported by our Instrumental Variable estimates, using the discontinuity created by the population-thresholds as an instrument.</p>
<p><b>A Road for all Seasons: Market Access and Inter-temporal Arbitrage in Rural India</b></p> <p>Shilpa Aggarwal</p> <p>Indian School Business</p> <p><a href="https://aggarwalshilpa.wixsite.com/home">https://aggarwalshilpa.wixsite.com/home</a></p>	<p>This paper examines the impact of a large-scale rural road infrastructure program, which connected market centers to unconnected villages, on inter-temporal price volatility in agricultural markets in India. Leveraging the staggered roll-out of the program, we find that improved road connectivity significantly reduces the annual price dispersion of non-perishable crops, by allowing farmers to delay sales to later in the harvest cycle when prices are higher. The effects are strongest in regions with access to storage facilities and rural credit, underscoring the importance of complementarities in agricultural marketing infrastructure.</p>

Session 6 – Development 3	
<p><b>"Spillover effects in complementary markets: A study of the Indian cellphone and wireless service markets"</b></p> <p>Debi Prasad Mohapatra</p> <p>University of Massachusetts Amherst</p> <p><a href="https://www.umass.edu/resource-economics/about/directory/debi-prasad-mohapatra">https://www.umass.edu/resource-economics/about/directory/debi-prasad-mohapatra</a></p>	<p>This paper studies indirect network effects between two complementary markets and quantifies how the presence of technologically more advanced international firms in one market helps the development of the other market (a cross-market spillover effect), which, in turn, benefits domestic firms in the first market (a within-market spillover effect), and more importantly, how consumers benefit from both spillovers. Our context is the Indian mobile phone industry during the 4G rollout. The industry consists of two complementary markets: the handset market, where international firms play a large role, and the wireless service market. Using data on sales, prices, and product availability in these two markets, we estimate a structural model of consumer demand, carriers' 4G network expansions, and handset firms' product choices. Our estimates yield four findings supporting the spillover effects. Using counterfactual simulations, we quantify how the presence of international handset firms accelerates 4G network deployment, increases 4G handset variety, and benefits consumers.</p>
<p><b>"Identity, Market Access, and Demand-led Diversification"</b></p> <p>Akhil Ilango</p> <p>IIM Bangalore</p> <p><a href="https://www.iimb.ac.in/user/249/akhil-ilango">https://www.iimb.ac.in/user/249/akhil-ilango</a></p>	<p>Using Indian microdata on employer-employee caste composition and household consumption, we document demand segmentation along caste lines, limiting firms' market penetration and reducing firm size in the economy. We develop a model where consumers prefer goods produced by socially closer groups, and firms overcome these barriers by hiring employees from the target consumer group. We identify the structural parameters governing demand segmentation using rainfall-induced demand shocks. Counterfactuals indicate that social identity-driven barriers restrict the growth of high-quality firms while sustaining low-quality ones. Lowering the cost of hiring out-group employees expands firm size by improving market access and enhances consumer welfare through greater variety of products.</p>

Symposium on Evidence of Economic Development (SEED) is jointly organized by [Pavel Chakraborty](#) (University of Bath, UK), [Anindya Chakrabarti](#) (IIM Ahmedabad) and [Ritwik Banerjee](#) (IIM Bangalore)