

## IGC ISI INDIA DEVELOPMENT POLICY CONFERENCE

19-20 December 2011

Indian Statistical Institute, Delhi Centre

The 2<sup>nd</sup> IGC-ISI India Development Policy Conference, the annual growth conference of the IGC India Central Programme, was held at the Indian Statistical Institute (ISI), Delhi Centre on 19-20 December 2011. This conference brought together researchers, policymakers, members of non-governmental organisations as well as media representatives, and served as a forum to widely disseminate the IGC's research and to discuss the policy implications of the findings of ongoing and completed work. The conference was also successful at the identification of further areas of research that are relevant to the policymaking community.

The programme included sessions designed around the three priority areas of the India Central Programme i.e. Macroeconomic and Financial Sector Policies, Urbanisation and Infrastructure, and Human Development – Health and Education. 7 Country Programme Projects, 5 Research Programme Projects and 1 jointly funded (by the India Central Country Programme and Research Programme) were presented at the Conference. In addition to IGC-funded work, 6 other papers related to the priority areas were also presented. 3 keynote lectures were delivered, of which 2 were by researchers from the IGC network and 1 by a Member of the Parliament of India. The conference culminated with policy panel, which was an engaging discussion among 3 policymakers (from the Planning Commission and the Ministry of Finance (MoF)) and 4 researchers (3 of whom belong to the IGC network) on the role that research has played and ought to play in the policymaking process, with specific references to the areas of higher education, transport infrastructure and global governance. Following the event, one of the panellists wrote about the discussion in *Business Standard*, one of India's leading business newspapers<sup>1</sup>.

### Inaugural



**Suman Bery, Country Director, IGC India Central**, opened the conference by describing the model and broad mission of the IGC, and introducing the India Central leadership team. **Dilip Mookherjee, Lead Academic (Micro), IGC India Central**, elaborated on mission of the IGC and outlined two key goals: (i) To fund research on pertinent policy issues that have been somewhat neglected but have relevance, and (ii) To disseminate research results in order to foster informed policy debates.

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<sup>1</sup><http://business-standard.com/india/news/shubhashis-gangopadhyay-an-outward-focused-research-culture/459517/>

## Session 1: Urbanisation and Infrastructure I – Urbanisation/ Environment



Session 1 on **Urbanisation and Infrastructure – I (Urbanisation/ Environment)** was chaired by **Mr Hardik Shah (Member Secretary, Gujarat Pollution Control Board)**.

**Parikshit Ghosh (Delhi School of Economics)** presented results from the project titled **“Improving urban air quality in India: Lessons from the Kolkata Clean Air Regulations, 2009”**). The study seeks to assess the impact of the Kolkata Clean Air Regulations 2009 -

according to which all auto rickshaws in the state were required to be upgraded to a cleaner fuel (LPG) – in terms of air quality improvement as well as economic impact on auto rickshaw drivers. The study involves a survey of about a 100 auto rickshaw drivers that collects socioeconomic data on the drivers as well as data on changes in rent, maintenance costs, work hours, waiting time for refilling and net income flows. Ghosh said that both for political pragmatism and equity reasons, one needs to make use of such data to arrive at the right transfer policy so that the society can enjoy the benefits of cleaner air without hurting a particular section of society.

**Rohini Pande (Harvard Kennedy School)** presented an ongoing project titled **“Urban governance and public good provision in Delhi’s slums”**. Broadly, the project seeks to examine the political constraints that limit public good provision in Delhi slums. Pande said that roughly a quarter of India’s urban population lives in slums with low public goods provision, and municipal councillors wield significant policy influence over public good provision in slums. Data from a household survey (2010) shows that 36% of the sample (102 wards; 50 households/ ward) is aware of municipal councillor funds and only 3% is aware of the approximate amount of funds. A research question for the 2012 election is the margins politicians will respond on if the information on public goods quality (to politicians) and councillor spending (to voters) is experimentally altered under different scenarios.



**Michael Greenstone (MIT)** presented the ongoing project on **“Improving Gujarat’s industrial pollution inspection standards”**. The presentation focused on one of the two interventions studied by the project - modified environmental audits by private auditors. Incentives for accurate reporting were improved by making auditors independent i.e. they were randomly assigned to firms and not paid by firms. A proportion of the auditors working under the modified scheme were back-checked and pay was linked to the accuracy of pollution readings. The results show that auditors in the treatment scheme report higher pollution concentration, auditors in the treatment scheme report the truth whereas auditors in the standard scheme under-report, and the modified audit scheme reduces true pollution emissions.

## Keynote Address 1: Infrastructure



Session 1 was followed by a keynote address by **NK Singh (Member of Parliament, Rajya Sabha)**, which was chaired by **T.N. Srinivasan (Yale)**. The talk broadly focused on the theme of **infrastructure** in India. NK Singh emphasised the importance of the quantity and quality of infrastructure for GDP growth, competitiveness, employment, and for reducing inter-state income and growth inequalities. He discussed five broad issues within the area of infrastructure – (i) Finance: amount required, sources, inter-sector and inter-state allocation etc. (ii) Need for an integrated infrastructure policy (iii) Regulatory framework: process of appointing regulators, their compensation structure and manner of functioning need to be modified (iv) Centre-state relations: demarcation of responsibilities as well as enforcement of rules, regulations and guidelines, especially in the power sector, is an area of concern (v) Specification: issues relating to power, roads, telecom and railways are vastly different from one another. He said that research is of value to policymakers as it generates debate and creates awareness, and good governments would certainly adopt outcomes of research. He suggested a few areas within infrastructure where research could inform policy – how the economy responds in states that have unbundled electricity, budget choices say, if there ought to be public outlay on power or rural roads, performance of rural electrification programmes, reducing agro-products wastage, and the importance of rural roads penetration for linkages with the urban economy.

## Session 2: Urbanisation and Infrastructure II - Infrastructure/ Governance



Session 2 on  
Urbanisation  
and  
Infrastructure  
II

(Infrastructure/ Governance) was chaired by Pronab Sen (Principal Adviser, Planning Commission).

**Farzana Afridi (ISI Delhi Centre)** presented the ongoing project titled “Does female leadership impact on the quality of public goods? Evidence from a public poverty alleviation programme in Andhra Pradesh, India”<sup>2</sup>. The project studies the recent extension of the focus on women as agents of change from the economic to the political sphere, in the context of the National Rural Employment Guarantee Scheme (NREGS) in Andhra Pradesh, using randomized political reservations. The key preliminary observations discussed by Afridi were that while there are significant differences in the characteristics of male and female reserved ‘sarpanchs’, there is no difference in their perceived effectiveness, and there are potentially larger effects of social audits in female reserved ‘gram panchayats’.

**Gunjan Sharma (University of Missouri)** presented early results from the project “Determinants of clusters in Indian manufacturing”<sup>3</sup>. The key questions addressed by the study include what determines the location of different industries across states within India, and whether there are complementarities between regional and central government initiatives to boost manufacturing industry. Using data from the Annual Survey of Industries (ASI) cross-sections of manufacturing plant-level data (1980-99) and other sources, it is found that comparative advantage factors are important in explaining concentration and entry, and federal policies boost importance of some types of comparative advantage.

**Miriam A. Golden (UCLA)** presented the project titled “Local level estimates of corruption and theft in the energy sector of Uttar Pradesh, India”<sup>4</sup>. The study uses electoral, demographic and power, output, bills and revenue data from Uttar Pradesh to find that power “theft” is politically correlated – it is greater around election years, greater in zones with more agricultural users (suggesting higher caste and economically better off tube well owners that exceed their allotted usage),



<sup>2</sup> [http://www.theigc.org/sites/default/files/farzana\\_afриди.pdf](http://www.theigc.org/sites/default/files/farzana_afриди.pdf)

<sup>3</sup> [http://www.theigc.org/sites/default/files/gunjan\\_sharma1.pdf](http://www.theigc.org/sites/default/files/gunjan_sharma1.pdf)

<sup>4</sup> [http://www.theigc.org/sites/default/files/gunjan\\_sharma1.pdf](http://www.theigc.org/sites/default/files/gunjan_sharma1.pdf)

and is electorally advantageous to the incumbent member of the legislative assembly.

## Keynote Address 2: Will adaptation save us from climate change?



Session 2 was followed by a keynote address by **Michael Greenstone (MIT)** on the topic “**Will adaptation save us from climate change?**”<sup>5</sup> The address was chaired by **Kirit Parikh (IRADe)**.

Greenstone emphasised the adverse effects of climate change (in terms of mortality and morbidity, species extinction, water stress, farm productivity etc.), and specified the three main ways of dealing with climate change – mitigation, adaptation and geo-engineering. Given that mitigation is politically and economically challenging, and there is limited scientific research in the case of geo-engineering to deal with climate change, adaptation appears to be a large part of the solution.

However, adaptation is costly and likely to be unequal across the globe and the income distribution. US alone cannot reduce global emissions and big cuts in emissions are also required by developing countries such as India and China. In India, Hot Days are associated with a sharp decline in agricultural output and rural wages, and a sharp increase in mortality rates. The projected increase in annual mortality rate in India by the end of the century is 46 percent as compared to 3 percent in the United States. India currently has fewer adaptation opportunities and there is tremendous pressure to grow per capita incomes to get a temperature-mortality response function similar to the United States. Chlorinated water supply, electrification and air conditioning, and hospital access are some of the factors responsible for improvement in the situation in the United States.

He concluded by saying that empirical evidence on the history of adaptation to environmental change is nascent and mainly focused on relatively short-run adaptations. Hence, more research on the subject is necessary.

## Session 3: Macroeconomics

Session 3 on **Macroeconomics** was chaired by **Tridip Ray (ISI Delhi Centre)**.

**Amartya Lahiri (University of British Columbia)** presented the ongoing project titled “**Macroeconomic take-off and distributional churning in India**”<sup>6</sup>. The project addresses the issue of how historical



<sup>5</sup> [http://www.theigc.org/sites/default/files/greenstone\\_adaptation\\_to\\_climate\\_change\\_121911.pdf](http://www.theigc.org/sites/default/files/greenstone_adaptation_to_climate_change_121911.pdf)

<sup>6</sup> [http://www.theigc.org/sites/default/files/amartya\\_lahiri.pdf](http://www.theigc.org/sites/default/files/amartya_lahiri.pdf)

inequalities behave during periods of rapid and large macroeconomic changes - are they accentuated or dampened, who gains and who loses, and what are the key channels through which distributional changes occur. National Sample Survey (NSS) data for India is used to show that India has seen a sharp catch up in education and wages of historically disadvantaged groups (scheduled caste/ scheduled tribe). Aggregate shocks can have differential effects if there is pre-existing subsidisation of education for SC/STs.

**Ila Patnaik (National Institute for Public Finance and Policy)** presented results from the project titled **“Does foreign institutional investment in India increase financial vulnerability? An empirical investigation using an event study approach”**<sup>7</sup>. There is concern among policymakers in developing countries regarding foreign investors being “fair weather friends” i.e. if there is a domestic crisis, will foreign investors make it worse by exiting, and if foreign investors are big fish in a small pond i.e. can their trades (regardless of motivation) kick off short-term price distortions. Using data on daily FII flows from Custodian reports to the Government of India (1999-2011) and an event study methodology, it is seen that there is an asymmetry in the impact of extreme FII days on market prices and the impact of extreme market days on FIIs – in the former, the impact is broadly consistent with market efficiency, whereas in case of the latter, more money seems to come into India after extremely good days for Nifty and S&P 500. Even on extreme days for foreign investors, there is no overshooting on either side. The effects are relatively small in all cases. Patnaik however, points out that in the case of India, it may be the liquidity of the equity market that is driving these benign outcomes and the results may be different in other countries.

#### Session 4: Finance



Day 1 of the conference concluded with session 4 on **Finance**, chaired by **Indira Rajaraman (ISI Delhi Centre)**. **Mark Rosenzweig (Yale)** described the design of his project titled **“Selling formal insurance to the informally insured”**. The paper assesses (i) Whether and how the presence of risk sharing networks affects the demand for index insurance, and (ii) How and whether informal risk-sharing and formal index insurance affect risk-taking. Indian rural panel survey data from 17 states in India and data from a field experiment applied to households in the survey data are used to test the theoretical model.

<sup>7</sup> [http://www.theigc.org/sites/default/files/ila\\_patnaik.pdf](http://www.theigc.org/sites/default/files/ila_patnaik.pdf)



**Shawn Cole (Harvard Business School)** presented the project titled **“Are banks responsive to exogenous shocks in credit demand? District-level evidence from India”**<sup>8</sup>. The paper seeks to answer the question of how important incentives are within banks, and if performance-based pay is to be blamed for excessive risk-taking in financial institutions. A field experiment with three incentive treatments – varied power, deferred versus immediate compensation and effect of relaxing limited liability constraint, was undertaken with commercial bank loan officers. Cole presented the following results: (i) Loan officer (and bank) heterogeneity is important (ii) Incentive schemes affect

perception of risk, not just risk-taking (iii) Lending decisions are hard – high powered incentives yield small, but really only incremental gains (iv) Deferring compensation by three months with financially sophisticated individuals has a big effect, and (v) Limited liability reduces effort, but maybe desirable to encourage risk taking.

**Sankar De (Indian School of Business)** presented a paper on **“Are banks responsive to exogenous shocks in credit demand? District-level evidence from India”**. The paper examines whether the commercial banking system in the rural economy of India responds effectively to sudden changes in credit demand due to exogenous shocks. It is found that agricultural credit outstanding in a district is higher in drought years compared to non-drought years. The increase is driven by an increase in the average account size rather than the number of accounts, and due to new loans rather than non-payment of old loans. Moreover, when a drought corresponds with an election year, the effect is not different from that during other drought years.

## Session 5: Human Development – Health

Day 2 of the conference began with session 5 on **Human Development – Health**, chaired by **Arunish Chawla (Planning Commission)**.

**R Manjula (Institute for Social and Economic Change)** presented the ongoing project titled **“Motivating agents to spread information on health insurance: The role of explicit incentives and social identity matching”**<sup>9</sup>. The study is motivated by the fact that lack of information/awareness among beneficiaries is an important cause of the failure of public service delivery. The paper looks at different channels of information delivery using a randomized field experiment in India, in the context of the



<sup>8</sup> <http://www.theigc.org/node/2345>

<sup>9</sup> [http://www.theigc.org/sites/default/files/manjula\\_et\\_al.pdf](http://www.theigc.org/sites/default/files/manjula_et_al.pdf)

'Rashtriya Swasthya Bima Yojana' – a public health insurance scheme. It is found that recruiting local agents to spread information can make a difference to beneficiaries' knowledge about a scheme. While agents with monetary incentives do better at this, social identity also matters – higher knowledge levels are achieved when agents are matched to the households in terms of caste identity. Moreover, the study establishes that improved knowledge also leads to higher take-up of welfare programmes.

**Nidhiya Menon (Brandeis University)** presented the project **"Seasonal effects of water quality on maternal and infant health in India"**<sup>10</sup>. Water quality data from the Central Pollution Control Board (CPCB) of India and other sources is combined with Indian National Family Health Survey data to evaluate the infant and child health implications of exposure to fertilizer agrichemicals. It is found that month of conception exposure to agrichemicals in water has effects on first trimester and after-birth outcomes. The findings highlight the tension between greater use of fertilizers to improve yield and the negative child effects that result from such use. Possible ameliorative strategies include reliance on organic fertilizers, alternative farming techniques to improve soil productivity, programs to improve nutrition of mothers who are most exposed, early health intervention programs for low birth weight babies, and programs to raise consciousness in this regard.



**Sonia Bhalotra (University of Bristol)** presented on **"Political identity and public health provision in India"**<sup>11</sup>. The study investigates whether increasing women's political representation alters policy choices. In particular, it tests the hypothesis that women have stronger preferences over health provision because they disproportionately bear the cost of poor reproductive and child health services. A significant causal impact of raising women's political representation on neonatal survival, indicators of prenatal and early postnatal care, and the village level public health infrastructure is found. This is consistent with women leaders identifying with the needs of women voters.

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<sup>10</sup> [http://www.theigc.org/sites/default/files/nidhiya\\_menon.pdf](http://www.theigc.org/sites/default/files/nidhiya_menon.pdf)

<sup>11</sup> [http://www.theigc.org/sites/default/files/sonia\\_bhalotra\\_1.pdf](http://www.theigc.org/sites/default/files/sonia_bhalotra_1.pdf)



## Session 6: Human Development – Education and Rural Livelihoods



Session 6 on **Human Development – Education and Rural Livelihoods** was chaired by **Surendra K. Bagde (Ministry of Finance)**.

**Karthik Muralidharan (UCSD)** presented a paper on **“The aggregate effects of school choice: Evidence from a two-stage experiment”**<sup>12</sup>. There is evidence for higher test scores in private schools even after controlling for household assets and literacy levels, and a strong case for considering voucher-based education reforms that fund students and not schools. The recent Right to Education Act in India mandates a reservation up to 25 percent in private schools for students from disadvantaged backgrounds. In this context, this project conducts a school choice experiment – the first of its kind in India, across 180 villages in Andhra Pradesh, wherein randomly selected communities and students are provided vouchers/ scholarships to move to a private school of their choice. It is found that process indicators and parental satisfaction are better in case of private schools, but there is no significant impact on test scores. The study has mixed results for the private school versus voucher debate.

**Vijayendra Rao (World Bank)** presented on **“Designing a social observatory for National Rural Livelihoods Mission (NRLM)”**<sup>13</sup>. Rao described a poverty reduction project aimed to improve access to credit, encourage stable livelihoods, promote food security, and engender social change, executed by the NRLM – a society under the Ministry of Rural Development, Government of India. The key challenges faced by the project include local heterogeneity, heterogeneity in intervention, and requirement of a strong culture of learning by doing, tracking and evaluation. A Social Observatory – research and learning unit – has been set up within the project that would undertake field experiments, qualitative surveys, impact evaluation, national evaluation for outcomes such as household level economic outcomes etc.



<sup>12</sup> [http://www.theigc.org/sites/default/files/karthik\\_muralidharan.pdf](http://www.theigc.org/sites/default/files/karthik_muralidharan.pdf)

<sup>13</sup> [http://www.theigc.org/sites/default/files/vijayendra\\_rao.pdf](http://www.theigc.org/sites/default/files/vijayendra_rao.pdf)

### Keynote Address 3: Microeconomic evidence on the role of human capital in the growth process



Session 6 was followed by a keynote address titled **“Microeconomic evidence on the role of human capital in the growth process”**<sup>14</sup> by **Mark Rosenzweig (Yale)**, chaired by **Santosh Mehrotra (Institute of Applied Manpower Research, Planning Commission)**.

The broad question that the talk seeks to answer is where education and health play a role in the process of growth. Rosenzweig argues that while there is no direct role for health in fostering growth rates in any of the growth theory models, and most studies look at the effect of health on income levels, not on growth rate, there is in fact evidence of a role for health in the growth process and the production of skill. He summed

up the existing microeconomic evidence on learning and schooling, learning from others, the extent to which schooling, productivity and learning relationships merely reflect pre-existing abilities, as well as evidence on Lucas’s idea of increasing returns to human capital, and the effect of improving health and nutrition on productivity and income in low income countries.

Rosenzweig made the following concluding remarks on the growth oriented research agenda on human capital: (i) There is too much focus on populations that did not experience any growth. There is a need to look at settings that have been successful. (ii) It has been observed that schooling payoffs are high when new ideas, technology and innovations flow continuously. Hence, an important question is what restricts these flows. (iii) Given that there is very little cognitive skill intensive work in low income countries, what kind of schooling is more relevant to the state of the economy - cognitive or non-cognitive skills, and (iv) There is a need to redefine growth to include improvements in human capital and health, even if such improvements do not yet augment growth, and to identify areas where health interventions can be most beneficial.

### Session 7: Urban labour markets

The keynote address was followed by the final research session, session 7 on **“Urban labour markets”**, chaired by **Himanshu (Jawaharlal Nehru University)**.

**Kaivan Munshi (Brown University)** presented on **“Urban networks: past and present (India and US)”**<sup>15</sup>. Munshi asserted that low mobility is the hallmark of developing



<sup>14</sup> [http://www.theigc.org/sites/default/files/mark\\_rosenzweig.pdf](http://www.theigc.org/sites/default/files/mark_rosenzweig.pdf)

<sup>15</sup> [http://www.theigc.org/sites/default/files/kaivan\\_munshi.pdf](http://www.theigc.org/sites/default/files/kaivan_munshi.pdf)

countries, and where mobility is observed, it is characterised by the movement of entire groups. Two conditions for collective mobilisation are new opportunities and appropriate (predetermined) community characteristics. Using the examples of the Indian diamond industry and black mobilisation in postbellum south, it is shown that response to opportunities across groups varies with historical preconditions, and the development process at the group level is a sequence of interactions between existing conditions and new shocks.

**Jeremy Magruder (University of California, Berkeley)** presented on **“Who gets the job referral? Evidence from a social networks experiment (Kolkata)”**<sup>16</sup>. The study seeks to address the following questions: (i) Are some or all workers able to identify good matches among their network members, and (ii) Do financial incentives induce employees to change their optimal choice for a referral. Based on a laboratory experiment conducted in per-urban Kolkata, it appears that job networks are ubiquitous. Comparing the lab experiment with out of lab behaviour, it is found that individuals that are offered performance pay contracts are more likely to recruit co-workers and less likely to recruit relatives, and high ability individuals recruit high ability referrals who are also reliable when incentivised. The experiment provides evidence that networks – at least high ability members – can exploit information about peers’ capabilities, and individuals in networks are responsive to incentives.

**Vegard Iversen (University of Manchester)** presented a paper titled **“Network mechanisms and social ties in markets for low and unskilled jobs: Evidence from North India”**<sup>17</sup>. The paper seeks to explain why social clusters in Indian industries and workplaces are formed, and why employers may benefit from social connections among members of the workforce. Data from interviews conducted at the household and individual migrant level in western Uttar Pradesh is used to validate three predictions of the theoretical model: (i) Workplace referrals should be widespread (ii) Employers should select in-house referees with high stakes as compared to the employer, and (iii) Referees should recruit individuals who care sufficiently about referee welfare. The results give credence to the moral hazard account of workplace referral. Not only are connections to workplace insiders necessary, insiders need to have stature within the recruiting firm. Social obligations among members of the workforce may compensate for incomplete contracts in work relations in markets for low and unskilled jobs.

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<sup>16</sup> [http://www.theigc.org/sites/default/files/jeremy\\_magruder.pdf](http://www.theigc.org/sites/default/files/jeremy_magruder.pdf)

<sup>17</sup> [http://www.theigc.org/sites/default/files/vegard\\_iversen.pdf](http://www.theigc.org/sites/default/files/vegard_iversen.pdf)

## Session 8: policy Panel



The conference concluded with a **Policy Panel** that involved a discussion among three policymakers – Alok Sheel (MoF), Pawan Agarwal (Planning Commission) and Manoj Kumar (Planning Commission), and four researchers – Shubhashis Gangopadhyay (Indian Development Foundation), Mark Rosenzweig (Yale), Rohini Somanathan (Delhi School of Economics) and Karthik Muralidharan (UCSD), on the role of research in the process of policymaking. The discussion was chaired by **Suman Bery (IGC)** and **Dilip Mookherjee (Boston University, IGC)**.

Speaking on the topic from the point of view of the **architecture for global governance**, **Alok Sheel (MoF)** suggested the following areas for research: (i) What should be the governance structure in the G-20 that should exist internationally? (ii) What SWOT analysis should India pursue while in the G-20? (iii) What should be India's stance on issues that exist in the G-20? (iv) What are the issues that India should raise within the G-20? (v) The issue of re-balancing and global savings in the G-20?



Speaking on **higher education**, **Pawan Agarwal (Planning Commission)** asserted that this is one of the worst researched areas in India, as well as globally to some extent. An issue is that the purpose and quality of higher education are both very ambiguously defined. In contrast to China, India has no focused research on higher education and neither is it taught as a subject. Active policy research on higher education is critical for India, especially since we are going forward with universalization of higher education and the potential results of this for India are still unclear.

**Manoj Kumar (Planning Commission)** pointed out three constraints on the scope for researchers to contribute to policymaking: (i) Asymmetry of information (ii) Time constraints faced by policymakers, and (iii) Researchers would like to do work to publish in academic journals while policy-relevant research may not be published in academic journals, which is a priority for researchers. He emphasised the need for more avenues of interaction between the policymakers and researchers. In the context of **transport** and the 12<sup>th</sup> Five Year Plan, he said that applied and empirical research inputs are required for integration of transport as well as with regard to financing of infrastructure.

**Shubhashis Gangopadhyay (Indian Development Foundation)** said that there is a requirement for government funding and institutional changes in order to promote active research in social sciences. A key issue faced by development economists in India is the lack of access to data, on account of which they are unable to work on important research questions. A reason for the gap between researchers and policymakers is that researchers like to work on questions whose solution is not known or to provide a new solution for an old problem. For instance, there is a need to generate more non-agricultural lands in order to enable people to move out of agriculture. This may be achieved through accelerated urbanisation. It will however, solve the problem only if the government cooperates and encourages researchers to figure out solutions on how to urbanise. The government has to be more forthcoming and the researchers have to focus on the right issues.



**Mark Rosenzweig (Yale)** remarked that researchers could help ministers ask the right kind of questions. He illustrated the gap between research and policymaking through the example of the caste system in India. Research suggests that the caste system plays an integral role in solving many of the problems of market economies, gaps in the legal system and inadequate property rights. In some cases, the caste system contributes to job searches. On the other hand, the Planning Commission reports seem to say that the caste system is a serious cause for labour immobility across occupations and that it should be corrected through reservations and other means. Hence, there seems to be a need for policymakers to learn about what research is going on and vice versa.



**Rohini Somanathan (Delhi School of Economics)** said that a possible way to bridge the gap between research and policymaking is to do some swapping between academics and bureaucrats. She remarked that an important issue is India's position on climate change. While it is heartening to note that India and other countries such as China have taken on climate negotiations, it is disheartening that these economies believe they are only a small part of the whole issue and should hence, not be constraining themselves. It is critical to note that climate change is not only associated with

global problems but also local problems, for instance, health effects, and these have relatively easy solutions.

**Karthik Muralidharan (UCSD)** said that there are gaps between what researchers know, what is happening in policy, and what researchers do not know at all. Often researchers undertake studies

on policy on which there is a lot of government spending but what is missing is the policy push to take strong measures. For instance, regarding the Right to Education (RTE), there has been increasing expenditure on education but the learning outcomes of students have almost not changed. The Human Resource Development ministry's documents seem to emphasise on budgets and inputs rather than outcomes. IGC has a role to play by showcasing research findings. The policy makers are more interested in tactical questions whereas researchers ask more fundamental questions. There are a number of political economy issues that are relevant to both policy and academia such as improving the provision of high quality administrative data.