

5th SANEM ANNUAL ECONOMISTS'  
CONFERENCE (SAEC) 2020



# Institutions for Development

February 2-3 | Dhaka, Bangladesh

Abstracts of Conference Papers

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## **5th SANEM Annual Economists' Conference (SAEC) 2020**

Dhaka, Bangladesh  
February 2-3, 2020

# **Abstracts of Conference Papers**

### **Conference Themes**

Environment and Climate Change  
Energy and Environment  
Health and Development  
Institutions and Development  
Labour Market and Employment Challenges  
Macroeconomic Policies  
Poverty and Inequality  
Trade and Development

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## **THEME 1: Environment and Climate Change**

# **1. Rice Farmer's Observed Climate Stresses and Sustainability Analysis of Climate Change Adaptation Strategies in North Western Region, Bangladesh**

**Farjana Eyasmin**, Lecturer, Department of Economics, Pabna University of Science & Technology, Bangladesh

Ensuring food security significantly contributes to agriculture based economy like Bangladesh in economically, socially and environmentally sustainable manner. Climate change is happening and climate change coping strategies alter the impact of environmentally changing circumstances with respect to their economies. Moreover, sustainable adaptation claims to ensure and enhance food security in order to achieve the sustainable development goals (SDGs). Considering the above, the current study attempts to measure the sustainability of climate change adaptation by the farmer's observation through a participatory indicator based approach in Northwestern region, Bangladesh. A cross sectional multistage random sampling has been used to collect 500 data through face to face interview method. In this pursuit, to employ sustainability analysis over climate change adaptation strategies, a tri variate Tobit regression have been examined. Thereto, the results explain the linkage between sustainability and the socio-economic characteristics as well as climate change adaptation. Likewise, the study found farm size, credit access, and extension contact to significantly affect the sustainability. Moreover, off farm activities, crop diversification and using HYV are more sustainable adaptation strategies. Finally, the policymakers should focus on food security policy in rice farming through the existing education system, extension services, and farm size with sustainable adaptation strategies as mentioned like off farm activities, cop diversification and using HYV.

## **2. Economics of Climate Change Adaptation on Rice Production: Evidence from Rural Nepal**

**Niranjan Devkota**, Coordinator, Quest Research Management Cell, Quest International College, Nepal

Despite the widespread interest in climate change adaptations at the local and regional levels, very little literature is available on the economic estimation of climate change adaptation options. The study, therefore, intends to analyze the economics of climate change adaptation on rice production in rural Nepal. This study was conducted in 7 districts of Nepal that comprises of 4 Hilly districts (Ilam, Sindhuli, Syangja, and Surkhet) and 3 Terai district (Bara, Dang, and Kailai). A multi-stage sampling technique was applied to select the study sites and sample farm households in area and a fully structured questionnaire was used to gather information. This study adopts three different approaches to measure the economic analysis (i) Cost-benefit Analysis (ii) Adaptive Capacity Index and (iii) Logistic Regression. This study finds that farmers in rural Nepal are adopting mostly 13 adaptation options in order to protect themselves from climatic risk. Majority of the rice farmers perceived the increase in temperature (80.7%) and significant decrease in rainfall (90%) in last 30 years' period that has



caused decrease in rice production. This situation has forced the farmers to the adoption of available adaptation options. This study finds that 71 percent of the farmers have adopted such options to protect themselves from the perceived risk. The Cost-Benefit estimation reveals that per hectare total cost ranges from NRs. 86076.47 to NRs. 99580.18, whereas per unit total revenue ranges from NRs. 101439.39 to NRs. 148883.17. Unbelievable but true that farmers who do not adopt any adaptation options are able to receive highest income from per unit production. Farmers' adaptive capacity index shows that the overall adaptive capacity of rural rice farmers is 0.480 which falls in moderate adaptive capacity. However, such adaptive capacity differs from Hill (0.467) to Terai (0.49) and poor (0.41) to non-poor (0.50). The mentioned 13 climate change adaptation options are adopted by both poor and non-poor rice farmers in rural Nepal. But such adaptation practice is more with non-poor rice farmers compared to poor and the people living in Terai region. This study indicates that there is need for greater investment to remove the barriers and institutional setup. Similarly, the poor farmers are more vulnerable to changing climate requiring immediate actions. For such farmers, there is the need of greater investment and subsidies for the counseling and prompt service that helps them to improve their livelihood condition at rural level.

### **3. Economic Growth, Energy Consumption and Environmental Kuznets Curve in South Asia: A Cointegrated Panel Approach**

**Anuva Afsana**, Department of Economics, University of Dhaka, Bangladesh

South Asia has achieved tremendous economic growth in last few decades. But in terms of sustainable and inclusive growth, the condition of this region is still vulnerable. This paper is aimed at investigating the Environmental Kuznets Curve (EKC) hypothesis and the impact of renewable and non-renewable energy consumption on environmental degradation for South Asia. To conduct this study, data for five South Asian countries is collected over the period 1972-2014. Panel cointegration analysis, estimation of long run relationship and causality test among environmental sustainability and its determining factors have been performed. The results found that EKC hypothesis holds true for this region. Renewable energy consumption has negative impact and non-renewable energy consumption has positive impact on environmental degradation. The bidirectional causality between pollution and economic growth indicates that South Asian region has to face challenges to obtain sustainable and inclusive growth.

#### **4. Optimal Environmental Policy with Learning-by-doing**

**Bidyut Talukdar**, Associate Professor, Department of Economics, Saint Mary's University,  
Canada

We characterize Ramsey-optimal environmental policy in a dynamic stochastic general equilibrium macroeconomic model that includes learning-by-doing (LBD) and pollution externalities in production. Two main findings emerge from our study. First, the optimal emission tax rate and the absolute level of emissions both rise with the degree of learning-by-doing effects. However, the intensity of emissions falls with the level of LBD effects. Second, the optimal policy allows carbon emissions (intensity of emissions) to be pro-cyclical (countercyclical) and the cycles are dampened with the degree of LBD effects. With LBD in production, the monopolistically competitive firms endogenize the effect of their production decision today on productivity tomorrow and produce more than they would otherwise. However, this higher level of production by firms makes the pollution externality-induced distortion larger. By raising the emission tax with the degree of LBD effects, the Ramsey planner essentially strikes a balance between the dynamic productivity benefits and the extra pollution costs arising from learning-by-doing effects and thereby minimizes the distortion.

#### **5. Farmers' Social Capital and Their Effects on Climate Change Adaptation: Evidence from Drought Prone Rajshahi District**

**Fariha Nur Shoumee**, Department of Economics, Rajshahi University, Bangladesh

Climate change has become one of the gruesome threats to the mankind transcending boundaries that is bringing irreversible changes to the globe and Bangladesh is one of the most climate vulnerable countries due to the geographic location and low lying deltaic plain. The social aspects of climate change adaptation in agriculture, more specifically the impact of social capital has long been disregarded. Considering the value of the theory in climate change adaptation process and the increasing variability in climate in the drought prone region of Rajshahi district, the first major objective of this study is to analyze farmers' level of trust on groups as well as on individuals and their attitude towards cooperativeness including their participation in different groups and institutions. The second objective is to determine the effect of social capital on the extent of use of the climate change adaptation strategies of farmers. The paper has used micro level data obtained by conducting direct interview with 119 crop farmers from two upazilas, Puthia and Godagari of Rajshahi district. Descriptive analytical method is used to obtain the first objective employing a five point Likert scale. Multiple linear regression model, following OLS estimation method is applied to measure the impact of both structural and cognitive forms of social capital on the extent of use of the adaptation techniques. Findings show that more than half of the respondents are involved with various groups and institutions. When asked whether people in general can be trusted, 43.67% farmers have responded in favor of agreement. The same response has been received from 52.87% and 36.97% farmers in case of trusting groups and institutions involved and villagers of the

respondent's residing village respectively. 93% farmers have agreed to take part in community activities. Regression results show that number of groups and institutions involved and years of farming experience have significant and positive relationship with the extent of use of adaptation techniques. Total number of friends inside the village is highly and positively significant with the extent of adaptation among the farmers in the study area. In terms of policy implication, the study promotes networking through groups and institutions among farmers, which in turn will increase the level of trust and cooperativeness among them

## **6. Assessment of Livelihood Diversification Drivers and Their Effect on Agricultural Practices in the Mahanadi Delta, Odisha, India**

**Somnath Hazra**, Senior Fellow, School of Oceanographic Studies, Jadavpur University, India

**Tuhin Ghosh**, Professor, School of Oceanographic Studies, Jadavpur University, India

The geo-climatic situations of the Mahanadi delta in India make it highly vulnerable to natural calamities like flood, cyclone, and storm surges. The Coastal Economy is based on natural resources and different land use systems and as a consequence, the region is severely impacted by climatic variations and sea level rise. As a result, the livelihoods of the coastal communities are severely affected. This tempts us to examine the covariates that influence rural livelihood diversification and also tries to examine their effects on the intensity of adoption of Agricultural practices in this delta in the context of climate change. The major target of this paper is to know the drivers of livelihood diversification and its effect on agricultural practices in Mahanadi Delta. This paper is based on 1414 household data selected through a multistage stratified random sampling technique, and complemented with secondary data on climate factors in Mahanadi Delta located in Eastern part of India. A Binomial Logit model was also used to investigate the factors influencing livelihood diversification among rural households. Livelihood Diversification in the coastal communities is one of the major phenomena because incomes from agriculture and fishing activities have come under severe threat due to climate change. Livelihood diversification was significant with the dependency ratio, loan access, size of the farmland, household size and level of income. The results of this research can help to develop a better policy recommendation for the coastal communities in terms of livelihood strategies.

## **7. Long Term Nexus between Climate Change and Rice Production in Bangladesh**

**Md. Jahid Ebn Jalal**, Senior Research Associate, South Asian Network on Economic Modeling (SANEM), Bangladesh

Climate change will impact on rice food security in many parts of the world, including Bangladesh. This study has been given attention to understand the relationship between the production of three major rice crops (i.e. Aus, Aman, Boro) and climate variables (i.e. maximum temperature, minimum temperature, rainfall, and humidity) for Bangladesh. The study uses time series data for the year 1975 to 2015 at an aggregate level to assess the relationship between climate variables and rice production using both the granger causality test and

dynamic ordinary least squares (DOLS) methods. The findings of this study confirm that climate variables have had significant effects on rice production but that these effects vary among three rice crops. Minimum temperature and humidity are statistically significant for Aus rice with negative effects. Maximum temperature and rainfall have statistically significant negative effect on Boro rice where minimum temperature has the positive and significant effect. In contrast, the results revealed that production of Aman rice aggravates the climate variables positively. The study concludes that future climate changes are likely to change the rice production and hence impact food security. The results have important consequences for food security by indicating the need for appropriate adaptation measures in the future.

## **THEME 2: Energy and Environment**

## **8. Testing Relative Income Hypothesis on Household's Energy Choosing and Consumption in Pabna District, Bangladesh: The Application of VERME Model**

**Salman Ibn Yasin**, Masters' Student, Department of Economics, Pabna University of Science & Technology, Bangladesh

**Bikash Chandra Ghosh**, Assistant Professor, Department of Economics, Pabna University of Science & Technology, Bangladesh

As per the relative income hypothesis, the consumption behavior of households is not only a function of current income but also relative to the most elevated amount of income previously attained, and other peoples' consumption behavior. A strong tendency has existed in our society for people to emulate their neighbors and to strive toward a higher standard of living. This study examined households' choice and consumption of energies for cooking and lighting purposes in the context of testing the validity of the relative income hypothesis in developing countries. Both statistical and econometric (Verme model) tools and a multistage cluster sampling technique based on the geo-political categorization of the study area (Pabna District) are used for this examination. The main concentration of this paper is analyzing the composition of residential energy utilization and its sensitivity to income changes, recognizing fuel types and accounting for complete heterogeneity of the income coefficient. This paper holds that, a 1% rise in income increase the multinomial log-odd of adopting gas by about 0.85 units and the electricity by about 0.57 units compared to traditional fuel. Bangladesh has a minimal energy reserve, small amounts of oil, coal and countable natural gas reserves. Sustained economic growth has quickly expanded the demand for energy, transport, and urbanization. An increase in income is found to have a significant impact on the disheartening household appropriation of biomass fuel as the principal source of fuel policies and programs planned for increasing the income of people ought to be set out upon debilitating the adoption of biomass fuel.

## **9. Easy Bike Battery Recycling Channel- Expectation vs. Reality: A Study in the South-West Region of Bangladesh**

**Amina Khatun**, Economics Graduate, Khulna University, Bangladesh

Easy bike is often called an environment friendly transportation medium as it does not emit any harmful gases. However, it can be called environment friendly only when the lead acid batteries (LAB) used to run it is recycled in an organized way. Otherwise, it can create acute lead poisoning and environmental pollution. Easy bike is a very popular transportation medium in Bangladesh. The expectation is that the batteries are being recycled in an organized way and study is intended to investigate how far the reality matches that expectation. The survey is conducted in three districts- Khulna, Jessore and Bagerhat which are situated in the South-west region of Bangladesh. Easy bike driver (consumer) are the key respondent with a sample size of 250. Different statistical tools along with Logit estimation have been used to conduct the required analyses. The result shows that the channel is consumer- second hand retailer- scrap

dealer and smelters- organized manufacturer- first hand retailer- consumer. The dominating part of the recycling process is unorganized, thus the channel is unorganized. So, the reality is completely opposite of the expectation. Clearly, three factors play influential roles in choosing the unorganized processes- lack of proper rule, lack of positive incentive and most importantly the locational ease- availability of unorganized sources. Other factors like transportation cost, profit and awareness have minimum influence on the decision. However, there exists huge potential of environmental and health exposures in the unorganized part of the recycling process. To prevent this unobserved but obvious devastation, some policy initiatives must be introduced now. Strict regulation, incentives, return and refund policies could be effective requiring both the government and manufacturers to take responsibilities. Thus, easy bike will be able to serve people as a proper pollution free vehicle and the unwanted reality could be turned into a desired one.

## **10. Border Carbon Adjustment vis-à-vis Domestic Carbon Adjustment: Implications of Alternative System Boundary for India to Reduce Carbon Emissions**

**Suvajit Banerjee**, PhD Scholar, Department of Politics and Economics, Visva Bharati University, India

Being a non-obligated signatory to the Kyoto Protocol, India is frequently blamed for imprudent measures on its rampant and random emissions by the obligated developed countries. In this respect, this paper intends to analyse the impacts and implications of a possible threat from the 'border carbon adjustment (BCA)' as an environmental-barrier may be put on by India's export partner countries as against a softer arrangement with 'domestic carbon adjustment (DCA)' in India. Besides the spirit of WTO this instrument of 'BCA', violates the 'territorial production' based system boundary on emission reduction responsibility criteria presently practised by the UNFCCC. This study compares the implications of BCA impositions on India's exports under the present system boundary as against an alternative system boundary based on territorial 'consumption emissions'. In this new approach, India would impose a 'retaliatory border carbon adjustment (RBCA)' on its imports and exempt the Indian exporters from paying the DCA, for they will pay BCA to the foreign governments to cross their border. This study is methodologically based on a 'computable general equilibrium' analysis and follows the standard static approach of 'Partnership in Economic Policy' model, however significantly deviating with one respect, i.e. this study assumes India as a big importer which has some influence on the pricing decision of its imported items. Since BCA under presently practised system boundary is inconsistent, either a 'consumption-based accounting' is recommended, to be made fully operational or resistance should be built among the developing countries to oppose this BCA from its implementation.

## **THEME 3: Human Development**



## **11. Potential Demand for Universal Health Coverage for Climate Induced Diseases in Coastal Area of Bangladesh: A Randomized Conjoint Experiment**

**Hafiz Iqbal**, Assistant Professor (Economics), Government Edward College, Bangladesh

Universal Health Coverage (UHC) ensures the healthcare needs at an affordable cost. Given limited funding resources, assessment of economic efficiency of UHC is necessary. This study aims to estimate the economic benefits of UHC in the southwest coastal region of Bangladesh. Key informant interview and focus group discussions were conducted to understand climate-induced diseases properly and to select the relevant attributes of UHC. In the study, a choice experiment was applied to 716 respondents through cluster sampling technique. Five attributes - capitation, Telemedicine, Medicare, Medicaid, and social health insurance – were identified as relevant attributes for the choice experiment. A monetary attribute such as payment for UHC was also included. Random Parameter Logit (RPL) and Multinomial Logit (MNL) models were used for estimation. All the attributes included in the models were significant factors in affecting the probability of choosing an alternative scenario. The results suggest that households of the southwest coastal region of Bangladesh are more concerned about climate-induced diseases as reflected by the marginal willingness-to-pay for UHC. Household income, age, family size and years of education are found to be significant. The economic welfare from two improved scenarios makes a guarantee that government can make more return from UHC and establish well-being.

## **12. Demand for Maternal Health Inputs and Health Outcomes: A Study with Reference to West Bengal**

**Saswati Chaudhuri**, Associate Professor (Economics), St. Xavier's College, India

Using data from NFHS-4 for India, this paper attempts to look at various socioeconomic factors that account for the demand for maternal health inputs and eventually child mortality in an Indian state-West Bengal. Conditional Mixed Process is used to estimate the effects of prenatal care, hospital delivery, and child mortality. It has been observed that mother's education, religion, wealth status and access to information are those covariates that remarkably increase the demand for both the maternal health inputs – prenatal care and hospital delivery. Birth order of the child and the size of the baby are other important determinants. However, the whole analysis becomes futile if we do not identify the factors that can expose mothers and the households to the hazards of child mortality. We find that both pre-natal care and hospital delivery translates to lower child mortality. Age group of the mother, religion, her place of residence, access to information along with the wealth status of her family have important bearing on child mortality. Birth order of the child and its size at birth also influences child mortality.

### **13. Natural Disaster and Child's Health: Empirical Evidence from 2015 Nepal's Earthquake**

**Nirmal Kumar Raut**, Assistant Professor, Central Department of Economics, Tribhuvan University, Nepal

In this study, we estimate the impact of 2015 Nepal's earthquake on child health particularly the obesity: weight, height and Body Mass Index (BMI). We use two rounds of Nepal Demographic Health Surveys (NDHS) before and after the earthquake: NDHS 2011 and 2016. We combine NDHS data at household/child level and the earthquake data at district level to establish the causal association between the earthquake and children health. By focusing on children between 0 to 5 years age and using difference-in-difference framework as an identification strategy, our results show that the BMI increased for children living in affected areas. This increase in BMI is primarily driven by increase in their weights. Several other tests including that of the placebo test for parallel trend assumption confirm that our results are robust.

We also explored into the possible mechanisms of this positive association between the earthquake and the BMI. For this, we exploit the annual household survey data for the years 2013-14 to 2016-17. We show that the allocation of expenditure on food items increased in earthquake affected areas. We further show that this increase in expenditure was not due to the increase in prices in affected areas only. We, therefore, argue that child obesity increased in earthquake affected areas because of the increased food consumption. However, we do not find support for the hypothesis that this increase in consumption is primarily driven by the increase in the consumption of staple or junk food (with high calorie content but less nutrition). Due to the lack of data about the time use of children, we cannot test whether the physical activity (for e.g., engaging in outdoors games/activities) of children were restricted after the earthquake for the fear of its recurrence.

### **14. Is India Experiencing Health Convergence? An Empirical Analysis**

**Sulekha Hembram**, Assistant Professor, Department of Economics, Muralidhar Girls' College, India

**Sushil Kr. Haldar**, Professor, Centre for Advanced Studies, Department of Economics, Jadavpur University, India

A comprehensive study on health convergence based on beta ( $\beta$ ), sigma ( $\sigma$ ) and club convergence is attempted here across 26 Indian states over time using NFHS (1-4) data. We formulate an overall health index (OHI) from three sub-health dimensions like child, reproductive and general health based on selected health indicators. The results show that the states are improving with respect to OHI; there exists absolute  $\beta$  convergence with respect to OHI and its sub-dimensions; however, we find  $\sigma$  divergent with respect to OHI and its sub-health dimension indices except child health index. The club convergence based on kernel

density provides a clear picture about stratification, polarization and uni-modal distributions of states with respect to OHI; over time states are converging to a steady state at higher value of OHI but in the long-run there exists 'low level health trap' among five major states like UP, MP, Rajasthan, Bihar and Assam. Except Rajasthan, all the four major states remain at the lower level with respect to sub-health dimensions too. These five major states roughly account for 50 percent of India's population and more than 50 percent of India's future demographic dividend will emerge from these major states. Therefore, in order to reap the benefits of demographic return, a major investment in human capital is urgently needed. Such 'low level health trap' justifies the 'big push' theory to health. This analysis can be applied at the sub-state level for policy intervention.

## **15. Exploring the Differences in Health Outcome: Construction of Health Index at Household Level**

**Selim Raihan**, Executive Director, South Asian Network on Economic Modeling (SANEM) and  
Professor of Economics, University of Dhaka, Bangladesh

**Jonaed**, Research Associate, South Asian Network on Economic Modeling (SANEM), Bangladesh

In Bangladesh, the out-of-pocket health expenditure paid by individuals is one of the highest in the world, and one of the key obstacles of ensuring Universal Health Coverage and achieving SDG3. Besides, there are inadequacy of social health protection and government budget on health which impede to ensure equal access to quality health service to the whole population. To design effective social health protection, and strengthen financing and provision of public health care services, it is important to understand the pattern of household health status and the reasons why do some households have better health outcome. This paper tries to identify the determinants of health outcome to understand why do some households has better health status. In this regard, a health outcome index at household level is constructed using the data of a survey of 10500 household conducted by SANEM in 2018, and tries to explain the index by several household characteristics and indicators. To capture the potential endogeneity problems Two Stage Least Square (2SLS) model is used. The key findings is that, urban households, Household with sanitary latrin, household with higher average years of schooling and household with remittance income have better health outcome compared to their counterpart. On the other hand, households' percentage of elderly members and household per capita health expenditure has significant negative impact on health outcome. The findings of the paper can play an important role in designing social health protection schemes and developing effective health policy in Bangladesh.

## **16. Exploring the Differences in Education Outcome: Construction of Education Index at Household Level**

**Selim Raihan**, Executive Director, South Asian Network on Economic Modeling (SANEM) and  
Professor of Economics, University of Dhaka, Bangladesh

**Mir Ashrafun Nahar**, Research Associate, South Asian Network on Economic Modeling  
(SANEM), Bangladesh

Education is an indispensable determinant of economic growth for any developing country. Studies on the status of education at household level in developing country like Bangladesh generally indicates average years of schooling of the family members and education expenditure of that household. Aim of this research is to portray the scenario of education at household level by analysing various data and constructing Education Index (EI). It also explores the differences in education outcome at household level and illustrates that while returns of education are high, different type of households spend distinctive amount for grabbing felicity of education which make the dissimilarity among the households. A two-stage least squares (2SLS) regression analysis method is applied to this study with survey data- 2018 conducted by SANEM. This study considers Education Index (EI) as dependent variable and by doing this, it investigates the impact of other explanatory variables on it. The result of the study shows that higher spending in education has a positive and significant impact on Education Index (EI). It also identifies the pattern of education spending by different categories of households and the key challenges that Bangladesh's education sector is facing at household level. With narrations, this study proposes a policy change towards household level education aiming an improvement of education sector of the country which certainly will bring national development.

## **17. Exploring the Differences in Education Outcome: Construction of Education Index at Household Level**

**Selim Raihan**, Executive Director, South Asian Network on Economic Modeling (SANEM) and  
Professor of Economics, University of Dhaka, Bangladesh

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Education is indispensable determinant of economic growth for any developing country. Studies on the status of education at household level in developing country like Bangladesh generally indicates average years of schooling of the family members and education expenditure of that household. Aim of this research is to portray the scenario of education at household level by analysing various data and constructing Education Index (EI). It also explores the differences in education outcome at household level and illustrates that while return of education are high, different type of households spend distinctive amount for grabbing felicity of education which make the dissimilarity among the households. A two-stage least squares (2SLS) regression analysis method is applied to this study with cross section data for the year 2018. This study considers Education Index (EI) as dependent variable and by doing this, it

investigates the impact of other explanatory variable on it. The result of the study shows that higher spending in education has a positive and significant impact on Education Index (EI). It also identifies the pattern of education spending by different categories of households and the key challenges that Bangladesh's education sector is facing at household level. With narrations, this study proposes a policy change towards household level education aiming an improvement of education sector of the country which certainly will bring national development.

## **THEME 4: Institutions and Economic Development**

## **18. Importance of Institutional Quality in Managing Manpower Resources and Remittances**

**Mamta B Chowdhury**, Senior Lecturer, School of Business (Economics and Finance), Western Sydney University, Australia

This study examines the institutional determinants of workers' remittances in managing the trade in labour services of Bangladesh using time series data covering 1975 and 2019 and employing cointegration and error correction model. Over a million migrant workers are employed in overseas countries in 2017, which has helped ease the pressure on the over-populated domestic labour market considerably. In the recent years, workers' remittance is one of the top revenue earnings to Bangladesh, second only to ready-made garment exports. The growing importance of remittances is reflected in its total value of over \$16.4 billion and over 6% contribution to GDP of the country in 2018-19. However, the inflow of these enormous foreign exchange earnings has been encountered by several institutional weaknesses, which has posed challenges to achieve the full potential of development effect of remittances. Results of the study suggest that increased cost of securing an overseas employment caused by the prevalent of higher socio-political risks lowers the inflow of remittances. Nonetheless, the improvement in socioeconomic factors such as educational attainment, improvement of real exchange rate, financial development, openness in trade regime and exogenous increase in world income increases the flow of remittances to the country. The prohibitively high cost of migration, especially for the low skilled workers, corruption and administrative irregularities by the recruitment agents, insufficient information about wages, opportunities and known risks, lack of coordination between source and host countries in regards to providing institutional protection to workers' rights and assuring decent working condition; lack of properly trained workers and exploitation by the recruiting agents both in the host and source countries are some of the known barriers to receiving a high inflow of remittances. Policy recommendations suggest to improve the overall institutional support to correct the administrative irregularities and corruption, skill building of workers through vocational trainings, reduce the cost of migration and deploying the coordinated policies with the host countries to protect the workers' rights and working conditions that will expand the labour market across borders and capture the maximum valuable remittances for the overall welfare of the country.

## **19. Land Acquisition and Development: A Study from India**

**Arup Majumder**, Research Associate, School of Languages and Linguistics, Jadavpur University, India

The "land question" has invigorated agrarian studies and economic history since Marx and early 20th century writers on agrarian questions. In countries that allow private land ownership, compulsory land acquisition is the right and action of the government to take property not owned by it for public use. In the long run, growth dividends from infrastructure development and industrialization are likely to be materialized, and acquisition of land to facilitate such

process remains one of the main development challenges in many Asian countries, like India, Bangladesh etc. Land, being one of the most important finite resources is not only a piece of natural resource, which requires management and conservation; it is also an economic good and an important component of social formation. Practices and policies around land use vary considerably across the world and depend on physical as well as socio-economic and cultural factors. However, use of agricultural land for industrialisation leads to a number of adverse socio-economic and cultural impacts in the rural societies. The district of Paschim Medinipur in West Bengal is chiefly an agriculture based district where more than seventy percent of the population lives in the rural area and among them majority depend on agriculture and agriculture related activities. In this micro-level study, we would present some empirical data on the socio-economic and cultural consequences of land acquisition for the establishment of a heavy industry (Tata Metaliks) on the fertile agricultural land in the Kharagpur subdivision of Paschim Medinipur district in the early 1990s by the West Bengal government. The findings reveal that the land acquisition which took place about two decades ago has worsened the socio-economic conditions of the affected families and the people are also making attempts to cope up with the situation by adopting various strategies, some of which have further adverse effects on their socio-economic as well as cultural condition. Largely, land acquisition in the absence of proper rehabilitation and pre-project impact assessment has shown a downward spiraling effect in the study area.

## **20. Health Care Utilization amidst Peaceful Protests & Political Strikes**

**Adnan M. S. Fakir**, PhD Scholar in Economics, University of Western Australia, Australia

Political protests and strikes are one of the most common local disruptive events in the Indian sub-continent. Such events are generally meant to be non-violent but may have unintended consequences on health care utilization. To explore this possibility, we combine daily data from the Armed Conflict Location Event Data (ACLED) project with the 2011 & 2014 waves of the Demographic and Health Survey (DHS) of Bangladesh. Exploiting within-location variation in disruptive events over time, we find evidence of a negative effect of non-violent political protests and low-violence political strikes on health facility usage, hospital delivery and postnatal care. Examining specific impacts on sub-groups, we find evidence of son preference with lower utilization of health care facilities for female children reported sick compared to that of male children. Pregnant mothers are also found to be substituting away from delivering in hospitals to smaller local clinics during higher incidents of disruptions. The findings suggest that the cost of such arguably peaceful democratic protests might be higher than what it is believed to be.



## **21. Do Socio-economic Attributes of Households Influence Trust Levels on Institutions of India? A Temporal Assessment from a Developing Country Perspective**

**Balakrushna Padhi**, Economist, Centre of Excellence in Fiscal Policy and Taxation (CEFT), Xavier University, Bhubaneswar, India

**Udaya S Mishra**, Professor, Centre for Development Studies, Trivandrum, India

**Hrushaikesh Mallick**, Associate Professor, Centre for Development Studies, Trivandrum, India

Using two rounds of household survey on general levels of trust on institutions from India Human Development Survey (IHDS), the study assesses variations in levels of trust among various socio-cultural and economic characteristics of households across Indian states. It observes that the governance component has a greater deficit of trust against the overall trust score improving over time. On exploring the socio-economic determinants of trust in two rounds of survey separately, it shows that regional factors and economic conditions predominantly shape levels of trust than any other factor in the latest survey. The characteristic convergence in trust scores is made possible with narrowing down of caste and religion-based differences. Further, sensitivity of influence of these factors in shaping the trust is observed to be high at both extremes of the trust hierarchy. This exploration undoubtedly exposes a reality that reiterates the role of institutions and their differences which are relevant in the contemporary experience of economic growth.

## **22. Land Administration and Management in Bangladesh: Institutional Challenges and Way Out**

**Selim Raihan**, Executive Director, South Asian Network on Economic Modeling (SANEM) and Professor, Dhaka University, Bangladesh

**Jahid Ibn Jalal**, Senior Research Associate, South Asian Network on Economic Modeling (SANEM), Bangladesh

**Eshrat Sharmin**, Research Associate, South Asian Network on Economic Modeling (SANEM), Bangladesh

Bangladesh is a densely populated, land scarce developing nation. Therefore, land administration and management system is crucial for Bangladesh which this paper discusses. The land administration system is managed through multiple government bodies simultaneously and experienced negligible changes since the colonial period. Recalling past laws and reform measures that have been undertaken in this arena, many have not been effectively implemented. As a result, the land administration and management system remains largely analog, complex, archaic and inefficient. The challenges present in the land administration seem straight forward; such as, the analog record keeping system and archaic infrastructure, mismatch in human resources and lack of coordination etc. The incidents of corruption, land grabbing, congestion of legal disputes etc. are the symptoms or effects of the aforementioned challenges. However, this paper argues that the challenges which surfaced in

the land administration system are institutional in nature, that explain the ineffectiveness of the policies undertaken to treat the symptoms, such as, land grabbing, corruption etc. mentioned above. Furthermore, the solution requires institutional reforms through critical examination of the different perspectives of involved stakeholders in the process. Although, the determinants of such institutional reforms did not reach to a consensus among academics, deeper understanding of the challenges present in the context of Bangladesh will contribute towards further research. The paper analyzes the institutional challenges and suggests way outs for the improvement in land administration and management system in Bangladesh.

### **23. States of Growth of Indian States**

**Debajit Jha**, Assistant Professor, O P Jindal Global University, India

**Sabyasachi Kar**, Professor and Head, Development Planning Centre, Institute of Economic Growth, India

Regional growth in India in the post-reform period has been uneven in two important ways. First, across regions, divergent growth has led to the formation of multiple growth-clubs moving away from each other. Second, over time, regional growth has exhibited structural breaks, leading to growth accelerations and growth slowdowns. In this paper, we combine these two aspects of uneven growth in order to investigate the relative roles of growth accelerations, growth slowdowns and initial long-run growth rates in driving Indian sub-national regions towards high or low growth clubs. Based on our results, we draw policy implications for the sequencing of growth policies in these regions. Specifically, regions in lower growth clubs have a better probability of escaping from these growth traps by focusing on simpler reforms while the regions in the higher clubs need to focus on deeper reforms in order to achieve the same result.

### **24. Productivity and Technological Change in Microfinance Institutions: Evidence from Bangladesh**

**Aslam Mia**, Senior Lecturer, School of Management, University of Science, Malaysia

Usage of technology that serves to improve organizational efficiency among financial service providers has substantially increased during the last decade. Similarly, a large number of microfinance institutions (MFIs) have incorporated technological advancement in their operations to provide clients with better financial services. To understand the determinants of technological change in MFIs, this study investigated various factors, including sources of funds, institutional characteristics and macroeconomic factors. Using longitudinal data (2009-2014) from the microfinance industry in Bangladesh, this study estimated the Malmquist Productivity Index (nonparametric) to decompose the technological change at the first stage. This index was then used as a dependent variable in the second stage to regress against certain independent variables. Overall, it was found that the microfinance industry in Bangladesh observed regression in technological change; however, technological change could be improved by

promoting peer borrowing among MFIs. Apart from that, greater autonomy through decentralization of MFI branches could also stimulate technological progress. Interestingly, MFIs located in Dhaka have experienced better technological progress than MFIs located in other parts of the country, which signifies the importance of location. Additionally, the findings also revealed a gap in transfer of technological knowledge from commercial banks to the MFIs that they fund.

## **25. Impact of Institutions on the Performance of Firms: Empirical Evidence from MSMEs in India**

**Akhilesh K. Sharma**, Assistant Professor, Institute for Studies in Industrial Development, India

The present paper aims to study the impact of institutions on the performance of MSMEs in India. The study is mainly based on secondary data i.e. 73rd round survey (2015-16) of unincorporated non-agricultural enterprises conducted by National Sample Survey Office (NSSO). Different types of regulations have been considered as proxy for institutions. It has been assumed that a firm registered under a particular regulation follows it and obtains the benefits provided by the government under that regulation. Based on the econometric analysis, it has been observed that the performance of firm (measured in terms of gross value added and productivity) registered under any regulation is higher than that of those not registered under any regulation. Further, different types of regulations have different impact on the performance. Findings indicate that institutions, measured in terms of regulations, have positive impact on the performance of firms, in general. However, a uniform regulation may not be equally useful for all types of firms. For designing and implementing regulations, government agencies should consider specific needs of different types of firms in order to promote growth of firms and achieve sustainable development. In general, MSMEs in South Asian countries have similar features. Therefore, these findings may have similar relevance to all countries in this region.

## **THEME 5: Labour Market and Employment Challenges**

## 26. Labour Share in Value Added in South Asian Economies: What Explains the Trend?

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**C. Veeramani**, Indira Gandhi Institute of Development Research (IGDR), India

This study analyses the trends, patterns and determinants of the labour share in four South Asian economies: India, Bangladesh, Sri Lanka and Nepal. While a sectoral level study of the labour share for Bangladesh, Sri Lanka and Nepal have not been undertaken before, most of the literature on this topic for India covers only the organized manufacturing sector. This paper attempts to fill this gap in literature by covering both formal and informal sectors within agriculture, manufacturing and services. The analysis for India has been carried out using KLEMS Database (RBI, 2019) which covers the years 1980-2016. Due to non-availability of KLEMS data for the other three economies, two other databases, namely, LACEX (World Bank, 2016) and EVAD (World Bank, 2014), available for the years 1997, 2001, 2004, 2007 & 2011, were also utilised in this study. While the aggregate labour share for India and Sri Lanka declined significantly, that of Bangladesh and Nepal did not exhibit any major changes. Existing literature has pointed out technological change, erosion of labour bargaining power and exposure to international trade as some of the major factors that have led to declining aggregate labour shares across countries. The present study attempts to assess the changes in aggregate labour share of the South Asian economies and the role played by structural transformation in this process. Shift-share decomposition exercise for India and Sri Lanka reveal that both within and between sectoral factors played a role in determining the trends in the aggregate labour share. However, analysis at the disaggregated level for India shows that the within sector component of the decline in labour share is mainly driven by two sectors: real estate and construction, neither of which is susceptible to the effects of technological change or trade. The between sector component, on the other hand, is driven by the idiosyncratic nature of the economy's structural transformation, which has favored the high skilled service sector and bypassed manufacturing completely. Even within manufacturing, there has been a shift away from unskilled, labour intensive sectors (like textiles and leather) and towards capital-intensive manufacturing sectors which have lower levels of labour share as compared to unskilled manufacturing. The path of economic transition followed by India is a contrast with that of Bangladesh, which has seen an increase in the share of garments and apparel industry, a sector which heavily relies on unskilled labour, well in accordance with the economy's comparative advantage. This has translated to an increase in the labour share of Bangladesh's manufacturing sector. Sectoral level regression analysis for India, covering the period 2000-2014 reveals that, controlling for other factors like trade openness and capital intensity, a growth in the share of capital intensive and high skilled sectors leads to a decline in the sectoral labour share. We conclude that the apprehension regarding automation and trade eating up labour's share of the income might be pre-mature in this context. Instead, introspecting the economic conditions and government policies that favour a lopsided pattern of growth might shed more light on this issue.

## **27. Does Training Affect Employability and Earnings of Youth? An Empirical Investigation in the Context of Bangladesh**

**Mahtab Uddin**, Lecturer, Department of Economics, University of Dhaka, Bangladesh

**Rafia Nishat**, Research Assistant, Bureau of Economic Research, University of Dhaka, Bangladesh

Although Bangladesh has been able to attain a moderate to high economic growth over the last couple of decades, the country could not transmit the economic growth into employment-augmenting economic growth. The employment elasticity of economic growth has fallen from a 0.26 in the late 2000 to 0.12 in 2016. Low female labour force participation, a constantly falling share of urban females in the labour market, quality of jobs, high youth unemployment and youth NEET (Not in employment education and training) have emerged as an immense pressure over the overall economy. In addition, a surprisingly high share of employment in the informal sector (86.9% according to the Labour Force Survey 2013) direly necessitates required policy attention regarding skill enhancing active labour market policies. Empirical literature suffices education and training as major contributors for greater employability and earning capacity. Given the proportionately high youth population in the country, for endowing them with essential skills and engaging them in gainful employment, providing training of relevant job specific skills can be an important tool for policy makers. Especially, for Bangladesh, which is scarce in land and lacks physical capital, investing in youths can be an essential strategy for eventually transiting towards a higher growth trajectory. As the economy wide opportunities and the type of industrial demands are being diverged day by day, a sluggish age-old curriculum along with apartheid view towards women, makes the school to labour market transformation increasingly challenging. With the help of a nationally representative data set, this research aims at analysing the impact of different types of skill training programs (e.g. agriculture, manufacturing, service-related) on labour market participation probability and income earning capacity of youths. In this connection, it also plans to understand the sectoral as well as gender dimension of training programs while applying suitable econometric tools. The core objective of the current research is to analyse - how training affects employability and earnings of youths compared to others who have same observable characteristics yet have not received any training. In this respect, the paper applies propensity score matching method and finds that persons with training have 26 percent more probability to be employed compared to persons without any training (however, with same observable characteristics). It also finds impacts of different types of training programmes over employability where it is observed that, training on manufacturing trades provides higher employability than trainings in other trades. The paper also analyses the impact of different training programs (for instance, training in agricultural, manufacturing or services) over earnings. In this respect, to control for the sample selection bias, the Heckmen two step method has been applied. The results show that, persons with training in manufacturing has 9 percent higher income than others while persons with training in services has 11 percent higher income than others. Subsequently, the paper suggests appropriate active labour market policy options for Bangladesh for fostering human capital formations through skill-development to attain the SDGs.

## **28. Regional Female Employment & Unemployment in India: Inter-State Pattern**

**Hema Prakash**, PhD Research Scholar, Centre for Studies in Economics and Planning, Central University of Gujarat, India

This study evaluates the progress in female employment and unemployment among the Indian subnational. It argues that difference in the region and state-specific factors offers a robust understanding of the dynamics of female labour force participation rate in India. Based on the analysis of NSS- 61<sup>st</sup>, 68<sup>th</sup> and Periodic Labour Force Survey data, the study clearly brings that despite the favourable economic growth, achieving the appreciable female labour force participation is difficult, owing to the existence of persistent regional vis-à-vis inter-state disparity. Thus, the study suggests an understanding of inter-state differences and regional concentration of female labour force participation contributing to the nation's labour force, in dissimilar ways. Further, it argues that comparison based on the male-female labour force have led to computation of a 'Labour Force Gender Parity Index'-helps us to view the gendered labour force across all states. Additionally, the study brings that there is the state and region-specific dominance of female employment in industries with respect to spatial variables.

## **29. Skill Mismatch a Challenge in the Labour Market: Evidence from Primary Survey from the most Populous State of India**

**Puneet Kumar Shrivastav**, State Coordinator, Micro Finance, for the State of Uttar Pradesh, India

Skills and jobs are gaining importance with rising unemployment and increasing difficulties for people entering the labour market to find jobs matching their potential. Globally, it has been observed that, there are high and persistent levels of unemployment coexisting with the job vacancies which could not be fulfilled; these are often attributed to mismatches between jobs and skills. The Indian labour market is becoming more complex due to increasing skill mismatch. In Uttar Pradesh, the most populous state of the country, skill mismatch has increased many folds. In 2004-05 it was among one of the lowest Skill Mismatch states (3<sup>rd</sup> position) however, in 2011-12 it reached to 21<sup>st</sup> position and thus it has lost its rank badly based on Skill Mismatch Index (SMI) score. However, there are neither such studies nor data set which has captured the skill mismatch along with its different forms in the state. Given the situation, the paper is trying to highlight the incidence of skill mismatch and its different types in the state. The primary data is collected through field survey in 2018 from the individuals of Uttar Pradesh aged above 15 years across the four regions of Uttar Pradesh. A sample of 200 individuals has been collected covering all four regions of the State including a representation of 47 districts of Uttar Pradesh. The sample has been collected through convenient sampling using a structured schedule/questionnaire.

The results from the primary survey suggest that about half of the respondents (47.5 percent) are facing the problem of skill mismatch and maximum mismatch (75 percent) have occurred among the regular salaried employees/ workers. Further, the educational mismatch has occurred among the 23 percent of self-employed workers; the rest 2 percent are found in the casual workers. Among the regular employment category, the share of overeducated is about 6 times higher than the share of under educated. However, looking at the distribution of the over educated individuals across the categories of employment it has been found that 75 percent workers are in the regular salaried workers' cohort followed by the self-employed workers (23 percent) and casual workers (2 percent). It is found that horizontal mismatch also persists in the labour market of Uttar Pradesh.

### **30. The Determinants of Labour Force Participation and Employment Status in Bangladesh**

**Selim Raihan**, Executive Director, South Asian Network on Economic Modeling (SANEM) and  
Professor, Dhaka University, Bangladesh

**Tuhin Ahmed**, Research Associate, South Asian Network on Economic Modeling (SANEM),  
Bangladesh

Bangladesh with abundant labour supply faces major challenges in the areas of increasing labour force participation rate (LFPR) particularly for female LFPR, creating productive employment and ensuring decent employment opportunities for all. The paper estimates determinants of labour force participation and employment of the country and also examines the factors affecting the decision of moving from unpaid to other paid employments. In order to explore the factors, the study observes the supply side of the labor market through two different econometric studies. Firstly, the study estimates labor market participation probability of male and female separately through a logit model. Secondly, the study applies multinomial logit (MNL) to understand the relative significance of different factors while moving between unpaid work (base category) and other paid employments (self-employment, wage employment and salaried employment). The result of logit estimation shows that the labour supply decision of male and female are not same. The role of marriage, presence of children under 5 years and household size is positive for male but negative for female labour supply decision. However, the role of formal training and head of the household are found to be positive but the role of family income and belonging to remittance recipient household are found to be negative for both male and female. The result of multinomial logit model shows that education and training induced employees would be more likely to prefer self-employment or salaried employment over unpaid work. The results (logit estimates) suggest that there is scope for policy measures to increase female LFPR, particularly by providing access to the working mothers through affordable day care and pre-school education for their children. The results of MNL (In terms of RRR) suggest that there is scope for policy action to enhance worker's productivity through different training programs and spreading education which, in turn, can ensure decent employment.



### **31. Does Training Affect Employment and Labour Force Participation?**

**Selim Raihan**, Executive Director, South Asian Network on Economic Modeling (SANEM) and  
Professor, Dhaka University, Bangladesh

**Nadeera Sultana**, Research Associate, South Asian Network on Economic Modeling (SANEM),  
Bangladesh

This paper evaluates the impact of different types of training programme on the probability of getting employment as well as the quality of employment in Bangladesh. To identify this impact, we have utilised the propensity score matching method in order to overcome the problem of sample selection bias. The results of this study suggest that participation in training significantly increases the probability of an individual to be employed compared to those who do not have any training after controlling for the observable characteristics. The result is similar even after disaggregating for both the dimension of sex and locality. In addition, the effect of training on employment is statistically significant for all the different duration, area and institute of training. In case of quality of employment, the result varies across the type of employment. To evaluate the impact of training on quality of employment, we have constructed employment quality index for both wage-employed and self-employed individuals. For the wage-employed individuals, training does have a significant positive impact on the individual to secure a decent job irrespective of sex and locality. On the other hand, training programme does not have any significant impact on decent job irrespective of sex and locality for those who are self-employed.

### **32. Formal and Informal Employment in Bangladesh: The Case of Gender Wage Gap**

**Abdullah Mahir Masud**, Department of Economics, University of Dhaka, Bangladesh

This paper seeks to investigate how the presence of large informality in the employment of Bangladesh influences the gender wage gap in the country using the data from Bangladesh Labor Force Survey 2016-17. The paper has used Oaxaca-Blinder Decomposition for the purpose. The results from the decomposition indicate that informal employment plays a significant role in propelling the gender wage gap of Bangladesh. Gender wage differentials are considerably higher in the informal employment compared to the formal employment and a significant portion of the gender wage gap is provoked by discrimination. This paper also attempts to investigate the probabilities of individuals with different attributes and characteristics of entering the formal employment in Bangladesh using Logistic Regression. It was found that female individuals and individuals in the rural areas are more likely to be under informal arrangements. On the contrary, people with higher levels of education, skills and training are more likely to join formal employment.

### **33. The Long Run Relationship between Female Labor Force Participation and Economic Growth in South Asia**

**Kaniza Muhshina**, Department of Economics, University of Dhaka, Bangladesh

South Asia has become the fastest growing region of the world. Despite of this massive development and higher economic growth, females still face obstacles entering into the job market. Moreover, majority of women are employed in the informal sector and are involved in unpaid work. Thus, their contribution is not included in Gross Domestic Product (GDP). South Asia is growing with its low female labour force participation and so this study aims to find out the contribution of female labour force participation to economic growth. However, female labour force is considered as both a driver and an outcome of economic development. In this context, this study attempts to understand the long run relationship between female labour force participation rate and economic growth in South Asia. Using panel data from period 1993 to 2017, this paper has applied Johansen Fisher panel cointegration test and found a significantly positive relationship between female labour force participation rate and economic growth. The estimation result suggests that an increase in female labour force participation will increase the economic growth in the long run and so policy should be taken to remove the barriers and increase female participation in the labour force.

### **34. Labor Mobility in the Context of Unemployment Situation of Bangladesh: Its Impact and Determinants**

**Rafiah Bintay Rahim**, Department of Economics, Noakhali Science and Technology University, Bangladesh

This work is conducted to observe the recent trends of labor mobility from Bangladesh in the context of prevailing unemployment situation and to look through the determination behind this migration as well as impacts of labor migration on the economy. With a view to accomplish the research, secondary data from different sources (BMET, BBS, BER, WDI, Bangladesh Bank, etc.) for the time span 1991-2018 has been collected and analyzed through different econometric tools. This result indicates that the variables chosen for the research work as the determinants of labor migration from Bangladesh. The relationship of overseas labor migration with unemployment of Bangladesh is highlighted where it is observed that the unemployment situation creates overseas migration but not vice versa. The impacts of labor migration are observed by the impact of remittances on the GDP of Bangladesh, where a significant positive impact of remittance is found on GDP growth. The role of government in facing the challenges of overseas labor migration is analyzed where many developmental steps taken by the government of Bangladesh is observed. It is recommended that the government should finance more to make labor skilled and should ensure the security of expatriate labors in the foreign environment with a more revised treaty with the receiving-country government.

### **35. The Gendered Decision & Productivity Nexus, Breaking the Glass Ceiling: An empirical study of South Asian Subcontinent**

**Ashraf S. Khan**, Department of Economics and Social Sciences, BRAC University, Bangladesh

**Anik Tapader**, Department of Economics and Social Sciences, BRAC University, Bangladesh

The main objective of this paper is to find the impact of female decision maker on a firm's productivity. To accomplish this objective, the paper utilizes World Bank Enterprise Surveys Data from a number of firms situated in the 7 countries of the South Asian sub-continental region, namely: Afghanistan, Bangladesh, Bhutan, India, Nepal, Pakistan, Sri Lanka; in order to determine the effect of employing a female manager and their role on the productivity of a firm on a country level. For the analysis, Ordinary Least Square (OLS) method is chosen. Return on Equity (ROE), Return on Assets (ROA) and Return on Sales (ROS) have been employed for measuring productivity. Therefore, three different models for each country have been crucially examined to verify the hypothesis. These approaches allow to see the results from different perspectives. The main variable of interest for this study is a dummy variable, which captures the presence or absence of a female manager in the top management position. As for the control variables, the econometric models explore the following: gender of the owner, total annual sales, formal training for workers, total export and expense, sales growth, capital intensity, firm size, age of the firm, type of ownership. This study aspires to have a fresh take on this hypothesis and hopes to establish a unique perspective considering the patriarchal social structure of South-Asian Subcontinent.

## **THEME 6: Macroeconomic Policies**

### **36. The Effects of Fiscal Policy in Bangladesh: Results from an Agnostic Identification Procedure**

**Ataur Rahaman**, Deputy Director (Research), Bangladesh Bank, Bangladesh

**Roberto Leon-Gonzalez**, Professor, National Graduate Institute for Policy Studies (GRIPS), Japan

This paper analyzes the macroeconomic effects of fiscal shocks in Bangladesh using the sign restriction approach in Bayesian VAR framework. We identify a generic business cycle shock to deal with the endogenous movement of fiscal variables along with a monetary policy shock to absorb the variations due to those shocks. Both the unanticipated and anticipated fiscal shocks, i.e., government expenditure and revenue shocks, are also identified by minimal sign restriction. In identifying those shocks, we do not impose any restrictions on the sign of the key variable of interest. We find that private investment and consumption, and wage (though wage is not significant) increase due to the expansionary government expenditure shock. Such an increase in private consumption and wage is consistent with the neo-Keynesian prediction. The fall in output due to tax hike shock is highly robust. Private consumption also decreases due to the tax rise, although investment does not. The authority might use fiscal policy, especially tax policy, rather than monetary policy to stabilize output. Moreover, fiscal authority could increase government expenditure without hurting private investment.

### **37. Extending Dunning's Investment Development Path: the role of Home Country Determinants in Explaining Outward Foreign Direct Investment**

**Minakshee Das**, Consultant, Ministry of Steel, Government of India, India

**Vishnu Das Gupta**, Executive Officer (Research), Confederation of Indian Industry, India

In the last few decades there has been a rapid increase in capital flows across countries which is the forthright result of liberalization, deregulation and market opening mechanisms. Moreover, emerging-market and developing economies have gradually become the forerunners in initiating capital outflows. This paper investigates the home country determinants of outward capital flows during the period 1996 – 2016 for four main country groupings; namely—advanced, emerging-market, developing and transition economies. The empirical analysis is based on Dunning's (1981) Investment Development Path (IDP) paradigm, according to which a country's capital flows (inward and outward) are tied to its economic development relative to that of the rest of the world. The results support the main proposition of the IDP theory, but also highlight the importance of other factors, such as economic development, inward capital flows, trade, innovations and telecommunications affecting the capital outflows by adopting a new approach to Dunning's theory.

### **38. The Effect of Macroeconomic Determinants on Capital Flight in South Asia**

**G.D.N.M Godagampala**, Assistant Lecturer, Department of Economics and Statistics, University of Peradeniya, Sri Lanka

What is the effect of macroeconomic determinants on capital flight in South Asia? The relevant questions which form the pivot of this study are: What influence has economic growth on capital flight in South Asia? What is the effect of inflation, unemployment and investment on capital flight in South Asia? What is the relationship between capital outflow and economic growth in South Asia?

A panel data analysis was conducted including five South Asian countries, India, Bangladesh, Pakistan, Sri Lanka and Nepal for the period 1990-2017. Results showed that investment and unemployment positively and significantly affect capital flight while gross domestic product significantly and negatively affects capital flight in South Asia in the long run. It is concluded that there is a causal relationship between macroeconomic factors i.e unemployment, capital stock, economic growth and capital flight in South Asia. Therefore, the Governments of South Asian countries need to frame effective macroeconomic policies and strategies in order to manage inflation and interest rates at desirable levels; create an enabling environment to accommodate a higher level of capital stock through new investment; provide cheap labor with skill capabilities; ensure uninterrupted sustainable economic growth process which could maintain foreign investment for a longer period without capital flight. As much as possible, expatriates and researchers should be engaged in further studies since knowledge is lacking in these areas.

### **39. Is Fiscal Decentralization a means to Poverty & Inequality Reduction? : A Comparative Econometric Analysis for India and China**

**Sovik Mukherjee**, Assistant Professor, Department of Economics, Faculty of Commerce and Management Studies, St. Xavier's University Kolkata, India

In recent years, countries are targeting fiscal decentralization as a means for improving the autonomy at local levels of governance by delegating some of the centralized responsibilities. India and China are no exception. As newly emerging economic powers, China and India are interesting cases in the light of their remarkable record of economic growth. But the cause of concern is that the poor in both these countries, especially in India, are not fully sharing the benefits of rapid economic growth. Up until now, we have little understanding of what is the likely impact of fiscal decentralization on forms of poverty alleviation and inequality in the income distribution in a simultaneous setting. For conceptual understanding, there is a vast literature which focuses on the effects of fiscal decentralization on poverty and inequality, primarily, through redistributive regional transfers targeted at primary health and basic education for bringing about an increase in employment and hence pulling people out of the poverty line bracket or correcting the inequality in the income distribution. However, if we

consider a general setting like ours, the final effects on poverty and inequalities are not very noticeably specified in the literature, and would definitely depend on the quality of reforms and the policy targets the sub-national governments would have under the decentralized scenarios. Hence, the motivation for doing this research. To understand the concept of fiscal decentralization, the author makes use of World Bank's four ratios for  $p$  states in country  $i$  to build the composite fiscal decentralization index. For the measurement of poverty and inequality, the author makes use of the poverty headcount ratio for the concerned years and the Generalized Entropy (GE) Index, respectively. Using GMM Kernel estimations from 2006-2018, the empirical model has been developed in presence of the control variables like — modified fundamental index of fiscal decentralisation (MFDI), the size of the government, logarithm of per capita GDP, adult literacy rate, mortality rate, ethnic/religious fragmentation, share of urban population, trade openness ratio and index of democracy in presence of poverty and inequality based dependent variables in the one case and poverty based social tension and inequality based social tension in the other case. The paper primarily targets to answer to what extent is fiscal decentralization effective in combating social tension arising out of absolute (poverty) and relative (income inequality) deprivations? Interestingly, we find that fiscal decentralization reduces poverty levels while it deteriorates the inequality in the distribution of income below a threshold size of the government.

#### **40. Bank Capital Structure and Monetary Policy Transmission: Evidence from India**

**Shelja Bhatia**, PhD Scholar, Centre for Development Studies, Jawaharlal Nehru University, India

The paper examines the impact of monetary policy on the capital structure of commercial banks in order to understand the transmission mechanism via bank capital channel. We use panel data of 36 banks, consisting of 21 public sector banks and 15 private sector banks. The period of analysis is 2004-05 to 2016-17. It is observed that monetary policy shocks have significant impact on the Tier-I capital of banks through its effect on interest margins and profits. An expansionary policy is found to increase the probability of Indian banks which expands their stock of Tier-I capital. The analysis suggests that bank capital is an important channel to study the transmission mechanism for the Indian economy.

#### **41. The Nexus among Inflation, Unemployment, and Real Interest Rate in Middle Income Countries: A PVAR Approach**

**Faria Hossain Borsha**, Lecturer, Premier University, Bangladesh

**Moin Uddin Ahmed**, Research Associate, Nielsen Company (Bangladesh) Ltd., Bangladesh

The inverse relationship between unemployment and inflation - known as the Phillips curve (PC) - has been one of the most extensively studied relationships in macroeconomics literature, playing a key role in shaping the evolution of both macroeconomic theory and policymaking over the last several decades. This paper employs a panel vector autoregressive (PVAR) model

to examine the dynamic relationship between inflation and unemployment including real interest rate in 46 middle-income countries (i.e. 24 upper and 22 lower middle-income countries) applying annual data for the period of 1976 to 2018. Results are analyzed through the granger causality test, impulse response functions (IRFs), and forecast error variance decomposition applying the PVAR estimation. Granger causality test confirms that there is unidirectional causality from real interest rate to inflation and unemployment, also unemployment to inflation, but not vice versa for upper middle-income as well as the full sample of middle-income countries. The analysis of IRFs shows negative responses of inflation from both unemployment and real interest shock for the same panels of countries. From the overall findings, it can be concluded that there is an inverse relationship between unemployment and inflation for middle-income as well as upper middle-income countries supporting the PC hypothesis. Similarly, an inverse relationship has also been found for the real interest rate and inflation rate for the same panel of countries. But, in the case of lower middle-income countries, these relationships are found to be inconclusive.

## **42. Exchange Rate Pass-Through in South Asian Countries**

**Darpajit Sengupta**, PhD Scholar in Economics, Department of Economics, Jadavpur University, India

**Saikat Sinha Roy**, Professor, Department of Economics, Jadavpur University, India

This study is aimed at estimating the Exchange Rate Pass Through (ERPT) to import prices for a sample of 5 South Asian Countries (Bangladesh, India, Iran, Pakistan, Srilanka). Using profit maximising approach of firms, in lines of Bailliu and Fujii (2004) theoretical specification, this paper estimates the ERPT elasticities in the ambit of dynamic panel data technique. The pass through to import prices is incomplete in the short run. This is indicative of high degree of absorption in foreign currency term and near zero pass through in domestic currency terms, following exchange rate changes. Unlike in the short run, the pass through is relatively high in the long run. The dynamic panel results of the aggregate level analysis suggest that marginal cost, trade openness and country specific domestic demand are statistically significant variables in explaining the volatility of import prices and thereby value of the imports. Furthermore, the pass-through elasticities as revealed by the estimated coefficients depend on depreciation or appreciation of domestic currencies of respective countries. The findings on exchange rate pass through have implications for exchange rates being used as important policy instruments for export promotion and growth on one hand, and in reducing current account deficit, on the other hand.



### **43. Asymmetry in the Monetary Policy Transmission Mechanism: Evidence from India**

**Irfan Ahmad Shah**, PhD Scholar in Economics, Centre for Development Studies, Jawaharlal Nehru University, India

In this paper, we analyse asymmetric effects of monetary policy on output and inflation in Indian context. Given the fact that such studies are limited in Indian context, we use quarterly data from 1996-97 Q1 to 2019-20 Q2 with Jorda (2005) local projections method to explore such asymmetries. A significant asymmetry in the effects of monetary policy of India is observed. These asymmetries are mainly due to the sign (positive/negative) of the shock and the state (recession/expansion) of the economy. Size (small/large) of the shock does not seem to have any asymmetric effect. Moreover, we found negative (expansionary) monetary shocks to have significant effects especially on inflation, compared to positive (contractionary) shocks. Considering the state of the economy, it is observed that monetary effects are more effective during low growth and high inflation regimes. We conclude that studies ignoring asymmetric effects may actually give inaccurate and misleading results.

### **44. Impact of key determinants on innovation: A panel data study on South Asian countries**

**Abir Hassan**, Department of Economics, Bangladesh University of Professionals, Bangladesh

Although innovation has been considered as the driver of sustainable economic growth for quite long, it drew the attention of scholars more recently to keep pace with the 4th Industrial Revolution. This paper attempts to measure the effect of various determinants (such as human capital, energy consumption per capita, foreign direct investment inflows, gross capital formation and internet access) on the Global Competitiveness Index (GCI) in South Asian countries from a macroeconomic perspective. It considers the innovation-driven variables particularly for South Asian regions and tries to compare the individual dynamic effects of those determinants on innovation for specific countries. The study is conducted using the World Development Indicators from the online database of World Bank, Human Capital Index (HCI) of Penn World Table 9.1 and the Global Competitiveness Index from World Economic Forum (WEF). It undertakes the panel data regression approach and descriptive statistics to identify and explain the key elements for improving innovative capacity of South Asian countries. The study finds out human capital to be the most effective determinant for innovation in South Asian countries. Since innovation is a very complex phenomenon to evaluate, the study is limited within the consideration of a concise set of determinants and utilization of secondary data.

## **45. Macroeconomic Determinants of Remittance in South Asia: A Panel ARDL Analysis**

**Sheikh Rafi Ahmed**, Department of Economics, University of Dhaka, Bangladesh

South Asian developing countries rely heavily on their unskilled and semi-skilled migrant workers for remittances, at least during the early stages of development. In this study, we make an attempt to determine the macroeconomic factors affecting remittance in South Asian countries. However, the entire analysis is contingent upon sound microeconomic analysis of the incentive structure of a migrant. For econometric analysis, macro panel set for four South Asian countries (Bangladesh, India, Pakistan and Sri Lanka) has been used for panel cointegration, estimation of long run relationship and determining causality between remittance and its determining factors. Estimates suggest that remittance has long run causal relationship with income level of the host country, exchange rate and political stability of the country of origin. Based on such finding, this paper attempts to provide sound policy recommendations that ensures better future for the brave emigrants working hard in the foreign lands for the betterment of their family, society and country.

## **THEME 7: Poverty and Inequality**

## **46. Inequality of Opportunity and Economic Growth in India**

**Mrinalini Jha**, PhD Fellow, Department of Economics, Delhi School of Economics, University of Delhi, India

Inequality of opportunity has emerged as a key determinant of economic growth in some recent studies outside India. It takes the form of a variety of circumstances in which an individual is born. By measuring inequality of opportunity in monthly per capita consumption expenditure (MPCE) for each state, this paper examines its relationship with economic growth in the Indian context. By taking the three circumstance variables of father's education, caste identity, and sector of residence to define the inequality of opportunity share in the overall inequality, and using, as the other regressors, life expectancy and the initial level of income in the economy, we look at it as an explanatory variable in our growth equation. We also run a second specification wherein we replace share of inequality of opportunity with total inequality as our regressor. We find results from seventeen major states of India over the period from 1993-1994 to 2011-2012 indicating that inequality of opportunity has adverse effects on subsequent economic growth.

## **47. Inequality in Access to Higher Education in India between the Poor and the Rich: Evidence from NSSO Data**

**Pradeep Kumar Choudhury**, Assistant Professor, Zakir Husain Centre for Educational Studies, School of Social Sciences, Jawaharlal Nehru University, India

**Jandhyala B. G. Tilak**, ICSSR National Fellow & Distinguished Professor, Council for Social Development, New Delhi, India

Rising inequalities in the society are indeed becoming an important concern for all. Among inequalities in different spheres, inequalities in education, and inequalities in higher education in particular are seen as too serious to ignore any more. The available studies on inequality to access higher education in India have largely examined the issue from gender and social category of the students; too little is done by examining income as a determining factor. Using NSSO surveys, conducted in 2007-08 and 2013-14, an attempt is made here to examine the income inequality and access to higher education in India. The analysis shows that the inequality in access to higher education has increased substantially by household's economic status in the last seven years. Though the overall gender inequality has come down significantly, this is very high between the rich and the poor. The inequality in access to higher education also varies considerably between rural and urban regions. The logit results lead us to conclude that rich income groups have a higher probability of attending higher education institutions than others. The difference in the probability of participation between men and women narrows down as one moves from poorest to richest quintiles. Recent debates on higher education in India have raised a variety of interesting policy related issues and through this empirical study the author has highlighted a few of them, particularly the interaction

between income inequality and access to higher education, with the aim of facilitating a more informed policy discourse on this.

#### **48. Pathways of Reducing Inequality in Bangladesh**

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**Md. Jahid Ebn Jalal**, Senior Research Associate, South Asian Network on Economic Modeling (SANEM), Bangladesh

**Bazlul Haque Khondker**, Chairman, South Asian Network on Economic Modeling (SANEM) and Professor, Department of Economics, University of Dhaka, Bangladesh

Bangladesh is one of the few least developed countries who has successfully maintained a stable real gross domestic product (GDP) growth rate for the last two decades. In last decade, the average real GDP growth rate for Bangladesh was 6.76 percent. Besides, the per capita gross national income (GNI) has increased to USD 1,909 from USD 843 in the fiscal years (FY) 2010-2019. With a stable economic growth and rise in income per capita, the moderate poverty rate has also decreased by 7.2 percentage point during the period 2009-10 to 2016-17. However, economic growth has been accompanied by rising income inequality suggesting that the growth may not be inclusive. The Gini coefficient of income in Bangladesh has been estimated to be 0.48 in 2016-17 whereas it was 0.46 in 2009-10. Therefore, despite having one of the fastest economic growths in the world, the nature of the growth has been inequality enhancing for Bangladesh. There is empirical evidence that the presence of high inequality may hurt the growth. If the Gini coefficient of income is more than 0.27, the inequality begins to hurt the economic development (Grigoli and Robles, 2017). The current Gini coefficient of income is higher than 0.27 for Bangladesh implying that it may already be hurting economic growth in Bangladesh. If the current trend continues, the Gini coefficient of income may not improve during the period FY2017- FY2040. This may encumber the current rate of economic growth. Thus, to make the development inclusive and broad based, Bangladesh needs to find the apt ways out to reduce the inequality. It is discernible that there is lack of right approach to reduce the inequality. Bangladesh needs to revisit the existing instruments and rethink about executing them effectively. This paper confers that, even with pursuing the current growth model (which is inequality enhancing), Bangladesh can reduce the inequality by effective use of the existing instruments of fiscal policy (i.e. tax and expenditure policies). The authors argue that the progressive and effective fiscal policies will be required to reduce the inequality in Bangladesh. In this paper, based on HIES 2016, a microsimulation model has been applied to evaluate how the progressive fiscal policy reforms affect the inequality. Three different simulations have been carried out to estimate the inequality for the period 2017-2040 where the base year is 2016 – (i) current income tax system where income tax payment is poor; (ii) effective application of income tax system where taxable incomes under different tax slabs are paid according to marginal tax rates; and (iii) additional income tax revenue mobilized through the effective tax system is transferred to the extreme poor persons, poor persons and vulnerable persons. The results show that the aforementioned interventions help to reduce

inequality. The third simulation produces the largest gain in inequality reduction signifying the importance of effective implementation of fiscal policy in Bangladesh.

#### **49. Multidimensional Deprivation among Children in India and Bangladesh**

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Multidimensional poverty among children is a serious issue. While a lot of literature has been generated regarding child poverty and deprivation in developing countries, very little has been written regarding the Indian and Bangladesh context, even though children under the age of 17 constitute more than one third of India's population and 28 percent of Bangladesh's population. The present study aims at studying the deprivation of children in various forms and for different age groups. In this paper, the study has measured the extent of child poverty in India and Bangladesh based on multidimensional poverty approach and multidimensional overlapping Deprivation (MODA) approach. The study has used Demographic Health Survey data 2015-16 for India and 2014 for Bangladesh. The analysis found that intensity of poverty is much lower among the children in age groups 6 to 17 years compared to children aged 0 to 5 years in both India and Bangladesh. In both the countries, it is seen that children are simultaneously deprived in multiple dimension and this is much higher among those between 0 to 5 years. Hence major policy should be targeted to protect the child rights of young children.

#### **50. Street Vending, Income Generation and Poverty Reduction in Nepal**

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**Balaram Pathak**, Lecturer, Economics, Tribhuvan University, Nepal

This study analyzes business income of street vendors and role of street vending on poverty reduction of street vendors in Kathmandu valley. For this, a randomly selected 150 street vendors were interviewed in three locations of Kathmandu valley, i.e. Balaju, Lagankhel and Suryabinayak. Data were collected by using a structured questionnaire. The objectives of the study were to measure net business income of street vendors, to determine the factors influencing their net business income and to analyze the role of street vending on poverty reduction in Kathmandu valley. Among the respondents, 42.67% were males whereas 57.33% were females. The average monthly household expenditure of street vendors was Rs 24,124 and the average monthly net business income of street vendors was Rs 15,370.43. Most of the street vendors were fixed vendors (72%). Study found that most of the vendors were selling either vegetables or services (19.3% vendors in each category), followed by other items (17.3%), food (14.6%), clothes (11.3%), fruits (9.3%), consumer electronics (4.6%) and utensils (3.3%). Vegetable sellers had the highest level of monthly average net business income (Rs 16,075.85) followed by fruit sellers (Rs 15,466.79), sellers of other items (Rs 14,555.81), sellers of clothes (Rs 14,000.24), sellers of consumer electronics (Rs 11,515.25), service sellers (Rs 9,444.60), food sellers (Rs 8,867.45) and sellers of utensils (Rs 4,915.71). Educational level, experience and sales were the factors influencing net business income of street vendors.

Among 150 respondents, study found that 77 (51.33%) respondents were found to have consumption above poverty line whose consumption was covered by their net business income. Similarly, data suggests that if respondents were not involved in street vending, only 51 (34 percent) respondents could have consumption above poverty line whose consumption would be covered by their income from other job/profession. Thus, there is role of street vending on poverty reduction of street vendors in Kathmandu valley.

## **51. Understanding Regional Income Disparities: A Panel Study of Indian States**

**Smruti Ranjan Sahoo**, PhD Scholar, Centre for Development Studies, Jawaharlal Nehru University, India

This study focuses on the empirical verification of one of the process underlining increasing income disparities among Indian states. Specifically, we focus on the cumulative circular causation arising out of the interaction between manufacturing and producer services. We employ a panel data set consisting of 14 major Indian states over the period 1970-71 to 2016-17, for that reason. First, we computed growth rates of the states, and found substantial variation in growth among the states, starting from the decade 1970 -79. Second, both the  $\sigma$  and  $\beta$  convergence, for the period 1970-71 to 2016-17 show an increasing income disparity among Indian states. Third, sector wise analysis of income disparities, reveals large variation in manufacturing income among the states, followed by service income. On the other hand, disparities in agricultural income has been declining slowly. Noticing the importance of the manufacturing and producer services, we tried to verify empirically whether there exists a mutual feed-back mechanism between both the sectors that is driving overall income disparities among the states, as implied by the process of cumulative circular causation. To find mutual-feedback mechanism, we first check for the long-run association between manufacturing and producers services, through a number of cointegration tests. Then, we used GMM-IV regression method to check mutual feedback relationship in the growth of both the sectors. The results suggest a strong long run relationship between the two sectors, as well as, a mutual positive feedback between them in their growth rates. Thus, both the tests together confirm the existence of cumulative circular causation between the manufacturing and the producer services sector, helping the richer states to grow richer and thereby contributing to greater income disparities.

## **52. Determinants of Poverty: The Case of Bangladesh**

**Selim Raihan**, Executive Director, South Asian Network on Economic Modeling (SANEM) and Professor of Economics, University of Dhaka, Bangladesh

**Fahmida Haq Majumder**, Research Associate, South Asian Network on Economic Modeling (SANEM), Bangladesh

Accelerated economic growth has assisted in reducing poverty rate in Bangladesh over the last few decades. Starting from 1972 to 2018, extreme poverty rate fell from 82% to below 9%. Even though Bangladesh has achieved a colossal success in poverty reduction, it is so far one of the poorest country in South Asia, ranked right after Afghanistan, Nepal and Pakistan. HIES 2016 data states that around 40 million poor and 21 million extreme poor people live in Bangladesh right now. To tackle down and mitigate the root cause of poverty, understand its characteristics, fundamental causes and pattern is the principal concern of this paper. The present study is an attempt to understand the determinants of poverty in Bangladesh. The main aim of this paper titled “Determinants of Poverty” is to identify the factors responsible for poverty in the urban and rural areas of Bangladesh and compare it with global scenarios, so that it comes in handy for policy implications. This paper estimates the determinants and probability of being poor for a household through a probit model. As the dependent variable is binary, probit model suits the analysis best. After analyzing the regression result, various factors have been identified as the determinants of poverty in case of Bangladesh such as remittance, location of the household, size of the household, health index, education index, sex of the HH head, HH main income source and dependency ratio etc.

## **53. Gender Inequality and Maternal Health Care Services in Bangladesh**

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The study reveals the impact of gender inequality on maternal health care service utilization in Bangladesh. In order to define gender inequality, the study considers gender based violence in the household as well as woman’s decision making autonomy. This study used data from Bangladesh Demographic and Health Survey (BDHS) 2014, which is a nationally representative survey considering respondents of 17,863 women. The study instrumented gender inequality by autonomy and violence index of woman depending on the treatment women face in their own household through principle component analysis (PCA). Ordinary Least Square Analysis has been used for finding out the determinants of gender inequality. Logistic regressions have been carried out for finding out the probability of woman’s receiving maternal health care services particularly: all four types of ANC facilities, at least four ANC center visits and skilled birth attendant during delivery.



Woman's autonomy significantly positively affect access to maternal health care and violence faced by woman in household significantly negatively affect the outcome variables. Women with high autonomy get more access to good health care services compared to the women with limited decision-making power in their households. Reducing gender inequality at the household level by ensuring higher autonomy in their decision-making and securing them from violence could be a good policy proposal to raise the access to maternal health service for the women.

## **54. Determinants of Household Food Poverty among Children in Bangladesh**

**Farhin Islam**, Department of Economics, University of Dhaka, Bangladesh

The phase of demographic dividend makes the concept of food security more important in Bangladesh. Food poverty is about quality of food as well as quantity which has increasingly included the concept of food insecurity in recent years, particularly at the household level. This paper identified the household determinants of food poverty with special emphasis on the households with children using three different measures of food poverty (calorie intake, dietary diversity score and expenditure on food) covering a wide range of socio-economic and demographic determinants using HIES-2010 dataset in the context of Bangladesh. There is notable difference between with children and without children households in terms of food consumption in calorie, dietary diversity score and food expenditure. Almost all households, irrespective of their dietary diversity subgroups and having children status, reported having consumed cereal, tubers & roots, vegetable, fish, pulse, oil/fat. The difference is highly notable in fruits, meat, milk and sweet groups. It is high time we paid special attention to food poverty pattern, going beyond the calorie requirement-based measure and focusing more on quality of food. This paper can suggest important policy implications emphasizing on children food poverty based on some econometric analyses.

## **55. Intimate Partner Violence in Bangladesh: Some Empirical Evidences**

**Shahriar Ahmed**, Department of Economics, University of Dhaka, Bangladesh

Accepting "Intimate Partner Violence (IPV)" is a severe societal prejudice that we need to deeply consider. When women, victim of IPV, start to accept IPV then it becomes tough to eradicate this problem from the society. Due to several factors, women accept IPV. This study identifies that the women's characteristics, several social norms, exercise of rights, their partner's characteristics etc. play a crucial role in determining whether a woman would accept or reject the idea of IPV. Besides, this paper reveals that the women who have faced childhood discrimination, they are more likely to accept violence in their later life. Hence, this paper advocates interventions which are crafted for reducing childhood discriminations. Moreover, the paper strongly underpins the urgency of gender-sensitive education and robust community level institutions in Bangladesh to solve heinous societal problem like IPV.

## **56. Ascertaining the Determinants of Inclusive Growth in Rural Bangladesh: A Quantile Regression Analysis**

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Bangladesh has been enjoying a stellar growth rate for the past decade. Currently, the GDP growth rate of the country is 7.9%. Simultaneously, the country's inequality situation has worsened. According to the latest Household Income and Expenditure Survey (HIES), the country's Gini coefficient increased significantly to 0.482 in 2016 from 0.458 in 2010. In order to achieve sustainable growth, it is essential for the country to sustain the growth rate whilst reducing the existing inequality. Furthermore, Bangladesh's aspirations to become an upper middle income country should be reflected in its poverty alleviation strategy as well. In this scenario, this paper aims to address poverty in a holistic manner by considering the World Bank's international poverty line, lower-middle income poverty line and upper-middle income poverty line to ensure inclusive growth. A quantile regression analysis is conducted on BIHS's panel dataset to find the effect of skill levels of migrants on the consumption behavior of households classified by poverty lines. The findings of the paper outline the importance of sending highly skilled workers as migrants for poverty alleviation across different consumption groups paving the way for inclusive growth.

## **THEME 8: Trade and Development**

## 57. Boosting LDCs' Participation in Global Trade: The Way Forward

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**Sunera Saba Khan**, Research Economist, South Asian Network on Economic Modeling (SANEM),  
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The slowdown in world trade had begun long before the recent eruption of protectionism. The least developed countries (LDCs) have been largely affected by rising protectionism. Changing trade policies and changing global trade scenarios have had serious implications for the world's poorest and most vulnerable economies. In this context, this paper attempts to provide an overview of LDCs' participation in global trade, explores the differences between the trading patterns of African LDCs, LDCs in the Asia Pacific region and LDCs in Latin America and the Caribbean during a period of growing protectionism. The paper also looks into the challenges LDCs encounter when engaging in global trade. This study carries out a panel data analysis for 47 least developing countries to determine the factors affecting LDC export performance for the period 1980-2018. For this purpose, a fixed effect model is employed. It is observed that higher openness (measured by trade-GDP ratio), larger population, higher investment-GDP ratio, higher private sector credit as a percentage of GDP, the quality of trade and transport-related infrastructure and the different institutional variables have a significant impact in raising LDCs' contribution in global exports. Furthermore, the paper carries out an appraisal for enhancing LDCs' trade in the changing global context and finally concludes.

## 58. Convergence Potentials in SAARC and ASEAN Economies

**Sunetra Ghatak**, Research Fellow, National Institute of Public Finance and Policy (NIPFP), India

Studying the existence of income convergence (or divergence) among SAARC and ASEAN countries is the aim of this study. Asian rising growth trajectory is incomplete without attaining income convergence and economic integration among these two important regional blocs. Therefore this study is set to investigate whether (or not) there exists income convergence across SAARC and ASEAN blocs over the period of 1970 to 2017. It empirically investigates the role of per capita income levels for member countries with the help of  $\beta$ -convergence,  $\sigma$ -convergence and club convergence estimation methods. Using a panel data framework, this article investigates the possible determinants of the conditional convergence by undertaking the problem of endogeneity. The results confirm the convergence of income across ASEAN member countries, which is absent for SAARC member countries at intra-regional level. Results differ when conditions are applied for intra-regional level analysis. Although considering SAARC and ASEAN blocs together in the panel, evidence of convergence between the two have been found. The analysis supports the view of trade liberalisation and recommends investing in the human capital to narrow down the regional disparity in future. To achieve a favourable impact of the Asian rising growth, regional integration is important, for which a combined and collective policy framework at the regional level is needed for both SAARC and ASEAN.

## **59. Does ICT-Trade Openness Ensure Energy and Environmental Sustainability? Empirical Evidence from Selected South Asian Economies**

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Consumption of fossil fuels has triggered worldwide awareness to attain sustainability with respect to ensuring adequate energy access and mitigating environmental adversities, globally. Against this background, this paper aimed at investigating the impacts of enhancing ICT-trade openness on the transition from non-renewable to renewable energy use and carbon dioxide emissions in the context of six South Asian economies. The overall results from the econometric analyses confirm that greater openness to ICT-trade leads to greater consumption of renewable energy, reduces the intensity of energy-use and enhances the access to clean fuel and technology for cooking. However, although ICT trade is found to foster renewable energy consumption across South Asia, it fails to ensure renewable energy transition completely since greater openness to ICT-trade curbs the share of renewables in the aggregate energy consumption figures. Moreover, trade of ICT goods is found to reduce the levels of carbon emissions as well. Thus, these results impose key policy implications for the governments with respect to ensuring energy security alongside environmental sustainability across South Asia.

## **60. Prospects of Cross-Border Energy Trade in South Asia: Significance of Political Negotiation through Game Theory**

**Samanta Islam**, Department of Economics, Bangladesh University of Professionals, Bangladesh

South Asia has been blessed with a vast diversity of energy resources in different regions i.e. Nepal's hydropower, Bangladesh's fossil fuel, and Sri Lanka's renewable energy. With rapidly rising energy demand across all the nations in the South Asian region, there are huge opportunities to optimize the available energy resources via cross border trade through an interconnected power system. However, the regional trade volume of South Asia is the lowest let alone energy trade which is not only expensive but also requires strong inter-governmental cooperation. This paper aims to analyze the prospects of the cross-border energy trade of South Asia, its current energy consumption and production situation with the available data. The analysis of the paper indicated that among the South Asian countries, there is an actual and potential trade gap. However, the gap is reduced through energy import which is not sustainable to meet the increasing demand. Hence, the importance of political negotiation among governments is indispensable. In this paper, the significance of negotiation has been shown through the lens of game theory. The finding suggests the importance of co-operation among the South Asian region to build a successful cross-border energy trade model that can keep pace with economic growth.

## 61. Labor Demand and Export-Oriented Industrialization of Bangladesh

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**Binata Rani Sen**, Department of Economics, Noakhali Science and Technology University,  
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This thesis based on the findings of a study on labor demand and export-oriented industrialization in Bangladesh at the time of 1992-93 to 2016-17. For this persistence, secondary data from different sources (BBS, WDI, EPB, BER, WB, BB, etc.) for the time duration 1992-2017 has been composed and analyzed through econometric tools. To test the normality of the disturbance terms Jarque-Bera (JB) normality test is accepted. The test approves that the disturbance terms are normally distributed. To detect that the data suffer from multicollinearity, heteroscedasticity, and autocorrelation problem, the diagnostic test has been adopted. From the diagnostic test, it is detected that while the data free from heteroscedasticity, and autocorrelation problems, however, the data suffer from severe multicollinearity problem. The multicollinearity problem is removed using remedial measures (first difference form). The Unit root test has been detected to test the stationarity of the composed data. Among different unit root test, ADF-test is adopted. The test displays that the data are stationary at the first difference level for export-oriented industrialization and the second difference level for labor demand. The Johansen co-integration test is adopted to test whether the data are cointegrated at any level. The test results approve that six variables are cointegrated on labor demand and one variable cointegrated on export-oriented industrialization. To observe the short-run and long-run relationship of the independent variables VECM method was the dependent variable. The Granger causality test under VAR (Vector Autoregressive Regression) framework displays the variable has a unidirectional causal relationship with the dependent variable where all independent variables lead, and the dependent variable follows. This investigation focused on the current situation, to investigate econometrically of many exogenous variables, to evaluate the impact of export-oriented industrialization, to observe the standard of living of labor constructed on their wage, classify the problems, resolutions and, commendations founded on the study, and effect on economic position of labor demand and export-oriented industrialization in Bangladesh. The analysis of the demand for labor showing that engaged with labor was one-third of all labor and its export percentage grew up which have solely passed the economy of Bangladesh until now. This sector's involvement in export earnings has increased steadily. However, these relationships have found a statistically significant positive impact of labor demand and export-oriented industrialization in Bangladesh. Thus, there is a dynamic relationship between domestic labor demand, export, and economic growth in Bangladesh.

## **62. Does Export Orientation Influence Innovation? Empirical Evidence at the Firm Level**

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The objective of this paper is to analyze how and to what extent the export orientation of firms affects its decision to innovate. The paper defines innovation from three perspectives: (i) process innovation; (ii) product innovation; and (iii) market innovation. It uses the World Bank Standardized Enterprise Survey (WB-SES) which provides firm-level microdata of 142 countries. Results from the panel random effect probit estimates show that export-oriented firms have a higher probability to innovate than the firms which focus only on domestic markets. For further understanding of the relationship between a firm's innovation-decision and export intensity, this paper divides the total sample into three sub-samples based on the firm size. It is observed that the large exporting firms have a higher probability to undertake product and market innovation than non-exporting large firms. On the other hand, small and medium export-oriented firms have a higher probability to conduct only product innovation compared to non-exporting firms. The results also show that other conventional variables such as the age of the firms, competition, formal training of the employees and foreign share positively influence a firm's decision to innovate.

## **63. Trade Facilitation and Regional Integration in South Asia**

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Unlike other regions of the world, regional linkage is weak in South Asia due to cross-border dispute and divergent strategic interests. Despite of SAFTA, the South Asian countries have not shown favorable results in promoting intra-trade and economic development over the last few years. In this regard, this region highly requires adopting trade facilitation measures in order to reduce trade costs and achieve more economic competitiveness. More than one-fifth of the world's population live in South Asia. However, it is one of the least integrated regions where the share of global trade is only 3 percent and intra-regional trade accounts only for only 5 percent of its total trade. The main objective of this study is to identify the trade potential and role of trade facilitation measures in developing regional integration among South Asian countries, using diagnostic approach. It has been evident that inter-regional trade is missing

between many countries like Afghanistan and Nepal, Maldives and Afghanistan, Pakistan and Bhutan etc. Moreover, the average trade cost is 20 percent in South Asia which is also very high. Proper infrastructure and logistic, and customs facilitation are the major factors that determine cross-border trade flow. Poor infrastructure, high level of protections and institutional deficiency are also hindering intra- trade in the region. There is need to improve trade facilitations such as visa sticker, removing tariff and non-tariff barriers and improving infrastructure for enhancing regional trade between SAARC countries. Furthermore, investment should be linked with facilitating trade in logistic infrastructure, road connectivity, information and communication and cross-border trading services. There is also a need to build more confidence while minimizing trust deficit between member countries which may improve economic interest and increase possibility of trade throughout the South Asian Countries.





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