

Final report



Development Economics Conference report



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Development Economics Conference Report

By Farria Naeem, Tim Dobermann, and Zeeshan Abedin

The Development Economics Conference held in Dhaka, Bangladesh on 12 March 2017 was organized by the International Growth Centre (IGC), in collaboration with the BRAC Institute of Governance and Development, BRAC University (BIGD).

The seminar brought together policy stakeholders and researchers with the objective of showcasing IGC research, and sharing ideas, experiences and best practices for achieving sustainable growth in Bangladesh. The seminar comprised of sessions on key priority areas of the IGC in Bangladesh, including manufacturing growth, infrastructure development, energy, sustainable urbanization, and governance.

The seminar disseminated research findings to policymakers and other stakeholders. It also enabled policymakers to comment on the relevance and outcomes of IGC research. The daylong seminar highlighted the shared challenges to growth and possible policy solutions for Bangladesh, encouraging a lively debate on issues such as migration and social mobility, the challenges posed by climate change, how to improve firm capabilities, enhance state effectiveness etc. The participants in the seminar were affiliated with some of the world's top universities –Harvard, Yale, London School of Economics, Ohio State University, Monashamong others.

About IGC and BIGD

The IGC is an international network of researchers and policy analysts from around the world, directed and organized from hubs at the London School of Economics and Oxford University. It aims to promote sustainable growth in developing countries through demand-led policy advice based on frontier research. The IGC was initiated and is funded by the United Kingdom's Department for International Development (DFID). BIGD, University is a centre of research and academic excellence. BIGD is devoted to research on the entire range of governance concerns as they relate to development, while also conducting research on a range of development issues centred mainly on Bangladesh. BIGD, BRAC University is the secretariat of IGC in Bangladesh.

Session I

Session I was chaired by Professor Dr. Shamsul Alam, Member of the General Economics Division (GED), Planning Commission, Government of Bangladesh. The first presentation in the session titled 'Infrastructure and Well-being: Employment Effects of Jamuna Bridge in Bangladesh' was delivered by Dr. Minhaj Mahmud of the Bangladesh Institute of Development Studies (BIDS). The author of the study opined that public investment into infrastructure has helped Bangladesh's structural transformation. The Jamuna Multipurpose Bridge removed a bottleneck created by the Jamuna, separating the east from the west. Previous literature, notably Duflo's work on dams in India, has evaluated impact of the infrastructure investment using experimental/quasi-experimental approaches. This study employed a similar approach, arguing that the location of the bridge was determined mainly on the basis of engineering decisions; and thus remains beyond manipulation. The authors of the study cite this as evidence of there being very little selection bias.

The ‘difference-in-difference’ approach was employed in two districts, Siranganj and Tangail. The focus was on employment opportunities to explore if the effect of the bridge’s construction was an increase the opportunities. The findings suggested that unemployment decreased and among the young, a transformation jobs from farming/fishing to increased day labour ensued. Households living in the west benefitted more. Siranganj witnessed increased proportion of non-farm employment compared to Tangail. To reap the full benefits from infrastructure investments requires investments in other, complimentary areas as well. Households living in the west, who are separated from the east developing areas, improved their job opportunities. The gain can be explained, at least partially, by direct land redistribution. The impacts on jobs and employments was positive but heterogeneous.

Among the issues that remained beyond the scope of this study was—how the evaluation was limited to the locality around the bridge itself. Future studies should explore broader impacts, especially on the northern ‘*monga*’ area which experiences seasonal hunger and thereby check for spillover effects. A cost-benefit analysis is pertinent. Dr. Mahmud also felt that broader impacts warrant investigation (e.g. poverty, income, empowerment, trade and finance, price, risk, and etc.). As it was a retrospective survey, any bias stemming from non-classical measurement error should be assessed as well, he felt.

The chair of the session, Professor Dr. Shamsul Alam urged researchers to think about the effects of infrastructure on the river itself, e.g. how it influences flow and downstream sedimentation. The bridge has had a boost on national identity; but Professor Dr. Alam was also curious about how, in quantitative terms, the bridge affected GDP.

Professor A. Mushfiq Mobarak expressed concern over the leading question in the survey and whether Tangail, as a district, was the right choice as it has historically been well connected to Dhaka. He felt that in instances like this, the IGC would be well placed to support in research design to improve questionnaires

Other discussion revolved around drawing learning from Jamuna Multipurpose Bridge to help feed into contemporary Padma bridge construction debates. There was a call for looking into the impacts not only on labour but also on the transportation of goods (agricultural and non-agricultural) and the starting of enterprises and industrial clusters. Interesting extensions of the study were suggested that would look into how much of the effect comes from population effects –e.g. how much of the growth or increase comes from existing versus a new population moving into the area. It was highlighted that huge premiums exist on deep research combining various data sources in one paper.

Dr. Asadul Islam from Monash University was the next one to present. His study was titled ‘Social Networks, Referrals and Technology Adoption – Evidence from Field Experiments’. Dr. Islam started off with a brief overview of a range of rice management practices: soil, water, plant and nutrients that are altered in order to achieve greater root growth and to nurture microbial diversity resulting in healthier soil and plant conditions. He described the System of Rice Intensification (SRI) as transplanting single young seedlings with wider spacing, carefully and quickly into fields that are not kept continuously flooded, and whose soil has more organic manure and is actively aerated. Neither a new seed variety nor additional external inputs are required. Knowledge intensive and requires more labor for field preparation, water management, weeding and harvesting. The model pursued in his study entailed RCT training to farmers plus added incentives for some to refer. There were difficulties in identifying the effects of social networks. The new technology they introduced was a system of rice intensification. As mentioned

above, this is knowledge intensive but does not require any new input. – making it a “system” rather than a “technology” because it is not a fixed set of practices. SRI is a locally adaptable set of principles rather than packaged instructions. The system has continuously been shaped by farmers and other actors through practice. Practitioners recommend the importance of location-specific technologies. SRI proponents claim that it (i) increases farm productivity and income, and (ii) enhances household food security, and (iii) lifts up otherwise marginalized producers

SRI has attracted considerable attention worldwide. Preliminary results were extremely promising (higher yields ranging from 50 to 80%) and there were cases of increased profits among those that adopted SRI. Social (i.e., village, kinship or friendship) networks offer a viable alternative: considering resource constraints on extension and adaptive research facilities and limited access to formal finance sources. The study examined whether village level social networks among farmers could be used to promote information, as well as the uptake of SRI. Dr. Islam and his team analyzed whether and how a farmer’s decision to adopt a new technology depends upon the adoption decision of other farmers in his social group, and examined the impact of SRI on rice yield and profitability. They tried to see if the observed productivity gains measured elsewhere using observational studies can be verified using a RCT.

To date there has not been any experimental study examining the impact, adoption and diffusion mechanism of SRI. Diffusion through social networks play an important role. Relatives and close neighbours have higher influence in adoptions. Giving responsibilities to teach others help to encourage more adoption among those received the recognition. Teachers can influence the others as much as the training by NGOs. One time training could lead some adoption, but farmers continue to adopt. Training twice led to significantly higher adoption. More adoption took place when farmers were given reminder and trained again. Farmers are generally constrained by knowledge/information and the skills necessary for local adoption.

Basic training treatment had no monetary incentive; another treatment added a monetary incentive for referral; and a final treatment had monetary payments conditional on the adoption of SRI. There were effects from adding financial incentives for referral but accounted for little differences between two treatments with monetary incentives. Neighbours were most likely to refer people. Word of mouth referrals increases adoption rate. The basic peer effects was a 30% increase in adoption; with incentives, this jumped to 50%.

Professor A. Mushfiq Mobarak said, in his comments, that SRI arrived two decades ago and that this is not a new concept. We need to make sure this is a profitable technology. Dr. Islam responded by sharing his plans to study the second stage profit effects. He acknowledged that questions on village spillovers: motivations for why people are adopting is hard to pin down.

Session II

Session II was chaired by Professor Dr. Shamsul Alam, Member of the General Economics Division (GED), Planning Commission, Government of Bangladesh along with Dr. Sultan Hafeez Rahman, Country Director, IGC Bangladesh, and Professor Wahiduddin Mahmud.

Adnan Khan presented his work on incentivizing bureaucrats through performance-based postings, titled ‘Making Moves Matter: Experimental Evidence on Incentivizing Bureaucrats through Performance-Based Postings’

The ultimate aim of the project was to address weak state capacity. Transfers (postings) were used by bureaucrats to dole out favours or to reward/punish staff. Political pressure was also present in how transfer postings were decided. The study ran an RCT using 500 tax collectors in Punjab, Pakistan. Baseline data on preferences for postings was also acquired.

As an outcome, the system increases tax collection. Those with higher marginal incentives to perform better did in fact respond more to the treatment. Higher ranked tax collectors got their preferred postings. Marginal incentives depended on what inspectors know about the preferences of other inspectors. The less we know, the sharper the incentives were to perform. Allocation effects were observed in the form of high performing people going to similar circles as these were the more desirable locations. Disruption effects came in the form of the risk that tax collectors might not be able to perform as well in their new circle once they get posted to a new circle. People tend to prefer the status quo – and more so once they have moved. This scheme put high performers in larger circles; perhaps optimal for tax but not always socially desirable for other applications (e.g. teacher postings). Postings which were too frequent ended up having adverse results

From among the audience, it was noted by one to consider taking a holistic view, per se incorporate aspects like career planning, promotions, etc., when factoring in placements. Qualitatively, promotions matter a lot to inspectors. In extreme case: perverse incentives are present if there is widespread corruption. It was perhaps rhetorically inquired if these postings were simply correcting for an initial misallocation?

In the presentation ‘Effects of Emigration on the Rural Economy’ by Professor A. Mushfiq Mubarak talks about the scale up of a research study that randomly assigned incentives to poor household members to migrate during the 2008 Monga in Bangladesh. The intervention provided an \$8.50 which covers expenses of round-trip bus ticket from northern Bangladesh to capital and a couple of days food. It tracked households in the short run, and in the long-run, after inducements were removed. The study found evidence that incentive induces those close to subsistence and those not comfortable migrating and there are strong response to “migration insurance” offers in 2011.

The seasonal migration program now being scaled up to 310,000 households in Bangladesh over 5 years. Through RDRS. Replication in other countries are underway (Indonesia, India, Ghana) using commitment from Givewell.org, Global Innovation Fund.

The authors find no effect on local food prices based on data from survey of shopkeepers. This suggests that food markets are spatially more integrated than labor markets

There are spillovers of the intervention- (a) people more likely to move if others are moving simultaneously (b) leads to better labor market outcomes for those remaining in the village (c) wages increase 4-5% from our treatments.

Given that poverty is both chronic and seasonal, and the seasonal dimension of poverty is often overlooked, the author noted that the study can shed light on the area. This particular intervention may be effective in enhancing both income and welfare of the household when there is seasonality in agrarian rural area and there are nearby cities with seasonal job opportunities and there are people who face subsistence risk for whom travel is risky.

In the open floor session, comments were made on the challenges to take pilot programmes to scale.

Session III

Session III of the conference was chaired by Dr. Mashiur Rahman, Economic Affairs Adviser to the Honourable Prime Minister. The session was co-moderated by Dr Sultan Hafeez Rahman, Country Director, IGC Bangladesh programme and Dr. Wahid Mahmud, Senior Advisor, IGC Bangladesh programme. Three papers that were presented in the session are

The Impacts of Electronic Wage Payments for Salaried Garment Workers by Emily Breza, Harvard University

Electronic Filing System, Bureaucratic Efficiency and Public Service Delivery: Evidence from Bangladesh by Wahid Abdallah, BRAC Institute of Governance and Development

Migration and climate change: environmental vulnerability and location choice in Bangladesh by Joyce Chen, Ohio State University

Professor Breza noted that study was motivated by the goal to improve access to basic financial services in Bangladesh where only 37% of men, 26% of women have a bank account and the country has relatively large population of unbanked salaried workers, despite stable income. This translates to dependence on cash for everyday transactions, lack of savings in a formal account, borrowing at high interest rates in informal sector and inability to use formal credit to deal with income shocks.

The goal of the study is to measure the impacts of electronic wage payments on workers and compare different options currently available in the market. To study these issues, a randomized controlled trial with 2 salaried large garment factories workers is conducted. At the beginning of the study, all wages are paid in cash; however the study randomly and individually assign workers within the same factory to either continue receiving their wages in cash, or receiving electronic wage payments (EWP) through either a bank or mobile account. However there have been small deviations from plan due to delays in ID proof, mistakes opening accounts, clerical errors by factories. The project faced large attrition and turnover however attrition did not appear to differ much across treatment arms.

For Bank EWP treatment arm, standard savings bank accounts opened with debit cards; no fee charged to the worker and they were provided access to ATMs built in each factory. The workers received an introductory training session that explained how to use the debit card to access their account, but did not provide additional financial literacy content.

The Mobile EWP treatment tied to phone number. It was implemented using Bangladesh's largest mobile payments platform, which is widely used and has an extensive agent network throughout the country. Project began in mid-2014, wrapped up at the end of 2016 and included baseline, follow up surveys, rolling out of the treatment arms and an end-line survey

Our preliminary results suggest that broadly, treatments were effective in stimulating the usage of formal financial products. There is increases in savings in both bank treatments.

The mobile money treatments did not have very strong long-run impacts on total savings accumulation. This is consistent with the typical usage patterns of mobile money accounts, and low incidence of savings accumulation in the mobile wallet.

No detectable average treatment effects were found on large asset purchases and remittances. But, this result hides heterogeneity: the study finds that for women, formal savings is a substitute for remittances and asset purchases while it is the opposite for men. This in turn suggests that consumption priorities not necessarily aligned within the household.

The presentation was followed by an open floor session when number of questions and comments were received. It was noted that one way workers get promotions in RMG factories is by switching factories; this might explain why women benefit more than men as they tend to switch factories much less often.

The session then moved to the presentation by Dr. Abdallah on Electronic Filing System, Bureaucratic Efficiency and Public Service Delivery: Evidence from Bangladesh. This IGC funded study aims to look into how effective are electronic systems in improving state effectiveness particularly bureaucratic performance and service Delivery. The study analyzes the impact of an Electronic Filing system (e-filing) introduced in January 2013 in Jessore district of Bangladesh as a pilot intervention. Under the intervention a file is created electronically, it travel across the decision making channel electronically and is disposed of electronically. The system provides a dashboard for a file-tracking system: The location of every file in the system can be tracked.

The intervention is nested in the District Controller Office -the administrative hub of the district, which conducts a variety of operations including (a) coordinates all the projects that are implemented in the district (b) provides a large number of services to the citizens (c) runs the Executive Magistrates' Courts (d) anything that is under (or possibly under) government, but not under a line ministry

In this study looks particularly into service Delivery to the citizens in terms of (a) number of Land Records provided (b) Number of various types of licenses (e.g., restaurants, entertainment and trade) provided; number of legal case deposition- under Revenue Munshikhana; under Judicial Munshikhana; under General Certificate Office and under Mobile Courts and number of land acquisition cases served

The identification strategy is exploits the natural experimental setup – e- Filing was adopted in different districts at different points in time. As a robustness check, the study notes that E-filing will improve service delivery to the citizens, but should have little effect on quicker processing of legal cases and complicated bureaucratic issues (Land Acquisition).

The author notes that e- filing has increased number of citizens served in a year for services where electronic system may have an impact.

The study also looks at conditional on files being electronically processed, does higher number of bureaucratic layers to process a file delay resolving the file? Do more complicated files, in terms of special requirements, take more time in processing? And if files that require multiple rounds of decision making (per decision maker) take more time?

The results show that conditional on e-filing, files are processed faster if fewer individuals are involved, the file requires fewer actions and the files have fewer paragraphs i.e. short.

The author notes that a second round of data is being planned to increase coverage and better measure of total files processed.

The floor was opened to question and answer session following the presentation. Comments were made that despite difference in difference setting, there could be problem of endogeneity. The author noted that endogeneity can occur due to transfer/promotion records of DCs, ADCs and other officials/

The session turned to the last presentation - Migration and Climate Variability in Bangladesh that was delivered by Professor Chen.

Global climate changes poses serious concerns for countries like Bangladesh which may that among other things will lead to continuous increase in surface temperature; extreme precipitation events; rise in global mean sea level, increased use of groundwater will accelerate land subsidence, saltwater intrusion, storm surge risk and affects level of crop production, intra- and inter-annual variability, vulnerability to hazards and extreme events.

Migration is an extreme response to environmental risk, used when other mechanisms for mitigation/adaptation are lacking. It is crucial that we obtain a better understanding of environmental migration, in order to ascertain how population flows will evolve with climate change and to adopt effective policies for mitigation, adaptation, and relief. Moreover, neglecting migration leads to incorrect inferences about resilience and adaptation.

The study looks at two events (a) Flooding which is an acute, rapid-onset event with the potential to affect large numbers of people over a very short period of time (b) Rainfall and temperature variability that may induce a more gradual response.

This project utilizes an innovative data collection technique to provide estimates of population mobility motivated by environmental stress. Building on existing household surveys, we conduct follow-up surveys via mobile phones. This approach is unique in that it can provide high frequency data on mobility, essential in a context where individuals often migrate over short distances and for short (<3 months) periods of time, allowing us to assess both the extent and the efficacy of migration as adaptation.

Data on migration are paired with state-of-the-art climate and environmental data, derived from a combination of remote sensing, geodetic, and in situ sources. We focus on Bangladesh, one of the world's most vulnerable regions to the adverse effects of climate change. Migration is studied within the context of other adaptation and mitigation efforts in order to gain a complete picture of local resilience.

The study finds that likelihood of having an out-migrant is decreasing in rainfall, and magnitude of effect is increasing while flooding is associated with lower probability of out-migration. In addition looking just at migration for work (self-report), total precipitation has a positive effect which suggests households do seek alternatives when facing adverse growing conditions/ adverse shock to income from agriculture.

Using household survey data the study looks at impact on agriculture production by regress yield/revenue on climate measures. The results show that while total household revenue is decreasing in rainfall contrast, (abnormal) flooding is associated with higher revenue. It indicates that land under cultivation is decreasing in total precipitation – adjustment on extensive margin. When faced with poor growing conditions, household reduce cropped area- marginal lands – those that would have the lowest yields –

seem to be taken out of cultivation; and land may be converted to aquaculture. Coastal areas may face greater tension between farming and aquaculture.

In the open floor discussion following the presentation comments were received on environmental factors having mixed effects on out-migration from the household. Also the authors were asked on the technical aspect of satellite imagery used and there relative advantages with regard new high resolution satellite imagery. Comments were made to incorporate better knowledge of agronomy and other constraints.

The honorable chair thanked the international growth Centre for organizing the seminar and noted that the presentations on during the session touched on issues that are critical for economic growth of Bangladesh. Drawing on his experience as a civil servant he noted that ways to enhance efficiency of bureaucrats must be done in innovative way such that service delivery speed and quality are both maintained at an optimal level. Interventions need to be introduced with thorough understanding the behavior it wishes to induce.

He noted that climatic change is an important challenge for Bangladesh and migration as an adoption mechanism requires in depth analysis. He noted that the electronic wage payment study to have informed takeaways for both private sector and the government

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