

# Annual Report 2016-17



“Linking India  
with the World”



Indian Council for Research on International Economic Relations



# Annual Report 2016-17



Indian Council for Research on  
International Economic Relations

Research  
in  
Economic  
Relations



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## Foreword by Chairperson



**T**he Annual Report for 2016-17 records ICRIER's activities in the year gone by. By all accounts, it has been another productive and exciting year. Once again, the University of Pennsylvania in its 2016 edition of the *Global Go to Think Tank Index Report* has ranked ICRIER in the top 3 among all think tanks in India. By category, ICRIER is the 1<sup>st</sup> in India and 25<sup>th</sup> globally for International Economics, 1<sup>st</sup> in India and 67<sup>th</sup> globally for Domestic Economic Policy, and 2<sup>nd</sup> in India and 46<sup>th</sup> globally for International Development.

True to its founding vision, ICRIER remains committed to fostering and facilitating research in critical areas of emerging and contemporary policy relevance for India. Our research programme, as elaborated in the Director's report, has broken new ground and brought evidence-based perspectives on some of the pressing issues in the current stage of India's development. It covers several new areas that are assuming importance in India's renewed push

to meet its development challenges, e.g., research on agriculture, urbanisation, climate change, employment and skill development. More specific areas of growing importance in which research is being directed include income inequality, urban governance, role of entrepreneurship in generating economic growth and role of water efficiency in sustainable agricultural growth.

An important initiative this year was the first China-India dialogue, which was convened at Tsinghua University in Beijing on March 16-17, 2017. The second dialogue will take place in January 2018 in New Delhi, focusing on finance, energy, impact of climate change and South-South co-operation.

ICRIER's new Green building in the Saket Institutional Area is nearing completion and will provide scope for ICRIER to accommodate its expanding imprint in research activity. This would not have been possible without the generous support of donors.

I compliment Dr. Rajat Kathuria, Director and Chief Executive, ICRIER for ably guiding the research and dissemination activities of ICRIER. I have no doubt that with support from our stakeholders, ICRIER will continue to strive for excellence in policy-oriented research of high quality and help influence the discourse on India's economic policy choices.



**Isher Judge Ahluwalia**  
Chairperson, ICRIER

## Board of Governors

### Chairperson

#### Dr. Isher Judge Ahluwalia

W-36, Greater Kailash - I  
New Delhi - 110 048

### Elected Members

#### Mr. Pramod Bhasin

Founder, Genpact India  
F-35, Radhe Mohan Drive  
Gadaipur, New Delhi - 110 030

#### Mr. Tarun Das

102-B, Beverly Park - I  
Mehrauli Gurgaon Road  
Gurugram - 122 009

#### Mr. Nitin Desai

Chairman, Institute of Economic Growth  
B-63, 1<sup>st</sup> Floor, Defence Colony  
New Delhi - 110 024

#### Ms. Janaki Kathpalia

Former Additional Secretary  
Ministry of Finance, Government of India  
D-935, New Friends Colony  
New Delhi - 110 065

#### Mr. Uday S. Kotak

Vice Chairman & Managing Director  
Kotak Mahindra Bank Ltd.  
Bakhtawar, 2<sup>nd</sup> Floor, 229, Nariman Point  
Mumbai - 400 021

#### Mr. Sudhir Mankad

Plot 192, Sector 8  
Gandhinagar - 382 007

#### Mr. Sanjiv Misra

Non Executive Chairman, Axis Bank  
1541, ATS Village  
Sector 93A, Noida Expressway  
Noida - 201 304

#### Dr. Kiran Mazumdar Shaw

Chairman & Managing Director, Biocon Ltd.  
20<sup>th</sup> KM, Hosur Road, Electronics City  
Bengaluru - 560 100

#### Mr. Malvinder Mohan Singh

Group Chairman  
Religare & Fortis Healthcare Limited  
1, South End Lane, New Delhi - 110 011

#### Mr. N. K. Singh

Former Member of Parliament (Rajya Sabha)  
18 Paschimi Marg, 1<sup>st</sup> Floor, Vasant Vihar  
New Delhi - 110 057

### Co-opted Members

#### Mr. Kunal Bahl

Founder & CEO, Snapdeal.com  
363, Udyog Vihar - IV  
ASF Centre, Tower A, Ground Floor  
Gurugram - 122 015

#### Dr. Rohan Murty

Founder, Murty Classical Library of India  
703, 47<sup>th</sup> A Cross  
9<sup>th</sup> Main Road, Jayanagar 5<sup>th</sup> Block  
Bengaluru - 560 041

### Overseas Member

#### Lord Nicholas Stern

IG Patel Chair and Director  
LSE Asia Research Centre  
London, United Kingdom

### Member-Secretary

#### Dr. Rajat Kathuria

Director & Chief Executive, ICRIER  
Core 6A, 4<sup>th</sup> Floor, India Habitat Centre  
Lodhi Road, New Delhi - 110 003



## Management Committees

### Executive-cum-Finance Committee

<b>Dr. Isher Judge Ahluwalia</b>	:	<b>Chairperson</b>
Mr. N. K. Singh	:	Member
Ms. Janaki Kathpalia	:	Member
Mr. Tarun Das	:	Member
Dr. Rajat Kathuria	:	Member-Secretary

### Investment Committee

<b>Mr. Uday S. Kotak</b>	:	<b>Chairperson</b>
Ms. Janaki Kathpalia	:	Member
Dr. Rajat Kathuria	:	Member-Secretary

### Building Advisory Committee

<b>Dr. Isher Judge Ahluwalia</b>	:	<b>Chairperson</b>
Mr. Nitin Desai	:	Member
Mr. N. K. Singh	:	Member
Ms. Janaki Kathpalia	:	Member
Mr. Tarun Das	:	Member
Mr. Pramod Bhasin	:	Member
Dr. Rajat Kathuria	:	Member-Secretary

## Founder Members and Life Members

### Founder Members

1. Dr. Montek Singh Ahluwalia
2. Dr. Jagdish Bhagwati
3. Mr. K. K. Bhargava
4. Mr. I. S. Chadha
5. Mr. K. L. Dalal
6. Mr. B. S. Das
7. Mr. Ashok V. Desai
8. Mr. Nitin Desai
9. Mr. M. Dubey
10. Mr. R. M. Honavar
11. Mrs. Anna R. Malhotra
12. Dr. Suman K. Modwel
13. Mr. P. K. Nanda
14. Mr. N. C. B. Nath
15. Mr. P. C. Nayak
16. Dr. Deepak Nayyar
17. Dr. V. R. Panchamukhi
18. Mr. Vijay G. Pande
19. Mr. R. D. Pradhan
20. Mr. Vinay Bharat Ram
21. Mr. S. S. Ramphal
22. Dr. C. Rangarajan
23. Mr. S. S. Rao
24. Dr. Manmohan Singh
25. Mr. R. V. Subrahmanian
26. Dr. M. S. Swaminathan
27. Dr. Charan D. Wadhva

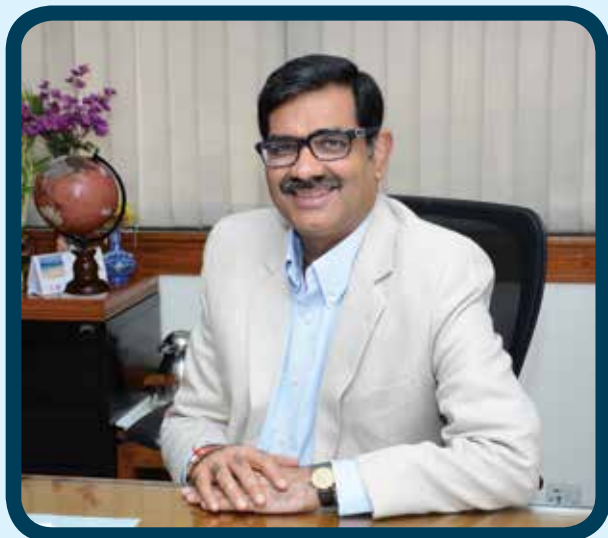
### Life Members

1. Dr. Shankar Acharya
2. Dr. Isher Judge Ahluwalia
3. Mr. Mukesh D. Ambani
4. Mr. J. S. Baijal
5. Mr. Jagmohan Lal Bajaj
6. Dr. Surjit S. Bhalla
7. Mr. Y. C. Deveshwar
8. Mr. Jamshyd Godrej
9. Mr. Rajinder Gupta
10. Ms. Lalita D. Gupte
11. Mr. Anwarul Hoda
12. Dr. Bimal Jalan
13. Mr. Rakesh Kacker
14. Mr. K. V. Kamath
15. Dr. Vijay Kelkar
16. Mr. Rajeev Kher
17. Dr. Rahul Khullar
18. Ms. Naina Lal Kidwai
19. Mr. Uday S. Kotak
20. Dr. Rajiv Kumar
21. Mr. Darshan Lal
22. Dr. Deepak Lal
23. Dr. Rajiv B. Lall
24. Mr. Arun Maira
25. Mr. Raghunandan D. Maluste
26. Dr. R. A. Mashelkar
27. Mr. Aman Mehta
28. Mr. Shivshankar Menon
29. Mr. Rakesh Bharti Mittal
30. Dr. Rakesh Mohan
31. Mr. Pawan Munjal
32. Mr. N. R. Narayana Murthy
33. Dr. Arvind Panagariya
34. Dr. Kirit S. Parikh
35. Dr. Swati A. Piramal
36. Mr. S. Ramadorai
37. Mr. N. Ravi
38. Dr. Y. V. Reddy
39. Mr. Shyam Saran
40. Mr. Parth J. Shah
41. Mr. Ajit Seth
42. Mr. Prakash Shah
43. Dr. Kiran Mazumdar Shaw
44. Mr. N. K. Singh
45. Mr. Surendra Singh
46. Mr. Pramath Sinha
47. Dr. T. N. Srinivasan
48. Lord Nicholas Stern
49. Mr. C. M. Vasudev

### \* Late Founder Members:

Mr. Malcolm S. Adiseshiah, Mr. M. C. Bhatt, Mr. Brij Bhushan, Dr. Sukhamoy Chakravorty, Mr. Khub Chand, Mr. B. K. Chatterjee, Dr. R. J. Chelliah, Mr. P. K. Dave, Professor P. N. Dhar, Mr. R. S. Gae, Dr. S. P. Gupta, Mr. B. D. Jayal, Mr. L. K. Jha, Mr. S. V. S. Juneja, Mr. P. K. Kaul, Dr. A. M. Khusro, Dr. Rajni Kothari, Mr. Raj Krishna, Mr. Lovraj Kumar, Mr. Suresh Kumar, Dr. K. B. Lall, Mr. Sanjaya Lall, Mr. R. N. Malhotra, Mr. S. S. Marathe, Mr. Freddie A. Mehta, Mr. Govind Narain, Mr. B. K. Nehru, Mr. I. G. Patel, Mr. Anand Prakash, Mr. Bharat Ram, Mr. P. Chenstal Rao, Mr. J. Rameshwar Rao, Mr. H. N. Ray, Mr. S. R. Sen, Mr. N. K. Sengupta, Mr. Y. T. Shah, Mr. Manu R. Shroff, Mr. Harbans Singh, Mr. Prakash Tandon, Mr. T. K. N. Unnithan, Mr. Mohammad Yunus

## Director's Report



The Indian economy continues to be one of the fastest growing economies in the world. Significant progress has been made on important economic reforms such as the implementation of the goods and services tax (GST), which will support strong and sustainable growth. Challenges remain however and there is little scope for complacency. Maintaining the reform momentum is the key to stronger growth. To keep the reform process going our policymakers need reliable, accessible and useful information about how current policies are working, as well as possible alternatives and their likely costs and consequences. Research activities at ICRIER over the last year have continued to focus on areas of central importance to India's policy regime.

In the last decade, India has averaged an annual GDP growth rate of 7.5 per cent, with an influx of foreign investments. Yet, there are concerns over the lack of productive job creation to meet the employment demands of India's rapidly rising workforce. With greater migration to cities owing to better employment opportunities, the challenges

of urbanisation, such as transport and congestion, air pollution and waste management, are on the rise, while demand for safe drinking water continues to grow. Further, the growth of the Indian economy depends critically on the performance of the agriculture sector. Research at ICRIER this year has focussed on a wide range of issues from strengthening financial institutions to issues of food security, employment generation, urbanisation and climate change so as to provide evidence-based research for policy.

In order to address gaps in employment creation and measurement in India, a study funded by the Ford Foundation is examining the challenge of employment generation in India. This study builds on our recently completed *Jobs for Development* research programme which focused on the confluence between labour market institutions, manufacturing and job creation. The new study will delve deeper into understanding where existing jobs are located in the economy, whether these jobs are indeed productive/good jobs, and where jobs will come from in the future. The endeavour will also be to examine the shortfalls in employment statistics and utilize alternative data sources that can give us a better sense of real time changes in labour markets. This is indeed a challenging exercise, exacerbated by the complex employment dynamics in India's labour markets. Furthermore, changes in demand and technology are changing the nature of jobs. The new entrants in the workforce need to be nurtured to be job creators and not just job-seekers. Therefore, skill development and entrepreneurship must occupy centre stage in India's employment strategy. Given this, ICRIER has expanded the scope of its research to incorporate these areas in our work on employment creation.

ICRIER has commenced work on the Programme of Global Competitiveness of the Indian Economy, jointly funded by the IDFC Foundation and Dr. Rajiv Lall. The objective is to examine the reasons for India's low competitiveness in the world economy, such as infrastructural bottlenecks, a narrow industrial base and continued dependence on agriculture for a large proportion of employment despite its low contribution to gross value added. The first project under this programme explores job creation specifically in the renewable energy sector and in India's export sectors and their impact on the global competitiveness of the economy.

In agriculture, the focus of research at ICRIER has been on food security and related issues, as well as water use efficiency in agriculture. The role of food and welfare schemes and associated issues of technology-linked direct benefit transfers (DBT) in food security have been examined in a number of studies by the research team led by Professor Ashok Gulati, Infosys Chair on Agriculture. The research has also analysed the linkages between farm wages and food prices, distortions in agricultural prices and undertaken a comprehensive review of agricultural policy in India. A second area of research has focussed on irrigation, water productivity and water use efficiency. In particular, a research project has been launched to create India's first water productivity atlas as well as conduct a detailed analysis of key crops like rice, wheat, maize, etc.

The role of organic farming in preserving soil quality and nutrients has received a lot of attention in recent years and ICRIER has initiated research in this field. A recently released report on organic farming prepared under the supervision of Professor Arpita Mukherjee has explored the scope and significance of organic farming in India, efficacy of various measures adopted by the government and the challenges that face organic farmers, food producers and exporters. It utilises data from a pan-India survey that incorporates multi-stakeholder

perspectives including companies, farmers, foreign buyers and policymakers. A related project has focussed on the sanitary and phytosanitary (SPS) barriers faced by agricultural exporters, specifically in the European Union market especially with regard to selected commodities such as fruits, rice, dairy products, etc.

ICRIER this year launched its first systematic initiative to examine trade facilitation within the Bangladesh, Bhutan, India and Nepal (BBIN) region from a gender perspective. Under the direction of Professor Nisha Taneja, and in collaboration with the Department of Foreign Affairs and Trade, the Australian High Commission and the World Bank, ICRIER has prepared a concept paper on measures to enhance women's participation in cross-border trade in BBIN, particularly in the border haats. Exploring trade channels from a gender lens is useful because of its corresponding positive effects on increasing female labour force participation in the economy. The IMF has estimated that gender parity in the work force could augment India's GDP by 27 per cent. Therefore, through the effects of trade and employment, a rise in female entrepreneurship could significantly bolster the growth of the Indian economy.

The withdrawal of the United States from the Trans-Pacific Partnership (TPP) Agreement in January 2017 has critical implications for India's future strategy in international trade negotiations. One of the recommendations of research at ICRIER under Professor Anwarul Hoda's leadership is for India to consider inclusion of provisions on the lines of the TPP Agreement with safeguards in our bilateral negotiations. Another area germane to India's future interest relates to bilateral investment treaties (BIT). India has one of the largest BIT networks in the world. As of 2016, India had signed 83 BITs, of which 72 have been enforced and 13 other international investment agreements (IIA). *Assessing the Indian experience with BITs: Emergent Issues for Future*

*Strategies* was an influential study we conducted for the Ministry of Finance.

Given the rapid pace of rural-urban migration, the challenges of urbanisation are more pertinent than ever. A study by Dr. Isher Judge Ahluwalia, Chairperson ICRIER, has analysed the challenges of urban governance in India which was published in the *Journal of Urban Affairs*. In order to accurately quantify the costs of delivery of urban services including the social, economic infrastructure, health and environmental costs, the urbanisation team has also undertaken a study to calculate the 'business as usual' costs of urbanisation in the cities of Surat, Pune, Bangalore and Indore, using a social cost accounting (SCA) methodology. It looks at a number of issues that are typically left unaddressed in urban planning, such as the overall size of the deficit in the supply of services, social costs by sub-sector and overall costs (public, private and self) to the entity providing these services. Another important study in this context was on the solid waste management scenario in India, including its changing composition, the growing use of plastic and non-recyclables, the lack of segregation of biodegradable waste from other waste and waste disposal at landfill sites. The project further explores practices adopted by the city of Pune, which successfully utilise solid waste to generate energy such as bio-gas and electricity and uses bio-methanation to produce manure.

A related core area of research to urbanisation is that of climate change and environment. Under this theme, research has focused on adaptation to climate change and making cities more resilient to its effects. Led by Professor Meenu Tewari and funded by the Rockefeller Foundation, the project detailed the effects of climate change on urban development, transportation, water availability and related services. Using spatial mapping data for four cities – Pune, Surat, Kochi and Ludhiana – the interdependencies

of urban development and climate risks, in the form of disasters (such as flooding) have been studied. Further, two key industries in Surat – textiles and diamond – have been explored in detail to examine their impact on public health as well as the effect of rising temperatures on labour productivity in these sectors. A related project, as part of a joint collaboration between ICRIER, the Stockholm Environment Institute (SEI) and Climate Policy Initiative (CPI) delves into energy policy and explores the role of municipal bond markets in enhancing the use of rooftop solar power in India. The results suggest that municipal bonds can significantly reduce the cost of rooftop solar power and make it commercially viable.

One of the key challenges India faces today is improving accessibility to affordable and quality healthcare. The Health Policy Initiative (HPI) at ICRIER is a large scale project that analyses the key bottlenecks in the health sector and suggests reforms. It is broadly divided into two categories – drug and regulatory reforms, and tackling chronic diseases in India. While the former deals primarily with the safe and effective delivery of high quality medicines within the country, the latter focuses on prevention of chronic diseases, delivery of primary healthcare and the prevalence of premature deaths in the country. The project brings in multi-sectoral expertise after interactions with over 150 stakeholders across four Indian states – Maharashtra, Karnataka, Gujarat and Telangana, and seven countries, namely the USA, the UK, Switzerland, Germany, South Africa, Singapore and Indonesia. The project has been jointly funded by the Pharmaceutical Research and Manufacturers of America (PhRMA), the World Health Organization, India (WHO) and RxGPS Alliance.

Stability of the macroeconomic environment in a country is important for economic growth and attracting private investments. Yet, since the recent



recession, there are serious doubts regarding the stability of financial markets. In light of this, ICRIER has conducted research on capital market reforms in India over the last twenty-six years, examining specific financial instruments such as equity, debt and derivatives markets as well as the role of the Securities and Exchange Board of India (SEBI) in strengthening financial institutions. Led by Professor Jaimini Bhagwati, RBI Chair Professor at ICRIER, the project also analysed the role of asset reconstruction companies (ARCs) in mitigating the rise in non-performing assets and 'bad loans' in a mix of developed and developing countries such as the United States, Sweden and Indonesia.

ICRIER hosted the 8<sup>th</sup> Annual G20 conference in 2016 with specific focus on revitalising global economic growth and investment in an era of Brexitism. As part of the ongoing effort for constructive collaboration and knowledge sharing between sectoral experts, ICRIER hosted a number of seminars, conferences and workshops for policy dissemination. Notable among these was the India-Israel conference on water and solar power, jointly organised by ICRIER and the Embassy of Israel in India and the workshop on India-Japan partnership for economic development in the northeast states that was supported by the Assam government and the Embassy of Japan in India.

The *Conversations on Urbanisation* series hosted jointly with the India Habitat Centre, covered a number of themes including making cities greener and environment-friendly led by Justice Swatanter Kumar, Chairperson, National Green Tribunal (NGT); enhancing energy efficiency in urban India conducted by Dr. Ajay Mathur, Director General, The Energy and Resources Institute (TERI); and air pollution levels in Delhi, led by Dr. Sunita Narain, Director General, Centre for Science and Environment.

This year, we started the China-India Dialogue, a partnership between ICRIER, Tsinghua University and the New Climate Economy (NCE). Its longer-term objective is to create a forum for the exchange of insights and identification of concrete opportunities for collaboration on the structural low-carbon transformation underway, and anticipated, in China and India. The first China-India Dialogue was convened at Tsinghua University in Beijing in March 2017. The Chinese and Indian delegations – headed respectively by Liu Yuanhua, Chairman of the Chinese National Expert Committee on Climate Change and Shyam Saran, Former Indian Foreign Secretary – held a productive dialogue around shared challenges and opportunities for climate action that will boost economic growth and inclusive development. The delegations agreed to meet annually, with the second dialogue due to take place in January 2018, in New Delhi around finance, energy, impact of climate change and South-South co-operation.

We continue to rank high among Indian and global think tanks. The ICRIER team remains committed to enhancing the knowledge content for policy making and facilitating India's effective engagement with the global economy by undertaking high quality, evidence based policy-oriented research and fostering informed, multi-level dialogue. Our Green Building at Saket will be ready soon to accommodate the expansion we are going through. By all accounts, 2016-17 was another productive year for ICRIER and I hope you enjoy reading about our activities in the Annual Report.



Rajat Kathuria

Director & Chief Executive, ICRIER



# Research Activities

## 1. Macroeconomic Management, Financial Liberalisation and Regulation

### 1.1 Liberalising Indian Capital Markets – Highly Successful Reforms & Unfinished Agenda

**Project Leader:** *Jaimini Bhagwati*

**Research Team:** *M. Shuheb Khan and Ramakrishna Reddy Bogathi*

**Commencement:** June 2016

**Date of Completion:** October 2016

**Funded by:** as part of RBI Chair (Rs. 400 lakh)

This research paper covers Indian capital market reforms over the past twenty-six years and details the most significant steps taken by the government and the Securities and Exchange Board of India (SEBI) over this period. These include the setting up and strengthening of institutions, such as stock exchanges, depositories and clearing corporations that led to greater transparency and enhanced competition. The paper explains the development and shortcomings of the separate sub-segments of Indian capital markets, namely equity, debt and derivatives markets and institutional participants in these such as mutual funds and foreign institutional investors (FIIs). The study covers the overarching issues of market integrity, co-ordination across regulators, accounting oversight and systemic risk and outlines what has been achieved and what remains to be done. The paper is part of the forthcoming Penguin-Random House Publication “A Quarter Century of Transformation”, edited by Rakesh Mohan.

### 1.2 Can Asset Reconstruction Companies (ARCs) be Part Solution to the Indian Debt Problem?

**Project Leader:** *Jaimini Bhagwati*

**Research Team:** *M. Shuheb Khan and Ramakrishna Reddy Bogathi*

**Commencement:** June 2016

**Date of Completion:** April 2017

**Funded by:** as part of RBI Chair

This research paper provides an analysis of banking crises in a number of developed and emerging economies, examining specifically how governments and regulators have tackled banking sector crises in the US, Sweden and Indonesia. The study also describes the setting up of so called “bad” banks, resolution corporations and asset management companies (AMCs) to provide the required capital and provide time for banks to be nursed back to health, besides examining the legislative changes that were brought about in these three jurisdictions and associated costs. The paper reviews past examples of when Indian banks had to be financially supported by the government and how RBI exercised regulatory forbearance. The working of Indian ARCs and the evolution of their functioning with repeated revisions in regulatory norms by the RBI are examined in detail. The analysis covers the sequential requirements under which banks can convert loans to equity in case borrowers are unable to service debt despite every opportunity given to them to recover. As the chopping and changing of RBI rules for recognition of impaired assets has been complex, the time line of regulatory changes is tracked. The paper assesses the capital adequacy of Indian ARCs and the corresponding regulatory norms and hence, the ability to be a significant factor in relieving stress in the Indian banking sector. The study also examines under what circumstances ARCs, or AMCs as these are known elsewhere,



could gain greater relevance in India by playing a significant role in the price discovery of distressed assets. The paper concludes that the current limited role of ARCs needs to be enhanced, particularly since the fixed costs of setting them up have already been incurred.

### 1.3 **Doing Good Index – Assessing the Environment for Charitable Giving and Receiving in Asia**

**Project Leader:** *Pankaj Vashisht*

**Project Team:** *Anandita Bagchi; Noshir Dadrawala and Michelle Chow (External Consultants)*

**Commencement:** July 2016

**Expected Date of Completion:** January 2018

**Funded by:** Tata Education and Development Trust (Rs. 99 lakh)

Despite a phenomenal increase in interest, the philanthropy sector in Asia has remained grossly under researched. There has been little effort to examine and document the government regulations and fiscal incentives that govern the charitable sector in various Asian economies. Similarly, little is known about the other societal factors such as the availability of trained manpower, corporate attitudes towards volunteerism that aid the creation and sustenance of a healthy charitable sector. This project intends to fill this void. Undertaking an in-depth analysis of government regulations along with an extensive survey, the project will develop a set of indicators that in aggregate will allow us to rate and rank the environmental and regulatory factors that affects an individual's and corporation's ability to help solve social issues. This *Doing Good Index* will be ground-breaking as a first-of-its-kind review of the philanthropy sector across Asian economies. The work will enable an assessment of policies that are most effective in promoting a vibrant charitable sector.

### 1.4 **Effect of Consumer Finance on Financial Inclusion in India**

**Project Leader / Co-ordinator:** *Rajat Kathuria and Saon Ray*

**Research Team:** *Smita Miglani and Sandeep Paul*

**Commencement:** March 2017

**Expected Date of Completion:** February 2018

**Funded by:** Home Credit India Finance Private Limited (Rs. 82 lakh)

Despite substantial progress in financial sector reforms in India, many rural and urban households do not have any access to funds. It is against this backdrop that this study aims to provide evidence of the size of the unbanked population in India, and reasons for such exclusion. The study will also examine the importance of consumer finance for financial inclusion, the products and financial services missing in India when compared to other countries, the impact of consumer finance on minimising the demand for an unregulated (black) lending market. It will compare consumer finance with banks to show that they target different but complementary audiences with different product offers, compare consumer finance with microfinance and analyse the key differences between microfinance and non-banking financial companies.

The study will provide an overview of the current Indian rate cap framework (imposed on microfinance companies), its historical development over time, and the regulatory impact. It will examine how and why the rate cap implementation process was initiated and what the key trigger was. The analysis of the effects of rate cap implementation in other countries, such as Great Britain and Japan, will be done.

## 1.5 Developing the Offshore, Rupee Bond Market: Lessons across Countries

**Project Leader:** Renu Kohli (*External Consultant*)

**Research Team:** Pravakar Sahoo (*External Consultant*) and M. Shuheb Khan

**Commencement:** April 2016

**Date of Completion:** March 2017

**Funded by:** British High Commission, India (Rs. 60 lakh)

After the 2008 global financial crisis, macroeconomic positions and growth prospects weakened in advanced economies, while that of many emerging market economies (EMEs) improved. Offshore, local currency bonds of EMEs became popular as a result, with many EMEs exploiting the opportunity. India also launched its rupee-denominated bond (masala bond) abroad in 2013, seeking to cultivate this channel for domestic infrastructure financing, while mitigating currency risks.

This project takes stock of the masala bond market. Although still nascent, masala bonds have generated tremendous interest amongst issuers and investors. There has been some activity with a few top and second-rung firms issuing masala bonds, with indications of preference over dollar-denominated external borrowings in a few segments. Market conditions appear to have made a difference along with critical regulatory changes. Challenges, however, remain. Market growth and development is notably constrained by the lack of liquidity and depth. Besides assessing the current market state and structure, the study surveys a cross-section of participants to identify relevant issues, and supplements the analysis with two case studies of EME peers – China and Brazil – to draw lessons from their experience. It offers a set of recommendations for the future growth and long-term sustainability of the masala bond market with a view to develop it as a viable infrastructure financing avenue.

## 2. Global Competitiveness of the Indian Economy – Agriculture, Manufacturing and Services

### 2.1 Agriculture, Value Chains, Food Security and Trade

**Project Leader:** Ashok Gulati

**Research Team:** Kavery Ganguly (*External Consultant*), Shweta Saini, Smriti Verma and Ranjana Roy

**Commencement:** October 2014

**Expected Date of Completion:** December 2017

**Funded by:** as part of Infosys Chair (Rs. 300 lakh)

#### 2.1.1 Missing Calories: Is NSSO Data Underestimating Consumption Figures?

Ashok Gulati, Ranjana Roy and Prabhu Pingali

Ongoing

India has been applauded for maintaining high economic growth in the past decade despite global sluggishness. At the same time, however, the period witnessed a steady decline in energy and protein intake at the household level in India, particularly from 1993. It is puzzling to see such low energy intake since international experience suggests a positive correlation between income and nutrition levels.

In this paper, the authors try to re-estimate calorie/protein consumption of the Indian population by adopting a supply side approach. In this method, the calorie equivalents are multiplied with food

availability figures and then compared with the intake figures obtained from NSSO surveys. The results show that the availability intake gap as a share of availability is increasing over the years, 2 per cent in 1993 to 14 per cent in 2011 for cereals. This increase in deviation is even higher for perishable commodities like vegetables, fruits and meat items. However, a change in the recall period in the NSSO survey from 30 days to 7 days gives higher intake figures and lower availability-intake gap. This study concludes that, nutritional intake given by NSSO needs better monitoring with a shift from 7-day to 1-day recall and more focus on 'food taken outside home', as this may constitute a larger part of food basket now as compared to earlier times.

## 2.2 **Driving Agricultural Growth and Alleviating Poverty in Eastern India (Uttar Pradesh, Bihar and Odisha): Learning from Successes in Punjab, Madhya Pradesh and Gujarat**

**Project Leader:** *Ashok Gulati*

**Project Co-ordinator:** *Shweta Saini*

**Research Team:** *Anwarul Hoda, Siraj Hussain, Pravesh Sharma, Ranjana Roy, Smriti Verma and Pallavi Rajkhowa*

**Commencement:** April 2015

**Expected Date of Completion:** March 2018

**Funded by:** Bill and Melinda Gates Foundation (BMGF) (Rs. 402 lakh)

### 2.2.1 **Doubling Agricultural Growth in Uttar Pradesh: Sources and Drivers of Agricultural Growth and Policy Lessons**

*Smriti Verma, Ashok Gulati and Siraj Hussain*

Completed

This paper forms a part of the study on agricultural growth and its linkage to poverty alleviation in six selected states of India, namely Bihar, Uttar Pradesh (UP), Odisha, Punjab, Gujarat and Madhya Pradesh (MP). The states of Bihar, UP and Odisha have experienced low to moderate growth in agriculture between 2000-01 and 2014-15. The key idea of this study is to look for policy lessons from each state within the Indian context, and see how to propel growth in agriculture for faster alleviation of poverty.

With a population of more than 220 million, UP is the most populous state of India. The research in this paper about sources and drivers of agricultural growth in UP indicates that the state has the potential to double its agricultural growth rate from 2.5 per cent to 5 per cent per annum. This can be achieved if the UP government, after a recent landslide victory in state elections, focuses on setting up a robust procurement system for wheat and paddy, ensuring minimum support price for farmers; encouraging the dairy sector by raising milk processing levels from about 12 to at least 30 per cent of production over the next five years; rationalising sugarcane pricing based on the Rangarajan Committee (2012) formula and freeing up molasses from all reservations and finally, introducing innovative farming practices and technologies in the cultivation of fruits and vegetables. These policies can be backed by investments in rural roads, power supply to rural areas, and improved irrigation, especially in the Bundelkhand region. Such an approach would reap rich political and economic dividends through faster poverty alleviation and development for all.

### 2.2.2 *Unleashing Bihar's Agriculture Potential: Sources and Drivers of Agriculture Growth*

*Anwarul Hoda, Pallavi Rajkhowa and Ashok Gulati*

Completed

The agricultural sector in Bihar grew at 4.7 per cent per annum in the period from 2005-06 to 2014-15, which is higher than the all-India average of 3.6 per cent in the same period. However, productivity of the major crops produced in the state is very low. The state's agriculture has diversified towards dairy development but poultry development is lagging behind. The study finds that poor public investment in power, road and marketing infrastructure has held back agriculture in Bihar. The growth in the sector can be stimulated through improvement in these areas. Moreover, there should be focus on health and reproduction management of dairy animals and the use of the integrator model for poultry development.

### 2.2.3 *Transforming Agriculture in Odisha: Sources and Drivers of Agriculture Growth*

*Anwarul Hoda, Pallavi Rajkhowa and Ashok Gulati*

Completed

Odisha is one of the poorest Indian states with a per capita income hovering around 62 per cent of the all-India average. More than 60 per cent of the workforce is engaged in agriculture. The state's agricultural sector grew at only 2.3 per cent per annum during the period from 2005-06 to 2014-15. Rice is the most important crop in Odisha with 46 per cent of the gross cropped area devoted to the crop. However, in recent years, there has been an increase in the production of fruits, vegetables and livestock products, resulting in an increase in the share of agriculture and allied activities in gross value of output. The study concludes that expansion of irrigation infrastructure, increase in surfaced road density in rural areas and diversification of production towards high value agriculture will be critical to stimulate agricultural growth in the state.

### 2.2.4 *Making Rapid Strides – Agriculture in Madhya Pradesh: Sources, Drivers, and Policy Lessons*

*Ashok Gulati, Pallavi Rajkhowa and Pravesh Sharma*

Completed

Agricultural growth in Madhya Pradesh (MP) during the past decade from 2005-06 to 2014-15 was around 9.7 per cent per annum, which is the highest growth rate registered in any state in agriculture. Madhya Pradesh's experience is a lesson for many states of India who are lagging behind in this sector. The study finds that expanded irrigation, a strong procurement system put in place for wheat along with bonus over MSP for wheat, and all-weather roads to connect farmers to markets are the major drivers of agricultural growth in the state. In the light of these findings, the study makes three principal recommendations to promote agricultural growth in other states, viz., improving the quality and quantity of rural power supply by strengthening transmission and distribution, separating feeders for irrigation and household use, increasing the density of surfaced roads in rural areas, and improving procurement and marketing infrastructure to reduce farmers' market risk.

### 2.2.5 *Getting Punjab Agriculture Back on the High Growth Path: Sources, Drivers and Policy Lessons*

*Ashok Gulati, Ranjana Roy and Siraj Hussain*

Completed

Punjab was a star performer in agriculture during the heydays of the Green Revolution. Agriculture in Punjab grew at a high growth rate of 5.7 per cent per annum during the period from 1971-72 to 1985-86, which was more than double of the all-India growth rate (2.3 per cent) during this period. However, the state slipped soon after and the agricultural growth rate fell to about 3 per cent per annum between 1986-87 and 2004-05, equivalent to the all-India agricultural growth rate. The situation has deteriorated further as Punjab's agriculture GDP grew at only 1.6 per cent per annum, which is less than half the all-India average growth rate of 3.5 per cent per annum in the period between 2005-06 and 2014-15. The study finds that irrigation facilities, all-weather roads to provide rural connectivity and assured market for agricultural produce had contributed to the high growth of agriculture in Punjab until 1985-86. But the future of Punjab's agricultural prosperity lies in the high-value sectors of agriculture. There is also an urgent need to promote sustainable agriculture by propagating micro irrigation techniques and encouraging the use of solar power.

### 2.2.6 *Agriculture Performance in Gujarat: Sources and Drivers of Growth*

*Ranjana Roy and Ashok Gulati*

Ongoing

Gujarat is an agricultural state with 49 per cent of its workforce engaged in agriculture. The agriculture sector grew at 8.5 per cent per annum for the period 2000-01 to 2014-15, which was very high compared to national average of 3 per cent. The study finds that Gujarat is primarily a non-food crop growing state. Cotton and groundnuts are the two major crops produced in Gujarat. The important cereal crops produced in Gujarat are wheat, bajra and maize. However, the state has shifted away from cereals to production of cotton over the years. The analysis shows that the primary source of agricultural growth in Gujarat was fibre, followed by oilseeds, livestock, and fruits and vegetables. The study finds that investment in irrigation and all-weather roads, price incentives and incentives given to cotton growers played critical roles in the state's agricultural growth. The major take away from Gujarat's experience in agricultural development for moderately performing states can be summed up as follows: ground water irrigation through assured power, the setting up of micro irrigation systems through the PPP mode, investment in all-weather surfaced roads and incentives to the private sector.

### 2.2.7 *Linkages between Agriculture, Poverty and Malnutrition in India*

*Ashok Gulati, Ranjana Roy and Ganesh Kumar*

Ongoing

Despite high growth, India has not performed well in alleviating poverty and malnutrition, which has remained consistently high for a long period of time. Although India has been going through a structural change with a higher share of GDP coming from the services sector, agriculture still plays an important role in the country's economy with around 47 per cent of the work force involved in agriculture. There are a lot of studies showing a direct linkage between agriculture, poverty and

malnutrition in the literature for many countries. This paper investigated the factors leading to high malnutrition levels, based on data from the third and fourth round of National Family Health Survey (NFHS) 2005-06 and 2015-16. Some important results emerge from this study. Econometric analysis indicates that agriculture plays an important role in reducing malnutrition in India. A majority of the population is dependent on agriculture and allied activities as a source of livelihood. Improvement in productivity will have a positive impact on their economic status, which in turn will influence their nutritional status. Other factors that have a significant impact on malnutrition are literacy, child care, sanitation and access to health care facilities.

## 2.3 **A Comparative Study of High Performing States in India to Understand Best Practices in Agriculture Extension**

**Project Leader:** *Ashok Gulati*

**Research Team:** *Pravesh Sharma, Shweta Saini, Anisha Samantara and Rohin Nautiyal*

**Commencement:** October 2015

**Expected Date of Completion:** December 2017

**Funded by:** Bill and Melinda Gates Foundation (BMGF) (Rs. 142 lakh)

The Indian agricultural extension system has evolved in the past two decades, with a shift from the earlier focus on increasing yields via technology transfers and adoption to implementing a decentralised and demand driven approach. Amongst various types of government spending on agriculture, investment in agricultural extension and R&D is one of the most critical for increasing farm yields. The dissemination of technology and knowledge delivers value to small and marginal Indian farmers and plays a major role in increasing yields as well as improving livelihoods. Keeping this background in mind, this study undertakes a qualitative and quantitative analysis of India's agricultural extension system and the role of extension in driving growth in the agricultural sector in six identified states, namely Gujarat, Punjab, Uttar Pradesh, Madhya Pradesh, Bihar and Odisha. The focus of the study is to identify effective and sustainable agricultural extension policies to foster higher agricultural growth and inclusivity.

### 2.3.1 **Review of Agriculture Extension in India: Current Status, Trends and the Way Forward**

*Pravesh Sharma, Anisha Samantara, Prerna Terway and Ashok Gulati*

Ongoing

The aim of the study is to quantify how agricultural extension is a driver of agricultural growth by learning from high performing states to understand the best practices in agricultural extension.

In this study, agricultural R&D and the extension system in India is viewed from a macro-economic perspective with special focus on six states, i.e., Gujarat, Punjab, Uttar Pradesh, Madhya Pradesh, Bihar and Odisha. The main objectives of the paper are (i) to analyse the latest trends in government expenditure on agricultural R&D and extension services at the all-India level and the six selected states, (ii) review the existing system of agricultural R&D in India with a focus on the public, private and NGO sector, (iii) empirically examine the association between agricultural extension and overall growth in agriculture in the six states, (iv) review existing extension systems internationally and (v) suggest policy in order to prioritise government spending on agricultural R&D and extension services.



The study has an important gender centric component, which focuses on gender issues in agricultural extension systems and the increased feminisation of the agricultural labour force over the years. As part of the project, this paper examines the factors that contribute to agricultural growth and the role of agricultural extension as a driver of growth in agriculture for women. The paper also aims to explain the increasing number of women in the agricultural labour force over the past few years, the inequalities between male and female labour force in agriculture and the centrally sponsored schemes in agriculture, their evaluation and learning. Finally, the paper will list the challenges and issues facing the provision of extension services for women in India and seek to offer some policy options for reform.

## 2.4 **Agriculture Sustainability, Productivity and Profitability**

**Project Leader:** *Ashok Gulati*

**Research Team:** *Yamini Gupt, Kavery Ganguly and Gayathri Mohan*

**Commencement:** April 2016

**Expected Date of Completion:** March 2019

**Funded by:** Monsanto Holdings Private Ltd. (Rs. 300 lakh)

The project broadly focuses on providing insights on efficient technological innovations and effective policies to make Indian agriculture sustainable, profitable and productive for farmers. In the current scenario of water stress faced by the country, the adoption of efficient water management technology in agriculture is one major imperative to ensure agricultural sustainability. Suitability of precision farming technologies like micro irrigation in achieving this will be studied in detail using three case studies – Maharashtra (sugarcane cultivation), Punjab (rice cultivation) and Tamil Nadu (banana cultivation). Cost benefit analysis will be used to understand the economic feasibility of farmers adopting micro irrigation technology. Further, the opportunity cost of using conventional irrigation methods will be analysed to understand the benefits foregone by farmers by not adopting water saving precision technologies. Based on these analyses, suitable policy options will be outlined to promote the adoption of effective technologies.

### 2.4.1 **Ensuring 'Per Drop More Crop': Case Study of Drip Irrigation in Sugarcane in Maharashtra**

*Gayathri Mohan, Ashok Gulati and Yamini Gupt*

Nearing completion

Maharashtra serves as a classic example of the anomalies plaguing agriculture water use in India. The sugarcane crop, which occupies only 4 per cent of state's gross cropped area, uses up almost 64 per cent of the irrigation water available, depriving other principal crops of irrigation. Our study analyses whether efficient water use technology like drip irrigation in sugarcane cultivation offers a sustainable solution to agricultural water stress in Maharashtra. The cost benefit analysis reveals drip irrigation to be an economically feasible solution for sugarcane farmers even in the absence of subsidies. Considering application efficiency alone, the adoption of drip technology saves water to the tune of 28 per cent over the flood irrigation method. Further, water saving can be increased by up to 60 per cent over the surface irrigation mode if piped water connections are established between the dams and the drip irrigation systems in the fields. It is also found that diverting the water saved towards irrigating other principal crops resulted in increasing agricultural productivity and profitability.

## 2.5 Agricultural Markets in India

**Project Leader:** *Ashok Gulati*

**Research Team:** *Tirtha Chatterjee, Siraj Hussain and Neharika Sobti*

**Commencement:** April 2016

**Expected Date of Completion:** March 2018

**Funded by:** National Commodity and Derivatives Exchange (NCDEX) (Rs. 100 lakh)

The commodity futures market in India has been perennially afflicted with several problems like abrupt suspensions, perception of speculators rigging the market, and lack of farmer/producer participation. Although the very objective of the agricultural commodities derivative market is to bring stability to all stakeholders in the agricultural value chain, its functioning has been very uncertain in India. Against this background, this study looks into the agricultural commodity market and provides recommendations to deepen markets in India. The three objectives of the study are (1) to determine criteria for commodities to be traded on futures markets, (2) to examine the feasibility and impact of introducing options and (3) to examine whether farmers benefit from futures markets directly or indirectly and how to increase their participation.

### 2.5.1 Agricultural Commodity Futures: Searching for Potential Winners

*Ashok Gulati, Tirtha Chatterjee and Siraj Hussain*

Nearing completion

This study proposes a set of criteria to identify commodities with high prospects in futures market in India. A review of highly traded commodities across the globe shows that (1) none of the commodities are sensitive to food security and government intervention, (2) none of them are basic staple food commodities, (3) countries with a futures market for specific commodities have a large share in the global trade in these commodities and (4) the countries are large producers and consumers of these commodities. A principal component analysis on several commodity specific characteristics has been done to estimate its potential/prospect. Our results show that maize, oilseed complex, fibre and spices are high prospect commodities while commodities like rice, wheat, chick peas, and sugar have lower prospects.

## 2.6 NABARD Research in Agricultural Economics: Land, Water and Value-chains

**Project Leader:** *Ashok Gulati*

**Research Team:** *Anwarul Hoda, Bharat R. Sharma, Indro Ray, Smriti Verma, Stuti Manchanda, Nithya Vishwanath Gowdru and Nandini Jayakumar*

**Commencement:** May 2016

**Expected Date of Completion:** April 2019

**Funded by:** National Bank for Agriculture and Rural Development (NABARD) (Rs. 266.16 lakh)

The project will undertake three studies.

### 2.6.1 Issues Related to Land Use in Agriculture

The study will examine three key themes – land use policy, tenancy laws, and soil health. First, it will examine how land acquisitions laws, in the context of increasing urbanisation and industrialisation, have ensured transparency and efficiency in land acquisition and land use pattern for both farmers as well as project developers. It will also analyse how the proposed 2015 Land Acquisition Bill can fill



legal gaps, if any. Secondly, the nature of tenancy laws and how tenancy regulations have affected land utilisation patterns and agricultural productivity will be studied to suggest changes in tenancy laws that promote efficiency and equity in land utilisation. Finally, the study will assess the status of soil health, especially in the light of India's fertiliser use policies.

## 2.6.2 Issues Related to Water Use in Agriculture

The objective of this project is to bring out the first water productivity atlas for India along with complementary working papers on some key crops. In this project, the water productivity for major crops at the district level in India has been calculated using data for 2009-10 and 2010-11. The crops considered in this project include rice, wheat, maize, tur, chickpea, sugarcane, cotton, ground nut, mustard, and potato. Water productivity for these crops is calculated for dominant states and districts in India. The dominant states cover at least 1% of the total area under the crop in India and the dominant districts within these states cover at least 95% of the total area and production of the crop in the state. Water productivity in this study is defined by the amount of crop produced per unit of total water consumed (PWP) by the crop (kg/m<sup>3</sup>). This study goes further in measuring water productivity by only considering man-made water supply and calculating irrigation water productivity (IWP). The objective is to identify regions in the country with the highest yield per unit of irrigation water, thus identifying areas that are more responsive to applied irrigation water for selected crops. Irrigation water productivity is calculated only for crops that need fairly high levels of irrigation. Once water productivity values are calculated, these figures are converted into economic terms. Economic water productivity (EWP) has been divided into two parts. The first part converts the volume of the crop produced per unit of water into economic terms (Rs. /m<sup>3</sup>) using farm harvest prices. The second part converts the unit of man-made irrigation water (surface and ground water) applied to economic terms based on the cost incurred to supply water. Due to data constraints, the economic water productivity will be calculated at the state level.

Among the crops, rice is the largest and the most water-intensive crop cultivated in India and improving water productivity of rice is central to improving water productivity in the agricultural sector. Thus, rice will be given the highest importance in terms of depth in research and analysis. A separate working paper focusing on all the above components for rice is under way. Most of the analysis for cereals, pulses, and commercial crops has already been carried out. Once all the ten crops are completed, the results (both quantitative and spatial) will be showcased in the atlas and will be submitted to NABARD.

### 2.6.2.1 Water Productivity of Rice in India

*Bharat R. Sharma, Stuti Manchanda, Indro Ray and Ashok Gulati*  
Ongoing

India accounts for 21.4 per cent of global rice production while accounting for 27 per cent of the global area under rice production. India's average productivity at 2.3 tonnes per hectare (t/ha) is below the global average of 3.02 t/ha and half the Chinese average of 4.6 t/ha. Twenty-eight per cent of the total gross irrigated area in India is under rice cultivation; rice also accounts for one-third of all water used in agriculture in the country. At present, rice is grown in arid states like Punjab and Haryana that rely entirely on man-made irrigation. But the agro-climatic conditions of eastern and coastal India are

more favourable for rice. This highlights the need to calculate water utilisation efficiency in India and the cost associated with providing irrigation.

In this study, water consumption efficiency is measured by a district level analysis of physical water productivity (PWP) in kg/m<sup>3</sup> for rice. This analysis is complemented by computing irrigation water productivity (IWP) in Kg/m<sup>3</sup> at the state level to measure applied irrigation efficiency. The latter measure of water productivity highlights the unsustainable nature of rice cultivation in arid regions in the face of over exploited ground water. Besides water productivity, this study also calculates the economic value of per unit of water (EWP) used to cultivate rice. Based on farm harvest price, cost recovered per unit of water is determined (Rs. /m<sup>3</sup>) as is the cost incurred to supply per unit of irrigation water by rice cultivators.

The results suggest that physical water productivity of rice in India is about 0.30kg/m<sup>3</sup> and 0.36Kg/m<sup>3</sup> for 325 dominant districts. In terms of IWP, UP has the highest value at 0.79 followed by Jharkhand (0.75), Chhattisgarh (0.68), Bihar (0.48), and Assam (0.38). This is way above the IWP of Punjab and Haryana at 0.22 indicating that it is more efficient to produce rice in the eastern states than in the north-west region of India. Favourable rainfall and agro-climatic conditions in these parts make it possible to produce rice with less irrigation. Based on the findings, the study recommends that rice cultivation should be discouraged in semi-arid and arid regions. Besides, marginal and critical irrigation needs should be addressed in the eastern states by providing adequate power, building tube-wells and other related infrastructure. This will help boost rice productivity in these regions.

### 2.6.3 Small Holders in High Value Agriculture

Small and marginal farmers with holdings of less than 2 ha, who account for 85 per cent of operating holdings and 44 per cent of the area under cultivation, stand to gain from the rising demand for high value agricultural products such as pulses and fruits and vegetables, resulting from rising incomes and increasing urbanisation in India provided they have access to finance at reasonable rates. This requires a good understanding of the structure of the value chain for the commodity.

Typically, both the production and farm gate prices of pulses and horticultural crops tend to be highly volatile while consumers continue to pay high prices for these commodities. The objective of this study is to analyse existing value chains of selected pulses and horticultural crops (potato and onion in vegetables, banana and mango in fruits) and provide recommendations to develop more competitive, inclusive, sustainable and scalable value chains to enable the farmer to get a larger share of the consumer's rupee. The research is based on a combination of secondary data analysis, field visits and discussions with all stakeholders in the value chain and will provide policy recommendations to improve the efficiency and reliability of these value chains to enable farmers to get a larger share of the consumer's rupee.

A draft paper studying the value-chain of pulses has been prepared based on the field visits conducted so far. This analysis will help us in providing policy recommendations on how to improve the efficiency and reliability of these value-chains to enable farmers to get a larger share of the consumer's rupee.

## 2.7 In-depth study of Indian Agriculture and Agricultural Policy

**Project Leader:** *Ashok Gulati*

**Research Team:** *Anwarul Hoda, Shweta Saini and Prerna Terway*

**Commencement:** May 2016

**Expected Date of Completion:** December 2017

**Funded by:** Organization for Economic Co-operation and Development (OECD) (Rs. 98.33 lakh)

This project is undertaking an in-depth study of Indian agriculture and agricultural policy. The attempt is to generate agricultural support and protection related indicators such as the nominal protection coefficients (NPC), nominal assistance coefficients (NAC), producer support estimates (PSE), consumer support estimates (CSE), and general services support estimates (GSSE) for selected agricultural commodities for the period 2000 to 2015. The estimates will be analysed to provide concrete policy conclusions and recommendations.

### 2.7.1 Review of Agricultural Policies in India

*Shweta Saini, Prerna Terway, Anwarul Hoda and Ashok Gulati*

Ongoing

The objective of this study is to, for the first time, produce a report on India's producer support estimates (PSE) for the period 2000-2015. PSEs capture the support that farmers get from support prices as well as subsidies on inputs. Preliminary results suggest that India's support to its farmers through input subsidies accounted for roughly 6 per cent of the value of agricultural output in 2014-15. However, price support from the output side is negative, implying that there are several policies that do not allow farmers to get the prices they could have under a free trade scenario. These policies are manifested in export controls, high minimum export prices, not allowing the private trade to hold stocks, and so on.

## 2.8 Analysis and Implementation of Measures to Reduce Price Volatility in National and International Markets for Improving Food Security in Developing Countries

**Project Leader:** *Ashok Gulati*

**Research Team:** *Shweta Saini and Sameedh Sharma*

**Commencement:** May 2015

**Expected Date of Completion:** Nearing Completion

**Funded by:** Centre for Development Research (ZEF), University of Bonn, Germany (Rs. 37.26 lakh)

India, with the largest number of poor and malnourished people in the world, faces the problem of high price volatility in food items in general, and of wheat and rice in particular. This adversely affects citizen's access to food. Price shocks can come through turmoil in the global markets (as happened in 2007-08) or through weather shocks in domestic production. The key objective of this project is to understand how best the negative impact of price spikes can be contained in India. The research focuses on food price volatility and food market reforms; food and labour market linkages; labour market volatility and income shocks; public and social insurance schemes; the role of ICT for efficient and fair transfers and on inter-linkages between Indian and Chinese food policies.

### 2.8.1 *Indian Food and Welfare Schemes: Scope for Digitisation towards Cash Transfers*

*Shweta Saini, Sameedh Sharma, Ashok Gulati, Siraj Hussain and Joachim von Braun*

Completed

This paper explores the possibility of using information and communication technology (ICT) to improve the efficacy and efficiency of food-based welfare schemes. In particular, the paper focuses on evaluating the case for substituting the 74-year old public distribution system (PDS) that distributes subsidised food to selected beneficiaries with an ICT-based direct benefit transfer (DBT) system that transfers cash directly into the bank accounts of beneficiaries.

In the first part, the paper draws lessons from international and national experiences with DBTs. In the second part, it studies the experience of Chandigarh and Puducherry, the two union territories where DBT has been implemented. The third part uses the analysis in the preceding sections to evolve a scientific method to determine a state's readiness to shift to the DBT platform. The underlying idea for part three is the acknowledgement that each state and union territory differs in its economic, social, nutritional, and political vulnerabilities. A standard deadline by the centre to all states and UTs to shift their PDS to DBT thus is viewed as a non-optimal strategy. By acknowledging differences between the states (by quantifying some factors), the paper proposes an approach where states and UTs have phased deadlines for implementation of DBT-food. For states that are politically and socially vulnerable, the paper proposes delayed implementation of DBT and recommends strengthening of aadhar-based PDS in the short to medium run.

### 2.8.2 *Indian Farm Wages and its Linkage with Food Prices*

*Shweta Saini, Sameedh Sharma, Ashok Gulati and Joachim von Braun*

Nearing Completion

In a development model in which the benefits of growth are shared equitably, employment is most relevant for income insecure rural workers. An important sign of inclusive growth is the number of new jobs that are created each year vis-à-vis the number of people entering the labour market. This paper studies the Indian farm labour market. Using both qualitative and empirical techniques, the paper analyses two aspects of the Indian farm labour market: first, the inter-linkage between farm wages and food prices and secondly, the drivers of real wage growth that India has experienced in recent years. The impact of government schemes like MGNREGA and labour laws like the Minimum Wages Act, 1948, on the farm labour market and prevailing wages has also been examined.

## 2.9 *India Agricultural Distortions Study*

**Project Leader:** *Ashok Gulati*

**Research Team:** *Shweta Saini*

**Commencement:** April 2015

**Date of Completion:** August 2016

**Funded by:** The World Bank (Rs. 25 lakh)

The objective of this project is to analyse India's recent and prospective agricultural trade policy from the perspective of price distortions, including the role of border taxes and quantitative restrictions and domestic price interventions (taxes and subsidies such as those applying on fertiliser and other inputs,

and direct price interventions). The analysis uses a combination of quantitative and qualitative/empirical approaches, diagnosing the extent to which distortions in the incentive structure affect producers' incentives and their potential impact on trade, particularly exports.

### 2.9.1 *Price Distortions in Indian Agriculture*

*Shweta Saini and Ashok Gulati*

Completed

This study focuses on estimating price distortions for select Indian agricultural products. It covers fifteen agricultural commodities in ten major Indian states, traded through five Indian ports and covers a period of ten years (2004-05 to 2013-14). The estimates of nominal rates of protection (NRPs) and nominal protection coefficients (NPCs) at the wholesale market level have been obtained. The main policy recommendations are to reduce the level of government intervention in the agricultural sector to remove an in-built consumer (and anti-farmer) bias in policy; create business space for private players to have integrated markets across space and time; use an incomes policy approach to protect poor consumers (and small farmers) through direct cash transfers; create a predictable and stable agricultural trade policy; and streamline high customs duties on some of India's highly competitive export products such as rice.

### 2.10 *Capacity Building Initiative for Trade Development in India*

**Project Leaders of the Consortium:** *Nora Plaisier (Ecorys Netherlands BV), Arpita Mukherjee (ICRIER) and Rohan Krishnan (Ecorys India)*

**Research Team (ICRIER):** *Tanu M. Goyal, Smita Miglani, Bhavook Bhardwaj, Avantika Kapoor and Suvi Agrawal*

**Commencement:** April 2015

**Expected Date of Completion:** September 2017

**Funded by:** European Community, represented by the Delegation of the European Union to India, {up to EURO 150,000 (Rs. 108 lakh)}

The Capacity-building Initiative for Trade Development (CITD) project aims to enhance trade-related capacity building in India so as to meet the country's development objectives. The project has various components that include research, training of policymakers and industry, workshops and field visits. This is a demand driven project and it is expected that it will meet the demand of Indian policymakers, the European Commission and its member states. The project was given to a consortium of three research organisations – Ecorys Netherlands Beslooten Venootschaap (BV), ICRIER and Ecorys India within which ICRIER's prime objective is to complete the research component and design training modules.

#### 2.10.1 *SPS Barriers to India's Agriculture Export: Learning from the EU Experiences in SPS and Food Safety Standards*

*Arpita Mukherjee, Tanu M. Goyal, Smita Miglani and Avantika Kapoor*

Completed

The objective of the study was to identify the sanitary and phytosanitary (SPS) barriers faced by Indian exporters in EU markets with respect to agricultural and processed produce focusing on selected products – mangoes, grapes, basmati rice, peanut and peanut products, mushrooms, green peas, green beans, dairy products, and eggplant. The study, based on secondary data analysis and



a primary survey, found that a number of food products from India have faced rejections in the EU due to higher than permissible chemical residue levels and pest infestation. The survey found that implementing traceability to the farm has been successful in addressing some of the barriers but the official export control system has not been successful in addressing SPS issues. The study made recommendations on how to implement product traceability and good agricultural practices, strengthen testing procedures and export infrastructure, scientifically raise SPS issues in multilateral forum such as the World Trade Organization (WTO) and sign bilateral equivalence agreements. If these recommendations are implemented, it will help double India's agriculture exports not only to the EU but also to other key markets such as the US (United States) and Japan, where Indian products face similar SPS barriers.

## 2.11 Organic Farming in India: Status, Issues and Way Forward

**Project Leaders:** *Arpita Mukherjee*

**Research Team:** *Souvik Dutta, Tanu M. Goyal, Avantika Kapoor and Disha Mendiratta*

**Commencement:** August 2016

**Expected Date of Completion:** July 2017

**Funded by:** Amway India Enterprises Pvt. Ltd. (Rs. 65 lakh)

Organic farming was the traditional form of agriculture in India, but after the Green Revolution in the 1960s, there has been a shift towards conventional methods of farming. The demand for organic food, the premium it fetches in export markets and the realisation among farmers and environmentalists that organic farming will help preserve soil quality and nutrients have led to the revival of organic cultivation in India. Further, India has a wide variety of agro-climatic conditions that enables it to produce a wide range of organic crops. The government is of the view that organic food production is integral to achieving development goals and ensuring nutritious food. These factors have prompted the Indian government to promote organic farming.

The objective of this study is to understand the scope for organic farming in India, measures taken by the government to support its growth and the issues faced by organic farmers and organic processed food producers, exporters, importers and other supply chain agents. The study examines recent trends and developments in organic farming globally, and in India. It also examines the regulatory best practices adopted by different countries. Based on a primary survey, the study identifies the barriers to growth in and exports of organic food products from India and suggests policy recommendations on how to design a comprehensive policy for the growth of organic food products based on global best practices and the country's own requirements.

## 2.12 Survey of Fruits, Vegetables and Juice Intake of School Children, Nutritionists & Dieticians

**Project Leader:** *Arpita Mukherjee*

**Research Team:** *Souvik Dutta, Tanu M. Goyal, Ankita Marwaha and Avantika Kapoor*

**Commencement:** April 2017

**Expected Date of Completion:** November 2017

**Funded by:** PepsiCo Holdings India Pvt. Ltd. (Rs. 15 lakh)

A number of studies have highlighted the benefits of consuming fruits and vegetables and juice and have linked lower than recommended levels of consumption to poor health and increased risk of non-

communicable diseases. Despite being one of the largest producers of fruits and vegetables in the world, India faces high rates of malnutrition and related diseases and deficiencies that result from poor intake of fruits and vegetables among Indian consumers. A recent study by researchers at ICRIER found that even high and middle income educated Indian consumers are consuming less than the World Health Organization's (WHO) recommended daily servings (5 servings of 80 grams each) of fruits and vegetables; the shortfall in consumption is more acute among young Indians. Other studies have also highlighted the existence of high levels of nutritional deficiency in India, especially amongst children.

As per the recommendation made by the Expert Committee of the Indian Council of Medical Research and accepted by the National Institute of Nutrition, India, every individual should consume at least 300 grams of vegetables daily and 100 grams of fresh fruits regularly. Keeping this as the benchmark and focusing on the consumption of fruits, vegetables and juices, a survey of nutritionist and dieticians was conducted during September-October, 2016, to examine their consumption pattern. It is expected that knowledgeable consumers - nutritionist and dieticians - are more likely to meet the recommended intake prescribed by National Institute of Nutrition. Further, a survey of school children was conducted during October-December, 2016, to understand their consumption pattern. The objective of the survey is to determine the actual consumption pattern of fruits, vegetables and juices of survey participants and examine the shortfall in consumption, if any. Based on the survey results, policy recommendation will be made.

### 2.13 Evaluation of MAI Scheme

**Project Leader:** *Nisha Taneja*

**Research Team:** *Amrita Goldar and Durgesh K. Rai*

**Commencement:** June 2017

**Expected Date of Completion:** July 2017

**Funded by:** Ministry of Commerce, Government of India (Rs. 9.14 lakh)

The main objective of the study is to evaluate the usefulness of the Market Access Initiative (MAI) Scheme. More specifically, the study will make an assessment of the impact of various activities undertaken under the scheme to promote exports, evaluate the efficacy of these activities and study reports, review the level of participation of various stakeholders and examine the extent to which the scheme has contributed to expanding exports and/or achieving product or destination diversification. The efficacy of the implementation mechanism adopted by institutions/agencies such as EPCs will also be examined. The study will attempt to identify some indicators/indices to assess the outcome of the scheme and suggest the way forward. It will also recommend a framework for the merger of market development scheme with MAI.

### 2.14 Assessing India's Experience with Bilateral Investment Treaties

**Project Leader:** *Jaivir Singh*

**Research Team:** *Parnil Urdhwarshie, Vatsala Shreeti and Smriti Chandrasekhar*

**Commencement Date:** January 2016

**Date of Completion:** August 2016

**Funded by:** Department of Economic Affairs, Ministry of Finance, Government of India (Rs. 24 lakh)

A study, 'Assessing the Indian Experience with Bilateral Investment Treaties: Emergent Issues for Future Strategies', was submitted to the Department of Economic Affairs, Ministry of Finance, GOI,

in August 2016. India has signed a number of Bilateral Investment Treaties (BITs) since the advent of liberalisation to signal a conducive environment for foreign investment. After some unfavourable experiences with BIT led arbitrations, coupled with the fact that we have reached a point when many of the BITs have to be renewed or terminated, a new Model BIT has been formulated recently by the Ministry of Finance to govern negotiations and signing of future BITs. Against this background, the report is an attempt to assess the Indian experience with BITs.

Empirical investigation shows that while the impact of individual BITs on FDI is insignificant, the cumulative effect of BITs altogether is statistically significant, suggesting that while specific effects may be absent, the overall presence of a BIT-led legal regime may be important for investment flows. The study also maps India's experience with investor-state dispute settlement systems and analyses the larger financial and regulatory costs borne by countries as respondents in the global BIT regime. While termination is perceived as a readily available option, the report assesses the costs of such termination, highlighting the possible implications on India's regulatory choice. Any step that India takes must begin with a clear assessment of the costs involved and the need to balance legitimate investor interests against regulatory freedom. The report also stresses that investor protection is a legitimate end-goal, especially since India is increasingly moving towards becoming an exporter of capital.

## 2.15 Institutional Framework for Collection of Statistics on Trade in Services: Four Pilot Surveys on Trade in Audiovisual, Logistics, Professional and Telecommunication Services

**Project Leader:** *Arpita Mukherjee*

**Research Team:** *Tanu M. Goyal, Bhavook Bhardwaj, Ramneet Goswami, Deeparghya Mukherjee, Raj Kumar Shahi and Pallab Ghosh*

**Commencement:** June 2014

**Date of Completion:** June 2016

**Funded by:** Directorate General of Commercial Intelligence and Statistics (DGCI&S), Department of Commerce, Ministry of Commerce and Industry (Rs. 81.98 lakh)

The services sector is the largest contributor to India's gross domestic product (GDP). The share of services in international trade, foreign investment inflows and employment has significantly increased over time. However, despite the importance of the services sector to the Indian economy, the country does not have a robust institutional mechanism for collecting information on international trade in services. The non-availability of an accurate database is a major hindrance in framing appropriate policies for promoting services sector exports. The objective of this study was to suggest a suitable mechanism for regular collection of country-wise, sector-wise and mode-wise services trade data, identify the barriers to data collection and make policy recommendations.

The study found that India does not have a robust business directory of service providers engaged in trade in services and recommended how such a business directory can be created. It then made recommendations on how to design the survey framework and questionnaires. The study found that there is need for a strong regulatory framework to support the on-line trade data collection process and it recommended that in regulated sectors, such as telecommunications and insurance services, trade in services data can be collected by the respective sector regulators.



### 3. Challenges and Opportunities of Urbanisation

#### 3.1 Climate Change and Economic Competitiveness of Cities: Making the Business Case for the Adaptation Project

**Project Leader:** Meenu Tewari

**Research Team:** Saon Ray, Indro Ray, Amrita Goldar and Zeba Aziz; Anant Sudarshan (External Consultant)

**Commencement:** November 2012

**Date of Completion:** July 2016

**Funded by:** Rockefeller Foundation (Rs.185 lakh)

This project focused on two pressing challenges of the 21<sup>st</sup> century: (i) urbanisation and (ii) the urgent need for cities to adapt to the risks of climate change. The aim was to understand how and under what conditions a city's adaptation decisions can also contribute to its economic competitiveness. In tracing the complex overlaps between a city's development and adaptation goals, the research study explored how everyday development decisions, if made in more climate aware and innovative ways, can foster both climate resilience and inclusive urban growth. The study used mixed methods to draw insights on how cities adapt to climate risks, based on a comparative case analysis of four rapidly growing secondary cities in India, namely Surat, Kochi, Pune and Ludhiana.

The study sought to identify the measurable impact of climate risk on a city's economy through the lens of four vantage points: services risk (water and connectivity), risk to industrial productivity (economic structure), public health risks and governance. By examining how climate stresses (specifically temperature and precipitation) influence these processes on the ground, the study sought to build a "business case" for motivating greater public and private investment in securing the economic competitiveness of cities in the face of climate risks.

Spatial mapping was undertaken for four cities – Pune, Surat, Kochi and Ludhiana – to highlight the overlays of ongoing urban development and climate risks such as flooding. A set of sample indicators were developed to assess the vulnerability and resilience of various aspects of urban development, transportation, water and related services and key industrial sectors, towards climate risks. Additionally, fieldwork was completed for the city of Surat focusing on understanding the adaptation mechanisms in two of its major industries – textiles and diamond – and public health. For the health sector, cost-benefit analyses of public health measures were carried out in the context of vector borne diseases in the city, and a model was developed to assess the impact of rising temperatures on labour productivity, initially on the city's textile and diamond industries, and then generalised to the national level with evidence from survey data.

The study found that ambient temperatures have non-linear effects on worker productivity, with declines of 4 to 9 per cent per degree rise in temperature on the hottest days; sustained heat also increases absenteeism. Overall, the estimates imply that warming between 1971 and 2009 may have decreased manufacturing output in India by at least 3 per cent relative to a no-warming counterfactual.

A summary paper was prepared that brought together the costs of climate inaction for Surat, focusing on the health, transportation, water supply and energy sectors. It delved into what types of interventions need to be taken by the city and what benefits would accrue from their adoption. This piece was set against the backdrop of how urban competitiveness has been defined in literature and why these four sectors were deemed critical to defining how well a city functioned or its competitiveness.

### 3.2 An Institutional Exploration of Urban Competitiveness and Climate Adaptation through Two Sectoral Lenses – Water Sector

**Project Leader:** *Meenu Tewari*

**Research Team:** *Saon Ray, Indro Ray, Amrita Goldar, Zeba Aziz and Sandeep Paul*

**Commencement:** January 2015

**Expected Date of Completion:** September 2017

**Funded by:** Rockefeller Foundation (Rs. 150 lakh)

Subsequent to Phase I of the Rockefeller project on Climate Change and Competitiveness of Cities, this project delves more deeply into two sectors – water/waste-water and industry – to understand the institutional and political economic dynamics of climate adaptation. The key question that this study focuses on is how utilities and households in the water sector and firms in the urban industrial sector adapt to the pressures of climate change, particularly with regard to rising temperatures, uncertain precipitation and the risks of urban flooding.

Adaptation is an extremely important, but incompletely understood link between a city's capacity to build climate resilience and its capacity to meet its economic development goals. The study uses mixed methods to gather primary data and build a deeper body of institutional and political economic evidence to generate measurable insights about the economic effects of climate adaptation in Indian cities. The objective is two-fold: (i) add to the understanding of the economic effects of climate action (and to some extent, the costs of inaction), and (ii) generate methodological insights about how to carry out such research in data-scarce environments.

In 2015, the project brought out a handbook for local governments that could serve as a tool for city officials to “self-assess” the economic effects of their region's climate vulnerability. A paper on the spatial analysis of water shortages across Indian districts was also completed. In an additional study, climate proofing interventions for water services in Surat were evaluated and quantified to measure the economic benefits of such strategies for the city's future adaption to flood risk.

Taking forward the work on urban resilience, a study has been undertaken on how inland waterways can be used to promote the resilience of coastal cities. Here, the study examined the case of Kochi and explored how waterways could promote the climate, social and economic resilience of the city. The study critically compared its efforts with respect to improving its transportation system against global experience and best practices and attempted to identify the limitations and challenges to the development of waterways in Kochi.

Extensive primary data was collected through interviews of key stakeholders in the local government and industries, followed by quantitative and qualitative analysis. The results indicate that for urban resilience to be inclusive there is need to foster equitable distribution of services (e.g., water supply, investment in public transportation) along with compact urban form, and the creation of proximate jobs in the service industry and certain kinds of manufacturing jobs that translate into higher incomes and employment generation.

### 3.3 Solid Waste Management in India

**Project Leader:** *Isher Judge Ahluwalia (honorary)*

**Research Team:** *Utkarsh Patel and Vrinda Gupta*

**Commencement:** July 2015

**Expected Date of Completion:** September 2017

**Funded by:** The Rockefeller Foundation (II phase)

Solid waste management is a major challenge that Indian cities face today. It has grave implications for public health conditions as well as global warming. Rising incomes, rapidly growing urbanisation and changing lifestyles have resulted in increased volumes and changing composition of the solid waste generated in Indian cities, but attention to solid waste management on the part of city officials is still in a nascent stage. Awareness on the part of city residents of the linkage between poor management of solid waste and public health is surprisingly low even in the big metropolitan cities. Similarly, the impact of open dumpsites on emissions of greenhouse gases, and on leachate, which causes pollution of ground water, is not fully recognised. Air pollution caused by waste to energy plants without appropriate filters is also not always recognised and therefore, not fully factored in when devising systems of solid waste management in Indian cities.

This study presents the solid waste scenario in India, highlighting its changing composition, growing use of plastic, lack of segregation of biodegradable waste from other waste at the source of generation, collection and transportation to transfer stations, recovery of recyclables and the role of the waste pickers in the informal sector within the system. This is followed by an analysis of the status of resource recovery with the role of decentralised processes (bio-methanation and composting) as well as large scale centralised plants for treating waste, e.g., RDF, and incineration plants. A review of landfill sites in Indian cities is presented to highlight the lack of scientific disposal of solid waste in Indian cities. The sites are effectively permanent, open dumpsites with mixed waste – biodegradable and dry – in airless heaps for decades and are desperately in need of bio-remediation.

The Solid Waste Management Rules 2016, which represent a significant improvement over the Municipal Solid Waste Rules 2000, provide a framework within which solid waste management systems can be assessed. The present study attempts to do this in a set of selected cities – large and small. The study also makes an assessment of how the Swachh Bharat, AMRUT and Smart Cities missions address the challenges of solid waste management, and how JNNURM had fared in this respect. The study concludes by presenting the way forward in addressing the challenges of solid waste management, all along the supply chain, i.e., from segregation at source at one end to safe disposal at the other, such that the non-recoverable waste is isolated from the environment until it has degraded biologically, chemically and physically so as to prevent leaching of harmful chemicals into groundwater and release of greenhouse gases. It also highlights the implications of integrated solid waste management and safe disposal of waste on climate resilience of cities.

### 3.4 Pune: Managing its Solid Waste

**Author:** *Isher Judge Ahluwalia*

Completed

Pune city with its population of over 4 million is the second largest city of Maharashtra. It stands out for its sustained efforts at attempting a number of solutions for solid waste management suited to the different situations within the city. In integrating the informal sector in the system of waste management, successfully focusing on segregation at source, and using a decentralised approach of bio-methanation to produce manure, bio-gas and electricity, Pune shows the direction in which other Indian cities have to move to manage their solid waste in a sustainable manner.

### 3.5 Urban Governance in India

**Author:** *Isher Judge Ahluwalia*

Completed

The pace and growth of urbanisation in India poses enormous challenges to urban governance. This paper examines the institutional features and devolution mechanisms of the federal framework within which cities have to deliver a better quality of life to their residents and generate an investment climate that is capable of sustaining rapid growth. It argues that although planned urbanisation is needed for the industry and services sectors and for rural rejuvenation, the lack of empowerment of cities is constraining their ability to translate the urban development agenda into action. The paper emphasises the importance of bridging the urban infrastructure deficit and argues that institutional reforms are crucial to induce the private sector to share the financing burden and ensure that it results in improved service delivery. The experience of a pioneering national mission for urban renewal and the design of new national missions are reviewed to highlight the importance of strengthening reforms and capacity for planning and management at the local level. Although the Government of India will have to provide strategic leadership, some funding, and assistance in building capacity for urban planning and management, state governments will be the principal players in creating an environment in which city governments can discharge the responsibilities assigned to them by the constitution.

## 4. Climate Change and Sustainable Development

### 4.1 The Global Commission on the Economy and Climate: New Climate Economy Phase II

**Project Leader:** *Rajat Kathuria*

**Research Team:** *Meenu Tewari, Anil Markandya (External Consultant), Saon Ray, Indro Ray, Aarsi Sagar, Zeba Aziz, Sandeep Paul and Kuntala Bandyopadhyay*

**Commencement:** August 2015

**Date of Completion:** July 2016

**Funded by:** World Resources Institute, Washington DC (Rs. 114 lakh)

The Global Commission on the Economy and Climate is a major international initiative to examine how countries can achieve economic growth while dealing with the risks posed by climate change.

Chaired by the former President of Mexico, Felipe Calderón, the Commission comprises former heads of government and finance ministers and leaders in the fields of economics and business. The New Climate Economy (NCE) is the Commission's flagship project that aims to bring together the economic argument for climate policy as advocated by the Stern Report and advance it in the light of development experience of many countries. It seeks to conduct an independent analysis of the impact of transition to a low-carbon economy. The goal is to create a common, rigorous and unbiased understanding of the relative risks and opportunities of low and high-carbon trajectories, the possible pathways to a low-carbon economy, the inevitable trade-offs involved in such a transition that will depend partly on the speed of change, and how they can be managed.

ICRIER is a key member of this partnership of leading global economic and policy institutions that includes the Climate Policy Initiative, Ethiopian Development Research Institute, Global Green Growth Institute, Pontifical Catholic University of Rio de Janeiro, Stockholm Environment Institute, Tsinghua University and World Resources Institute.

In Phase 2, the project focused on two themes – 'business as usual' costs of urbanisation and the de-carbonisation of railways in India.

#### 4.1.1 *De-Carbonisation of Indian Railways*

*Rajat Kathuria, Saon Ray and Kuntala Bandyopadhyay; T.S. Ramakrishnan (External Consultant)*  
Completed

As part of the 2015 international Paris Agreement on climate change, India has pledged a reduction in emission intensity of 33-35% by 2030 from 2005 levels. India has also set a target to transition to non-fossil fuel based energy for 40% of its cumulative electricity generation capacity by 2030. One key sector of the Indian economy that could set a strategic example for de-carbonisation and help meet India's 2030 targets is the rail transport system, and specifically the Indian Railways (IR), India's national railway service. This study identifies the different potential pathways to de-carbonisation of the IR by 2030 and examines their cost-effectiveness and feasibility. The IR is currently the world's second largest railway network and is the single largest consumer of electricity in India, consuming about 18 TWh per year, or roughly 2% of the country's total power generation. The IR also consumes 2.6 billion litres of diesel annually, or 3.2% of the total diesel consumption of the transport sector in India.

This study estimates the growth in passenger and freight demand in 2030-31 under three scenarios of GDP growth: optimistic, realistic and pessimistic. A first and essential step to de-carbonisation of the IR is to transition to an electrified rail network, and away from a diesel-powered rail network. A four-step calculation was used to estimate energy required for passenger and freight transport. This involved estimation of in-vehicle electricity consumption, electrical energy consumed for hauling and electrical energy consumed in the hauling of non-suburban and suburban passenger transport. Estimation of future electric traction in rail passenger and freight transport also included expected use of electric traction in hauling non-suburban passenger and freight transport. Based on these calculations, the electricity requirement of the Indian Railways has been projected until 2030-31.

#### 4.1.2 *Business as usual Costs of Urbanisation*

*Meenu Tewari, Indro Ray, Aarsi Sagar, Zeba Aziz, Sandeep Paul and Anil Markandya (External Consultant)*  
Completed

For this study, the cities of Surat, Pune, Bangalore and Indore were chosen as case studies. ICRIER, along with World Resources Institute (WRI), conducted the research to understand current patterns in service provision and consumption, calculating unmet demand, and estimating the 'true cost' of urbanisation by measuring economic, social, health, and environmental costs. The three sectors studied for each city were transportation, water and sanitation, and energy.

Analysis of primary and secondary data on household access to services in each of the cities for all three sectors shows that service delivery gaps exist in public service provision. These demand gaps are met by households choosing private or self-provisioning systems to access the required services. This may be through ownership of individual vehicles for mobility, dependence on tankers and bore wells for water supply or use of firewood for cooking. The results indicate that the indirect personal cost associated with time and congestion for people opting for private modes of transportation is high across cities. For the energy sector, the health cost linked to thermal power plants, and the use of firewood and kerosene ranks high across other cost categories. Households dependent on vended water and private bore wells bear the highest cost to avail of water service in the surveyed cities. Finally, the study summed the costs under different categories to calculate the annual per capita cost of urban service provision in the selected cities.

The findings along with policy recommendations directed towards the governments' various urban programmes were presented at a national conference organised by ICRIER in July 2016. The work titled 'Towards Smarter Service Provision for Smart Cities: Accounting for the Social Costs of Urban Service Provision' has been completed and has been subjected to peer reviews. Subsequently, the work has been presented at several fora including the New Climate Economy conferences and at a national conference organised by WRI called Connectkaro in April 2017. The final report is forthcoming.

#### 4.2 **Unlocking India's Rooftop Solar - The Role of Municipal Bonds Market**

**Project Leader / Co-ordinator:** *Rajat Kathuria*

**Research Team:** *Amrita Goldar, Indro Ray, Aarsi Sagar and Sandeep Paul*

**Commencement:** June 2016

**Date of Completion:** July 2017

**Funded by:** Swedish Energy Agency (Rs. 26 lakh)

The project, a collaborative effort between ICRIER, Stockholm Environment Institute (SEI) and Climate Policy Initiative (CPI), explores the role of municipal bonds in financing renewable energy expansion in urban India, and in particular, rooftop solar systems. The study suggests that municipalities can play a larger role in the acceleration of rooftop solar deployment, that are largely urban centric, in India. Given the lack of public finance even for infrastructure investments, municipalities need to look at new sources of finance and business models to increase the rate of rooftop solar deployment. The study proposes a bond model in which municipalities play an active role in raising debt capital



for private rooftop solar developers under the third party financing model. The study also shows that municipal bonds employed for the OPEX business model can take advantage of lower debt costs, which lowers the levelised cost of energy (LCOE) from rooftop solar systems and makes rooftop solar power costs competitive in many states of India across various consumer categories.

This study also illustrates the feasibility of solar rooftop financing through municipal bonds within two separate urban contexts in India – Surat and NDMC. Both are solar cities and perform well in various categories including local governance and service delivery, revenue generation, and renewable energy projects. The financial needs to meet rooftop solar targets in these cities are calculated using different scenarios. The application of the proposed bond model for both cities in general suggests that municipal bonds can significantly reduce the costs for rooftop solar power and make it competitive for commercial, industrial, public and residential customers.

## 5. Physical and Social Infrastructure including Telecom, Transport, Energy and Health

### 5.1 An Analysis of Competition in India's Mobile Handset Market

**Project Leader:** *Rajat Kathuria*

**Research Team:** *Mansi Kedia, Gangesh Sreekumar Varma and Kaushambi Bagchi*

**Commencement:** August 2016

**Expected Date of Completion:** November 2017

**Funded by:** Qualcomm Incorporated (Rs. 95.33 lakh)

The shift from voice to data has begun to take place, reflected in the increasing penetration of smart phones and the internet in India. It is recognised that access to the internet will be predominantly through mobiles. As India stands at the cusp of another phase of telecom sector growth, led this time by data, an analysis of competition in India's mobile handset market is timely. This study will collect, collate and analyse data to evaluate the extent and nature of competition, the prevailing ecosystem along with its interdependencies and the adoption of technology. Another aim is to highlight the challenges related to domestic manufacturing in India. Accordingly, the study is organised over three distinct segments. The first uses secondary data on mobile phones to outline the structure of the mobile handset market in India. The scholars use popular measures of competition such as market concentration ratios, Hirschman-Herfindahl Index, Entropy Index, etc., for this analysis. The second part is based on primary data collected through an online survey to analyse consumer preferences and to measure willingness to pay. The final segment is based on case studies of mobile phone companies to map manufacturing value chains for the sector in India. The overall analysis will be informed by the 'five forces' competition framework of Michael Porter and the traditional structure conduct performance (SCP) paradigm to identify challenges related to domestic manufacturing and domestic value addition in the backdrop of the government's 'Make in India' initiative.

## 5.2 The Anatomy of an Internet Blackout: Measuring the Economic Impact of Internet Shutdowns

**Project Leader:** *Rajat Kathuria*

**Research Team:** *Mansi Kedia, Gangesh Sreekumar Varma and Kaushambi Bagchi*

**Commencement:** May 2017

**Expected Date of Completion:** October 2017

**Funded by:** Facebook (Rs. 24.72 lakh)

The role of the Internet in connecting people and businesses and in delivering good governance is now well recognised. For emerging markets like India that suffer from traditional infrastructure and institutional deficits, the Internet has provided a ray of hope. The benefits of openness and connectedness have to be weighed against the economic costs of censorship of the Internet, often imposed as a government decree. Recent shutdowns have been motivated by national security interests. The study aims to measure the economic impact of an Internet shutdown in India using a macro-econometric model. The measure of loss at the economy-wide level will be supported with case studies of the impact on individual businesses / services facilitated by the Internet. Case studies will be selected on the basis of stakeholder consultations to adequately represent the Internet economy. This will include individuals, service providers, content developers, and small and medium sized businesses that operate extensively on the Internet. Findings from this study will highlight another facet of the internet economy and, in the process, contribute to the growing discourse on Internet policy and Internet governance in India.

## 5.3 Online Freelancing: Challenges, Opportunities and Impact in India

**Project Leader:** *Rajat Kathuria*

**Research Team:** *Mansi Kedia, Gangesh Sreekumar Varma and Kaushambi Bagchi*

**Commencement:** April 2017

**Expected Date of Completion:** November 2017

**Funded by:** LIRNEasia (Rs. 19.35 lakh)

Business process outsourcing (BPO) services, which started around the mid-1990s in India, have seen phenomenal growth in the last two decades. As the industry grew, business models evolved to embrace socially responsible and inclusive methods while moving beyond traditional urban areas. BPO companies set up operations in rural areas to benefit from lower wages and lower attrition rates. The next level of outsourcing is the rapidly growing market for online freelancers. This study examines the entire spectrum of BPO activities that begin from 'commoditised' micro tasks to high-end, project-based outsourcing. Primary data collected from an online survey and focus group discussions with individual micro workers / online freelancers will help address key research questions related to the embedded business opportunity and type of work (commoditised services or high value services), awareness and willingness to engage in micro work / online freelancing, price arbitrage, etc. Findings on the potential and challenges faced by the industry will be benchmarked with the experience of other countries such as Sri Lanka. Recommendations based on this analysis will contribute to policy making for labour markets in India.



## 5.4 Estimating the Value of New Generation Internet Based Applications in India

**Project Leader:** *Rajat Kathuria*

**Research Team:** *Mansi Kedia, Gangesh Sreekumar Varma and Kaushambi Bagchi*

**Commencement:** March 2017

**Date of Completion:** July 2017

**Funded by:** Broadband India Forum (Rs. 17.53 lakh)

The ubiquity of the Internet and internet-based applications is a given. New generation Internet applications or apps as they are commonly referred to, have become a way of life. They range from simple communication applications to the more complex business aggregation models used by the taxi and trucking industries. Urban life everywhere and everyday profits from ease of food delivery, on demand entertainment, news and weather alerts, doorstep shopping, fitness monitoring, etc., to name just a few. The main objective of this study was to measure and demonstrate the impact of apps on GDP. The study was conducted in two parts. The first estimates the impact of apps on GDP using a macro-economic econometric model. Cross-country data is used to arrive at a global estimate of the impact of internet usage on GDP. The same estimation methodology is used at the sub-national level to arrive at the growth coefficient for India. According to the research team's estimates, apps contributed a minimum of USD 20.4 billion to India's GDP in 2016. To reinforce the macro-economic results, the second part fortifies these findings through a set of case studies, which examine apps across various sectors and trace the channels through which economic and social effects are generated. The study offers policy recommendations based on the overall analysis.

## 5.5 An Inquiry into the Future of Net Neutrality in India

**Project Leader:** *Rajat Kathuria*

**Research Team:** *Mansi Kedia and Parnil Urdhwareshe*

**Commencement:** May 2015

**Expected Date of Completion:** December 2017

**Funded by:** Kanakia Foundation (Rs. 10.03 lakh)

The conundrum of net neutrality has rapidly become one of the most pressing issues in internet policy. As debates on the subject intensify, regulators across countries are struggling to balance the interests of the numerous stakeholders involved. This project attempts to contribute to the policy discourse via round-table conferences and panel discussions involving experts and civil society, government, industry and academia for an in-depth debate on the need and possible direction of net neutrality regulation carefully tailored to the Indian context. One panel discussion and three round table conferences have been conducted, inputs from which will be combined with secondary data-based research and distilled into a report with actionable policy recommendations.

## 5.6 The Story of Indian Telecom: Volatility, Opprobrium, Impact and Promise

**Project Leader:** *Rajat Kathuria*

**Research Team:** *Mansi Kedia, Gangesh Sreekumar Varma and Kaushambi Bagchi*

**Commencement:** April 2014

**Expected Date of Completion:** December 2017

**Funded by:** ICRIER

The story of Indian telecom's extraordinary growth, controversies and impact has remained the subject of constant media, public and academic attention for nearly a decade. At the centre of this narrative is the mobile phone, with over one billion connections in December 2016. The mobile phone has been the fulcrum on which telecom has surged. The future holds promise but that cannot be assumed, especially since disruptive technologies that we are witnessing need an enabling environment to flourish. In March 2014, ICRIER organised its International Conference on Telecommunications, aimed at influencing India's telecom sector policy discourse towards a productive and forward-looking path. The conference served as the genesis for ICRIER's flagship report on "The Story of Indian Telecom: Volatility, Opprobrium, Impact and Promise."

The report attempts to address major policy issues at the heart of the Indian telecom sector, while recording the enormous success it has had, both within the sector and as a driver of efficiency in others. It will provide a wealth of data, rigorous statistical analysis and views of sector experts to ultimately offer policy options to unlock telecom's vast unexploited potential in India. It will probe the state of institutions, examine spectrum policy, document the status of competition and interconnection arrangements and explore contemporary topics such as internet governance, network neutrality and the advent of over-the-top services. It uses mixed methods to provide a comprehensive assessment of Indian telecom. The report will be of interest to academics, telecom sector professionals, policy makers, students and anyone who has an interest in network industries in general.

## 5.7 A Study on the Financial Health of India's Telecom Sector

**Project Leader:** *Rajat Kathuria*

**Research Team:** *Mansi Kedia and Parnil Urdhwaresh*

**Commencement:** January 2015

**Date of Completion:** August 2016

**Funded by:** Cellular Operators Association of India (Rs. 20.70 lakh)

According to industry sources, the telecom sector in India has been beleaguered by high levels of debt, steep spectrum prices, burdensome levies and taxes and recently, to the dangers of disruptive competition. At the same time, there are examples of recovery and return to profitability, driven by sharp increases in data usage, technological innovation and increased operational efficiencies. In this background, this study investigates the telecom sector's financial health, particularly with regard to its ability to bear regulatory costs and imminent investment demands in new technology in a rapidly evolving environment.

The study uses data on the financial performance of all major operators (private and public) in the telecom wireless industry (CDMA and GSM) to assess the financial state of the sector. Parameters for analysis include real revenue growth, earnings before interest, tax, depreciation, amortisation (EBITDA) and profit after tax (PAT). The assessment of profitability, operating results and leverage

help determine the level of financial stress facing these firms. Moreover, as taxes and levies are allegedly a major outflow for telecom operators, understanding the magnitude of such expenses provides a measure of the regulatory burden borne by firms. The complete study uses data for five financial years from 2010-11 to 2014-15.

## 5.8 Health Policy Initiative

**Project Leader:** *Ali Mehdi*

**Research Team:** *Vasudha Wattal, Divya Chaudhry, Priyanka Tomar and Pallavi Joshi*

**Commencement:** February 2014

**Date of Completion:** April 2017

**Funded by:** Pharmaceutical Research and Manufacturers of America (PhRMA), Washington, DC (Rs. 523.60 lakh)

India's growth and development have been seriously hampered, inter alia, by efficiency and equity deficits in its health sector. Such deficits are poised to become more pronounced with the growing burden of chronic diseases in the country. Already, 21 per cent (3.4 million) of global premature deaths due to non-communicable diseases (NCDs) happen in India, the highest in the world. A country with global aspirations cannot afford the loss of human life on such a scale, not to talk of the associated economic costs for households and the country at large. A 2 per cent annual reduction in deaths due to NCDs between 2005 and 2015 would have not only led to substantial gains in labour supply, but saved India \$15 billion.

ICRIER's Health Policy Initiative (HPI) aims to analyse critical challenges in India's health sector, and develop actionable policy recommendations for health sector reforms based on best practices from around the world. The HPI started out with a research programme on drug regulatory reforms in India and a research programme on tackling chronic diseases in India, and is now preparing to be the nodal programme for research, promotion and action on Sustainable Development Goal 3 (health and wellbeing for all) in India, and more broadly, in South Asia. Within a short span of time, the HPI has been able to establish itself as a significant contributor to health policymaking within the country, and registered its presence at such prominent international fora as the T20 process of the G20, global initiatives like Think SDGs and Think Health – led by The Graduate Institute, Switzerland and the IDRC, Canada – and has signed a memorandum of agreement with a group of universities in Latin America for collaborative activities and research. For ICRIER's health-related research activities and publications, kindly visit – [www.icrier-health.org](http://www.icrier-health.org).

### 5.8.1 Research Programme on Drug Regulatory Reforms in India

This research programme seeks to address key challenges around drug regulation and evolution of the pharmaceutical industry in the country.

#### 5.8.1.1 International Co-operation for Registration of Medicines: Opportunities for India

*Vasudha Wattal, Pallavi Joshi, Aashna Arora and Ali Mehdi*

Completed

To tackle an increasing disease burden, the demand for newer and better treatment options is more than ever – and timely introduction of safe and effective medicines is extremely critical. To address public health requirements, countries across the globe are collaborating at various fora, more so since

the conception of the Millennium Development Goals (MDGs). However, in developing countries in particular, international co-operation vis-à-vis mechanisms to achieve the shared goals is still very limited – regulation of drugs is one of them. This report is based on extensive desk and field research in four Indian states – Maharashtra, Karnataka, Gujarat and Telangana – and seven countries – USA, UK, Switzerland, Germany, South Africa, Singapore and Indonesia – incorporating views of more than 150 stakeholders, and identifying lessons and opportunities for the consideration of the Government of India to address regulatory challenges and achieve public health goals.

#### 5.8.1.2 *Challenges and Prospects for Clinical Trials in India: A Regulatory Perspective*

*Rahul Mongia, Deepmala Pokhriyal, Seema Rao and Ali Mehdi*

Completed

Clinical trials are indispensable for the drug development process to ensure the efficacy and safety of new drugs – they are the mainstay for introducing newer and better therapeutics into a market. This report analyses prospects and challenges of clinical trials in India, focusing on new chemical entities (NCEs) and new drugs. It contextualises the debate around clinical research in the context of a new drug approval process and attempts to gauge the impact of regulatory changes brought about in the sphere of clinical research in India, while conducting a stakeholder perception analysis across various stakeholders in states and countries referred to above. Finally, it proposes actionable policy recommendations to reform drug regulation in India so that the country can realise its untapped potential in clinical trials, while addressing concerns raised regarding the conduct and quality of clinical trials.

#### 5.8.1.3 *Administrative Structure and Functions of Drug Regulatory Authorities in India*

*Nupur Chowdhury, Pallavi Joshi, Arpita Patnaik and Beena Saraswathy*

Completed

Drug regulation has been the focus of several recent policy reform efforts in India, starting with the Mashelkar Committee Report in 2003 to the report of the Ranjit Roy Chaudhary Committee in 2013. However, India's drug regulatory structure continues to be plagued by several structural challenges, including issues related to regulatory harmonisation between the centre and states, access to regulatory resources, transparency, etc., which have undermined the overall effectiveness of the country's regulatory system. This study evaluates the administrative structure and functions of drug regulatory authorities at both the central and state levels along with comparative perspectives on similar challenges from across the globe. Through legal and policy analysis, supported by stakeholder interactions, it provides a systematic analysis of challenges, and puts forth actionable policy recommendations and possible means for their implementation.

#### 5.8.1.4 *Drug Quality and Safety Issues in India*

*Maulik Chokshi, Rahul Mongia and Vasudha Wattal*

Completed

The global pharmaceutical product value chain is becoming increasingly complex, and this has led to the emergence of 'multiple quality standards' for medicines. This non-uniformity in the quality of medicines stems from both the regulatory milieu in the country of manufacture and the export

destination of the concerned pharmaceutical products. The focus of this study is on the domestic pharmaceutical market in India, where policymakers often face a trade-off between what are called 'high quality' and 'affordable quality' medicines. With India increasingly recognised as 'the pharmacy of the developing world', it is widely believed that there is need for strict quality specifications and enforcement within the country in the first place. There have been several reports that have raised doubts regarding the quality of medicines available in India. This study, by mapping perspectives of several stakeholders, attempts to bring clarity on issues related to the poor quality of medicines, and suggests institutional reforms in the Indian regulatory landscape, looking at good and bad practices followed domestically and internationally.

## **5.8.2 Research Programme on Tackling Chronic Diseases in India**

This research programme aims to address challenges regarding prevention and surveillance of chronic diseases at the level of primary health systems in particular.

### **5.8.2.1 Prevention of Chronic Diseases: Re-orienting Primary Health Systems in India**

*Ali Mehdi, Divya Chaudhry, Priyanka Tomar and Pallavi Joshi*

Completed

Although the primary role of health systems should be to prevent premature mortality, in India, 66 per cent of all deaths are premature. Notably, three times more premature deaths happen in the 30 to 69 year age group in comparison to children less than five years old. Nevertheless, primary health systems in India continue to focus almost exclusively on child mortality. There is urgent need to bring about a health system transition and attach due significance to adult mortality as well. This study analyses some of the major challenges in terms of governance, manpower and financing that such a transition would face and suggests a number of actionable policy measures to address them. It is based on field research in four Indian states – Uttar Pradesh, Rajasthan, Kerala and Tamil Nadu – and four countries – Japan, Canada, United States and Sri Lanka – involving interviews with almost 200 stakeholders among policymakers, industry, international organisations, civil society and academia.

### **5.8.2.2 Surveillance of Chronic Diseases: Challenges and Strategies for India**

*Udaya Mishra, Irudaya Rajan, William Joe and Ali Mehdi*

Completed

This study describes the status, challenges and scope for strengthening surveillance of chronic disease risk factors, morbidity and mortality in India. Drawing upon the experience of the selected states and countries mentioned in the paper above, it attempts to understand key challenges and solutions in relation to financing, infrastructure, human resources and governance. Surveillance mechanisms under the National Programme for Prevention and Control of Diabetes, Cardiovascular diseases and Stroke (NPCDCS) are performing sub-optimally due to funding constraints, inadequate operational guidelines and shortage of clinical, technical and managerial staff. The engagement of AYUSH and community health workers (ASHAs, others) is identified as a reasonable option, but this will require a sound incentive mechanism to ensure good coverage and programme outreach. Furthermore, local support, both social and political, is critical for a conducive environment to contact beneficiaries and for information recording. In this regard, public-private partnerships need to be explored.

## 5.9 Injection Practices and Safety and Healthcare Waste Management in India

**Project Leader:** *Ali Mehdi*

**Research Team:** *Joyita Chowdhury and Arunima Wanchoo*

**Commencement:** March 2016

**Date of Completion:** September 2016

**Funded by:** World Health Organization, India Office (Rs. 9.85 lakh)

Unsafe injection practices are the point of origin of infections with blood-borne pathogens. Health care workers injured during patient care are at risk from infectious material while the community at large is susceptible to risks through exposure to contaminated waste. Every year, unsafe injections cause 1.3 million early deaths, a loss of 26 million years of life, and direct medical costs of US\$535 million across the world. This study was based on a systematic literature review as well as primary research through interviews with policy makers, healthcare providers, healthcare waste management experts and industry stakeholders. The primary research conducted in the urban healthcare facilities (HCFs) threw light on several elements of injection practices and health care waste management. There was adequate awareness of the risk of injection reuse and other advantages of safe injection equipment over standard disposable syringes. Satisfactory dissemination of the latest BMW (Biomedical Waste Management) Rules, 2016, across HCFs was also observed. However, none of the HCFs used safe syringes like RUP / SIP (Reuse Prevention / Sharp Injury Prevention) that eliminate possibilities of injection reuse. Challenges in their introduction were lack of sufficient knowledge on their use, high cost and absence of a legislation mandating their use. Inadequate manpower in public health care facilities came across as a pressing concern in adherence to proper management of sharps waste. Staff overburdened with work in times of emergencies is a matter of serious concern. The presence of quacks and unregistered doctors in India's health care system is also a major threat, because of unsafe injection practices. Strict measures to curb their practices are needed.

## 5.10 Health of the Nation – India Health Report

**Editors:** *Ali Mehdi and Irudaya Rajan*

**Commencement:** June 2017

**Expected Date of Completion:** December 2018

**Funded by:** ICRIER

ICRIER prepared the first India Health Report, which was published by Oxford University Press, India, in 2003. Since then, there has been no single volume, which brings together a host of cutting-edge theoretical, empirical and analytical contributions by some of the best experts on India's health sector from around the world. 'Health of the Nation: India Health Report' (Oxford University Press, 2018) seeks to serve as a comprehensive reference on India's health sector for policymakers, scholars, students, private sector, civil society and the media not just within India, but also abroad.

The volume will put forth a set of policy recommendations to facilitate evidence-based policymaking in India's health sector. The attempt is to enhance the significance of health in the context of India's public policy and discourse. Being the inaugural issue in a triennial series, it starts out with demographic, economic, moral and legal arguments to prioritise health in India. Apart from providing statistics on the burden of disease and disability that will act as a data repository on India's health outcomes for ready reference, it also discusses the factors responsible for the current



state of health, ranging from the international to the economic, social, spatial and ecological, at the national level as well as more immediate health sector determinants and resources. Given the increasing significance of a range of industry stakeholders in India's health care, health sector regulation has assumed critical significance for the protection and promotion of public health in the country. A separate section has been dedicated to this theme.

Among the contributors are leading academics and experts on India's health system – including N R Madhava Menon, the Founder-Director of the National Law School of India University, Bengaluru; Sujatha Rao, Former Secretary, Ministry of Health and Family Welfare, Government of India; Leela Visaria, Honorary Professor, Gujarat Institute of Development Research; David Bloom, Professor, Harvard University; Roger Jeffery, Professor, University of Edinburgh; Santosh Mehrotra, Professor, Jawaharlal Nehru University, Rama Baru, Professor, Jawaharlal Nehru University; Somil Nagpal, World Bank, Cambodia and Shah Alam Khan, Professor, AIIMS, New Delhi.

## 6. Skill Development, Entrepreneurship and Jobs

### 6.1 The Challenge of Productive Employment Creation in India

**Project Leader:** *Radhicka Kapoor*

**Research Team:** *P.P. Krishnapriya, Surbhi Ghai, Serene Vaid and Raavi Aggarwal*

**Commencement:** November 2016

**Expected Date of Completion:** October 2018

**Funded by:** Ford Foundation (Rs. 93 lakh)

As India stands at the cusp of a demographic dividend, the maximisation of employment and not just maximisation of GDP needs to take centre stage. There is an urgent need to create an environment that is conducive to the attainment of full and productive employment and decent work for all as a foundation for sustainable development. It is widely acknowledged that India has been far from successful in creating such employment opportunities. In the given context, it is imperative to understand where jobs will come from in the future, where existing jobs are located in the economy and whether these jobs are indeed productive/good jobs. Do certain sectors and types of firms hold the key to job creation? What has been the record of these sectors and firms in contributing to output growth and job creation so far? To the extent that their track record has been lacking, what holds these firms back from creating good jobs? Understanding these questions is essential for the policy debate to rest on strong conceptual foundations.

While such an analysis is imperative to understand where and what kind of jobs have been created in a country, any study on employment in India would be incomplete without a discussion on the nature of available employment statistics. Employment statistics are a key input in designing macroeconomic policies and need to be reliably sourced, accurate and timely for policy responses to be meaningful and for validation of outcomes of policy decisions taken. However, the reliability and timeliness of employment statistics in India leave much to be desired. Real time data is missing and, unlike the US economy, which can be tracked minutely through official data, we have very few data points to rely on. In the absence of frequently updated data, policy planners have to extrapolate old data such as the five-year cycle for employment data from the NSSO. The government needs to focus



on improving the measurement of employment and wages even as it works towards improving the ease of doing business and enhancing India's manufacturing and employment capability. Without measuring employment correctly, it will be nearly impossible to monitor and manage employment. Data on the number of people employed by key sectors, their age groups and wages at an annual and quarterly frequency will help policy making. It is of little policy relevance if the numbers come in at an interval of five years. An important part of this study, therefore, will be to discuss the shortfalls in employment statistics and examine alternative data sources that can perhaps give us a better sense of real time changes in labour markets. This is a challenging exercise, further exacerbated by the complex employment dynamics in developing countries.

## 6.2 Programme on Global Competitiveness of the Indian Economy

**Project Co-ordinators:** *Radhicka Kapoor and Amrita Goldar*

**Research Team:** *Radhicka Kapoor, Amrita Goldar and Deb Kusum Das*

**Commencement:** March 2017

**Expected Date of Completion:** February 2020

**Funded by:** IDFC Foundation (Rs. 150 lakh)

Despite its immense potential and promise, by many accounts, India continues to suffer from poverty. A third of its population still lives in extreme poverty – possibly the highest incidence outside sub-Saharan Africa – and many people still lack access to basic services and opportunities, such as sanitation, healthcare, and quality schooling. Improving the living standards of the Indian population will not only require acceleration in the growth rate but also an improvement in the economy's competitiveness in order to put growth on a more stable footing.

Growth models suggest that in the long run, productivity is the most fundamental factor explaining the level of prosperity of a country and hence, its citizens. Economists have identified, theoretically and empirically, dozens of possible factors, including macroeconomic stability, corruption (or the absence of it), security, education (both basic and advanced), the health of the labour force, regulation, financial development, the efficient use of talent, appropriate incentives for firms to invest in research and development (R&D), market size, the participation of women in the workforce, and the use of modern production and distribution techniques. Importantly, most of these drivers of productivity are linked to one another.

Despite an improvement in India's performance in key drivers of competitiveness over the last decade, significant challenges, stemming from factors such as a narrow manufacturing base, the predominance of agriculture as a source of employment, fiscal constraints, infrastructural deficiencies and low digital connectivity, remain. Addressing these challenges is imperative given the enormous gains to be made from improving competitiveness. In particular, this will help rebalance the economy and move the country up the value chain so as to ensure more solid and stable growth; this in turn could result in more employment opportunities for the country's rapidly growing population. Through this project, ICRIER proposes to produce three studies/working papers, which will provide key insights on how to improve the competitiveness of the Indian economy. These studies will look at the issue of global competitiveness through the lens of job and livelihood creation. In the first year of the project, the following two studies will be undertaken.

### 6.2.1 Embodied Jobs in the Renewable Power Sector and its Competitiveness Links

**Project Leader:** *Amrita Goldar*

**Research Team:** *Indro Ray, Kuntala Bandyopadhyay, Sandeep Paul and Sajal Jain*

**Commencement:** February 2017

**Expected Date of Completion:** January 2020

**Funded by:** IDFC Foundation

Energy is a key input in the developmental process. India, with its growing millions having aspirations to a better quality of life as well as rising power demands from its consuming industries and services, needs access to a clean, abundant and reliable energy source. From this point of view, renewable power more than fits the bill. It helps to serve the hitherto underserved power-deficit areas as well as provides a viable solution for off-grid areas where costs of transmission and distribution might be prohibitive. India's large potential for renewable power (solar, biomass and wind) adds further weight to the argument for a strong policy thrust being given to renewable energy generation. In view of the above, a strong emphasis on renewable power has been given in the National Action Plan on Climate Change (NAPCC) under the National Solar Mission. In fact, as part of its Intended Nationally Determined Contribution (INDC), the Government of India has committed to achieve about 40 per cent cumulative electric power installed capacity from non fossil-fuel based energy sources by 2030, conditional upon the transfer of suitable technology and low cost international finance. To achieve these goals, the government is looking towards both large-scale grid connected (5 MW and above) as well as decentralised options.

The proposed study examines the renewable power sector from two interesting and different vantage points- namely (a) renewable power and livelihoods, and (b) the competitiveness impact of renewable power.

### 6.2.2 Domestic Value Added and Foreign Content in India's Exports and its Impact on Export Competitiveness, Global Value Chains and Job Creation

**Project Leader:** *Deb Kusum Das*

**Research Team:** *Neha Gupta, Prateek Kukreja and Kumar Abhishek*

**Commencement:** June 2017

**Expected Date of Completion:** January 2020

**Funded by:** IDFC Foundation

The global production process is highly fragmented with different stages of production being carried out in developed as well as developing countries. "Assembled in China" is a glaring example of imported components from countries across the world being assembled into a final product before being exported. From a policy perspective, it is important to understand the value addition of an economy in the context of international trade, especially as changes in bilateral exchange rates can affect a country's trade balance. The study focuses on "Improving Competitiveness of Indian Manufacturing through GVCs and Exports". This involve analysis of India's value added and import content embodied in its exports, identification of key Intermediate products and markets for exports to enable India achieve export competitiveness and the resultant impact on job creation through integration into GVC.

### 6.3 ICRIER-Mint State Investment Attractiveness Index

**Project Leader:** Radhicka Kapoor

**Research Team:** P. P. Krishnapriya, Amrita Goldar, Raavi Aggarwal, Richa Sekhani, Surbhi Ghai, Serene Vaid, Ruby Mittal and Ashulipi Singhal

**Commencement:** May 2016

**Expected Date of Completion:** Ongoing

**Funded by:** HT Media (Rs. 31.62 lakh)

India is widely projected to grow at a rate of 7.5 per cent or more per annum in the near future while other major emerging market economies including China, Russia, Brazil and South Africa are facing a slowdown. It is also the third largest economy in terms of market size according to the World Economic Forum's Global Competitiveness Report (2015). On the other hand, the World Bank's Doing Business 2015 report ranked India 142 out of 189 economies. Improving the regulatory framework for business is a key prerequisite for increasing investment in India, which in turn is essential for creating employment opportunities to support its rapidly growing youth population. Attracting investments, however, requires an investor friendly climate and information symmetry that could address the gaps surrounding the questions of what, how much and where to invest. Government initiatives such as 'Make in India' and 'Start up India' aim to accomplish this and bring India among the top 50 countries on the World Bank's Ease of Doing Business Index by 2017.

These initiatives have also spurred states in India to launch individual initiatives to make it easier to do business and attract a greater share of these investment inflows into the country. However, lack of adequate information at the state level makes it difficult for investors to take appropriate investment decisions. In an attempt to fill this gap, ICRIER, in collaboration with MINT, proposes to construct an 'ICRIER- MINT State Investment Attractiveness Index' based on secondary data to provide a baseline assessment of the investment climate in India's states. The index will be composed of eight sub-indices that will measure the macroeconomic environment, physical infrastructure, level and quality of human capital; goods market efficiency, labour market efficiency, financial market development, land acquisition and environmental clearances. Besides acting as a scorecard for investors, the ranking intends to draw the attention of policy makers toward states that lag behind in the implementation of various reforms. Such a ranking will also enable states to identify counterparts who have successfully created a more favourable business environment and draw lessons from them.

### 6.4 Indian Regulations on Occupational Safety and Health (OSH) and Working Conditions of Workers: Issues and Way Forward

**Project Leader:** Anwarul Hoda

**Research Team:** Durgesh K. Rai

**Commencement:** April 2017

**Date of Completion:** December 2017

**Funded by:** ICRIER

As India aims to strengthen its manufacturing sector, the obstacles that constrain growth need to be removed. Labour regulations in the country are known for their limiting role in industrial growth and if India wants to realise its manufacturing potential and put the country at least on par with some of

the successful countries in the Asian region, reform and rationalisation of labour laws is imperative. Indian labour regulations are broadly grouped into five categories: (i) industrial relations (ii) social security (iii) wages (iv) safety and (v) welfare and working conditions (National Labour Commission 2002 and Debroy 2005). Studies have already been carried out on labour regulations related to the aspects of industrial relations, social security and wages under the World Bank's Jobs for Development Project during the last three years. In this paper, it is proposed to cover the remaining aspects of Indian labour regulations relating to safety, health and working conditions. The Indian legal framework and practice relating to OSH will be analysed in the light of the standards set in ILO Conventions and will also be compared with those in selected comparator countries viz., China, Japan, Malaysia, South Korea and Thailand, which have been successful in attracting foreign investment to their industrial sector in general and manufacturing in particular. In the light of the examination, recommendations will be made to improve the situation in the country.

## 6.5 Jobs for Development: Creating Multi-Disciplinary Solutions

**Project Co-ordinators:** Radhicka Kapoor and Deb Kusum Das

**Research Team:** Anwarul Hoda, Radhicka Kapoor, Deb Kusum Das, Ali Mehdi, Jaivir Singh, Pankaj Vashisht, P. P. Krishnapriya, Sanjay Pulipaka, Durgesh K. Rai, Kuntala Bandyopadhyay and Prateek Kukreja; Homagni Choudhury (External Consultant)

**Commencement:** January 2014

**Date of Completion:** March 2017

**Funded by:** The World Bank, Washington, DC (Rs. 126 lakh per year)

ICRIER is one of the five global institutions that participated in the Network of Jobs and Development (NJD) initiative of the World Bank. The initiative aimed to develop a community of experts on 'jobs' and sought to build consensus among policymakers, academics, private sector, labour unions, development practitioners and others on the need to tackle the challenge of job creation from a multi-sectoral and multi-disciplinary perspective. The other international partners included the Institute for Emerging Market Studies, Hong Kong University of Science and Technology (HKUST IEMS); Development Policy Research Unit, University of Cape Town (DPRU); Institute for Structural Research (IBS), Poland, and the Latin American and Caribbean Economic Association (LACEA). Further details can be found at [www.icrier-jobs.org](http://www.icrier-jobs.org)

The research studies conducted under the research programme are as follows.

### 6.5.1 *Labour Regulations and Growth of Manufacturing and Employment in India: Balancing Protection and Flexibility*

*Anwarul Hoda and Durgesh K. Rai*

Completed

The factors responsible for the lacklustre performance of India's manufacturing sector are well identified in contemporary literature. The important ones are the absence of world class infrastructure, a complex system of internal taxation, an unpredictable taxation environment, and regulations pertaining to land and labour. This paper explored the difficulties in the area of labour regulations, focusing on the enactments and provisions that limit the flexibility of manufacturing enterprises to

adapt to swift changes in competitive conditions in international markets. The regulations in India that impinge on labour flexibility and related practices were analysed and compared with those prevailing in major developed and emerging countries, before coming to a conclusion on the changes needed in the country. The following aspects were studied in detail – collective dismissal, fixed term contracts, contract labour, trade unions and unemployment insurance. The recommendations were designed to ensure that a balance is maintained between labour market flexibility and protection of labour.

### 6.5.2 *Creating Jobs in India's Organised Manufacturing Sector*

*Radhicka Kapoor*

Completed

Despite rapid economic growth for over a decade, an acceleration of growth in the organised manufacturing sector has eluded India. Using data from the Annual Survey of Industries, the paper examined the factors holding back the growth of output and employment in this sector. The paper found heterogeneities in the performance of the manufacturing sector across industries and states. Recent economic growth has benefited industries that rely more on capital and skilled workers as opposed to those using unskilled/low skilled workers. This, combined with the rising capital intensity of production over the decade (2000-2010), partly explained the limited contribution of the manufacturing sector to employment generation.

At the state level, the study found that states with more inflexible labour regulations experienced slower growth in employment and output in manufacturing than states with more flexible labour market regulations. Given that the days of industrial licensing are gone and markets are influenced not only by regulations enacted by the central government, but also those enacted by state governments, much of the action for improving the business environment needs to be taken at the state level.

At the same time, the paper argued that it would be incorrect to put the entire onus of the dismal performance of the manufacturing sector on labour regulations as firms have been responding to rigidities in the labour market in innovative ways such as through the greater use of contract workers. Factors such as cumbersome product market regulations and infrastructural bottlenecks have also adversely affected the growth of the manufacturing sector.

### 6.5.3 *Labour Regulations and Manufacturing in India: Improving the Social Security Framework*

*Anwarul Hoda and Durgesh K. Rai*

Completed

An important segment of labour regulations is concerned with protective aspects. These regulations provide safety nets or fall back mechanisms to enable workers to cope with crises that affect households from time to time, such as illness, employment injury, death or old age. This paper critically reviewed and analysed existing regulations in India that provide the fall back mechanisms and evaluated how they measure up against the minimum standards recommended in various ILO Conventions. These regulations are important not only from the point of view of social welfare but also from the perspective of the efficiency of the work force in any activity. The analysis revealed serious shortcomings in social security legislation and programmes in India insofar as they apply to unorganised workers. The paper concluded with recommendations on alternative approaches to redress the deficiencies.

#### 6.5.4 *Innovations in Labour Market Regulation and Mechanisms of Implementation in Brazilian Manufacturing: Lessons for India from a Decade of Reforms in Brazil*

Meenu Tewari and Andrew Guinn

Completed

This paper draws on a comparative analysis of the experience of an emerging economy, Brazil, similar to India in size and manufacturing capability, to analyse recent reforms in the structuring and enforcement of labour regulations that have led to both skill formation and growth in the formal manufacturing sector. Some of the key questions addressed are the following: Which are the institutions and institutional arrangements associated with these reforms? How do they play out in a variety of different sectors? Through what mechanisms does employment protection undermine firm and industry level performance? Which other elements of the policy environment shape the demand for and supply of labour in India and drive labour practices among manufacturers? What sort of agenda should policymakers pursue in order to promote a more prosperous and dynamic manufacturing sector?

#### 6.5.5 *Labour Regulation in India: Contract Labour (Regulation and Abolition) Act, 1970 – Implications for Formal Manufacturing Employment*

Deb Kusum Das, Homagni Choudhury and Jaivir Singh

Completed

One particularly significant piece of labour legislation in India is the Contract Labour Regulation and Abolition Act (CLA), 1970, which regulates labour hired by firms through contractors. This paper examined the implications of this act for manufacturing employment in India. While empirical evidence seems to indicate the presence of a large number of ‘contract’ workers in the Indian manufacturing sector across a spectrum of industries, the increasing contractualisation of the workforce has not been typically discussed as a pointed labour regulation issue. It has been widely argued that Indian labour law imposes institutional rigidities inhibiting employment expansion.

However, in this context, a ruling by the Supreme Court in 2001, which interpreted the CLA, 1970, in the case of Steel Authority of India vs. National Union Water-Front Workers also needs to be taken note of. This judicial interpretation has enabled Indian firms to employ ‘contract’ workers widely, often employing them in jobs where they work alongside permanent workers. Against this backdrop, the paper documented the increase in the engagement of ‘contract’ workers and dissected the data to see patterns in the use of ‘contract’ workers in organised manufacturing. The paper suggested that the empirical patterns help generate hypotheses for further work on the normative consequences of large scale use of ‘contract’ labour.

#### 6.5.6 *Law, Skills and the Creation of Jobs as ‘Contract’ Work in India: Exploring Survey Data to Make Inferences for Labour Law Reform in South Asia*

Deb Kusum Das, Jaivir Singh, Homagni Choudhury and Prateek Kukreja

Completed

This paper discussed the theoretical literature on the importance of relationship specific investments for skills and the role of labour laws in this context. An analysis of labour law in South Asia (largely



India, Pakistan, Bangladesh and Sri Lanka) follows with special emphasis on laws that affect employment and skills. The study has used data from the specially commissioned survey conducted in Haryana (a state having a well established industrial base with a large pool of skilled labour force) in order to gain empirical insights on the links between law, skills and the extensive use of 'contract' labour. It is hoped that the findings will be used further to comment on the costs and benefits of the 'contract' labour system and its variants across South Asia, particularly in view of moves to reform labour laws in South Asia.

#### 6.5.7 *Creating Manufacturing Jobs: Has Openness to Trade Really Helped*

*Pankaj Vashisht*

Completed

After following inward oriented economic policies for nearly four decades, India opened up to international trade in the early 1990s. Since then, the trade integration of the manufacturing sector has increased phenomenally. Against this backdrop, this paper analyses the impact of trade on jobs in the Indian manufacturing sector. It finds that the direct impact of trade on manufacturing jobs has been positive. However, a trade induced decrease in labour demand has neutralised direct job gains to a great extent. Therefore, unlike other Asian economies, the overall employment gains from trade have been minimal. The paper recommends removal of supply side constraints to gain from international trade.

#### 6.5.8 *Human Capital Potential of India's Future Workforce*

*Ali Mehdi and Divya Chaudhry*

Completed

Indian policy makers, like most of their counterparts across the developing and developed world, have been concerned with the employability of working-age populations for obvious economic and socio-political reasons. However, such concern has been largely missing as far as the future workforce is concerned. This paper discusses India's demographic dynamics and argues that policymakers have the widest window of opportunity with the segment of population that is poised to enter the workforce between 2030 and 2050 – those in their infancy to-day – and in subsequent decades. Policymakers need to realise that India's employability crisis (as well as to some degree, inequality in the economic and human development sphere) has its roots, inter alia, in the country's grossly inadequate, inefficient and inequitable early health and education systems. Early childhood interventions hold immense importance in fostering the employability potential of the future workforce, especially in developing countries that are still a few decades away from their peak demographic opportunity. The paper noted that early health has not received the attention it deserves within the human capital framework and highlights pathways through which it potentially affects not just health and productivity, but learning outcomes as well as cognitive and non-cognitive skill development during the formative years. Another neglected area that is discussed is soft skill development and the role of pre-primary education. The study concluded that India will have to focus, inter alia, on early health and pre-schooling (soft skill development) to reap its demographic dividend in a manner that is commensurate with the demands of a knowledge economy.



### 6.5.9 *Dynamics of Technology and Employment: Insights from the Indian Manufacturing Sector*

Pankaj Vashisht

Completed

Technological progress has always caused apprehension among workers and the current wave of advances in Information and Communication Technology (ICT) is not an exception. The ongoing digital revolution and consequent increase in automation has once again reignited the old fear of technological unemployment. India is also not isolated from the current wave of technological change. Since the opening up of the economy, Indian manufacturers have invested substantially in technological up-gradation. Against this backdrop, this paper examined the quantitative and qualitative impact of technology on labour demand within the organised manufacturing sectors in India. Estimating a dynamic labour demand equation, the paper found a small but positive effect of technology on aggregate employment. However, the impact of technology has not been uniform across different groups of labour. The paper found that adoption of new technology and the consequent increase in automation has increased the demand for high skilled workers at the cost of intermediary skills, leading to polarisation in manufacturing jobs. It suggested that technology has reduced the routine task content of manufacturing jobs.

### 6.5.10 *Technology, Jobs and Inequality: Evidence from India's Manufacturing Sector*

Radhicka Kapoor

Completed

With easier access to foreign technology and imported capital goods, firms in India's organised manufacturing sector have adopted advanced techniques of production, leading to increased automation and a rise in the capital intensity of production. This has raised concerns about the ability of the manufacturing sector to create jobs for India's rapidly rising, largely low-skilled and unskilled, workforce. However, what has attracted less attention in the literature is the impact of capital augmenting technological progress on the distribution of income and wage. This paper attempts to fill this gap using enterprise level data from the Annual Survey of Industries.

The study found that with the growing capital intensity of production, the role of labour vis-à-vis capital has declined. The share of total emoluments paid to labour fell from 28.6 per cent to 17.4 per cent of gross value added (GVA) between 2000-2001 and 2011-12, while the share of wages to workers in GVA declined from 22.2 per cent to 14.3 per cent. Importantly, even within the working class, inequalities have increased. The share of skilled labour (non- production workers such as supervisory and managerial staff) in the wage pie rose from 26.1 per cent to 35.8 per cent while that of unskilled labour (production workers) fell from 57.6 per cent to 48.8 per cent of the total wage bill. However, it is not just the growth in capital intensity but another important, although independent, change in the labour market (i.e., the rising share of contract workers) that explains rising inequality. The study results also underlined the existence of capital-skill complementarities – firms with higher capital intensity employed a higher share of skilled workers and the wage differential between skilled and unskilled workers was higher in these firms.

### 6.5.11 *Contract Labour Law, Employment and Productivity in India: Inferences for Labour Law Reform in Manufacturing Industries*

*Deb Kusum Das, Jaivir Singh, Homagni Choudhury, Prateek Kukreja and Kumar Abhishek*

Completed

This paper builds on the previous study 'Law, Skills and the Creation of Jobs as 'Contract' Work in India: Exploring Survey Data to make Inferences for Labour Law Reform in South Asia'. The analysis has been extended to five major states of India – Haryana, Gujarat, Maharashtra, Karnataka and Tamil Nadu in an attempt to gain some empirical insight on the links between law, skills and the extensive use of 'contract' labour. The objective has been to assess the importance of relationship specific investments for skills and the role of labour law, particularly the Contract Labour (Regulation and Abolition) Act, 1970. Further, the study attempted to assess the costs and benefits of the contract labour system and its variants, using information gathered from these five states, particularly in view of moves to reform labour laws in India.

### 6.5.12 *Evolution of Task Content of Jobs in India*

*Pankaj Vashisht*

Completed

The recent wave of information and communication technological (ICT) advances has had a significant impact in terms of increased productivity. However, the IT revolution has also created several challenges particularly in labour markets. Studies have shown that rapid improvement in digital technology and the consequent decline in the cost of automation has changed the task content of jobs worldwide, leading to polarisation in the labour market and an increase in wage disparities. India is not isolated from these concerns. Against this backdrop, this study has examined technology-induced structural change in India and its implications for labour. Specifically, it has examined the evolution of the task content of jobs in the Indian economy since the early 1980s when India opened up to foreign technology and trade. The study also spells out regulatory and other policy reforms needed to enhance the labour market benefits of technological change.

### 6.5.13 *Labour Regulations in India: Rationalising Laws Governing Wages*

*Anwarul Hoda and Durgesh K. Rai*

Completed

The authors have earlier written papers evaluating Indian labour laws on industrial relations (ICRIER working paper no.298) and social security (ICRIER working paper no. 331). This paper evaluates the laws governing wages, which is another important segment of labour laws, and identifies shortcomings and anomalies and offers suggestions to rationalise them. It examines the Minimum Wages Act, 1948, the Equal Remuneration Act, 1976, the Payment of Bonus Act, 1965 and the Payment of Wages Act, 1936 and related practices against the benchmark of the relevant conventions of the ILO and the laws and practices in the five comparator countries in the region, viz., China, Japan, Malaysia, South Korea and Thailand. The paper has identified some shortcomings in Indian laws and practices and offered suggestions to improve them. A big limitation of two major laws relating to wages, e.g., the Minimum Wages Act 1948 and the Payment of Wages Act, 1936, is lack of universality in their

coverage. While the Minimum Wages Act, 1948, is applicable only to scheduled employments, the Payment of Wages Act, 1936, is applicable to some sectors or class of establishments and excludes employees drawing wages above a stipulated ceiling. The paper suggests that instead of having a positive list approach, India should follow a negative list approach in which only limited classes of employments or establishments should be excluded from coverage.

#### 6.5.14 *Too Many in Too Few: Females in the Indian Manufacturing Sector*

*Radhicka Kapoor and P. P. Krishnapriya*

Completed

Despite improvement in educational attainments, the share of female workers in Indian manufacturing industries has stagnated over the last decade. Even these figures are driven by those for the southern and the eastern states. The authors find a fall in the level of segregation over the last decade; yet, state level values of segregation measures suggest that jobs created for women continue to be created in only a few industries. Moreover, it is the plants with female proprietors that have registered an increase in female employment.

### 6.6 *The Contractualisation of India's Workforce: Explanations and Implications*

**Project Leader:** *Radhicka Kapoor*

**Research Team:** *P. P. Krishnapriya*

**Commencement:** November 2015

**Date of Completion:** August 2016

**Funded by:** International Growth Centre (Rs. 7.5 lakh)

The employment structure of India's organised manufacturing sector has undergone substantial changes over the last decade with a steep rise in the use of contract workers in place of regular workers. Total employment in the organised manufacturing sector increased from 7.5 million in 2000-01 to 13 million in 2011-12. The increasing use of contract workers accounted for over fifty per cent of this increase. The growing use of contract workers – workers who are hired by an intermediary or contractor on short-term contracts and can be fired easily – reflects the significant informalisation of the workforce and raises questions about the sustainability of employment growth driven by such jobs. It is important to understand what induces firms in the organised sector to hire contract workers.

Much of the existing literature has attributed the widespread use of contract labour to India's rigid employment protection legislation, in particular Chapter VB of the Industrial Disputes Act (IDA). This makes it necessary for firms employing more than 100 workers to obtain the permission of state governments to retrench workers. However, the argument that it is inflexible labour regulations that have incentivised firms to substitute regular workers with contract workers deserves closer scrutiny.

The objective of this project was two-fold. The first was to examine what factors other than labour regulations have driven contractualisation in organised manufacturing. Secondly, the aim was to understand the implications of the increasing use of contract workers on workers' wages and firm productivity. Using plant level data from the Annual Survey of Industries for the time period from 2000-01 to 2012-13, the study found that in addition to labour market rigidities and the existence of a

wage differential between contract and regular workers, firms have another important incentive to hire contract workers. Firms employ contract workers to their strategic advantage against unionised regular workers to keep their bargaining power and wage demand in check. Importantly, the strength of this 'bargaining channel' varies across firms depending on the capital intensity of production, size and existing contract worker intensity. Further, contract workers are not found to have an adverse effect on firm productivity, although their productivity appeared to be lower than that of regular workers in some cases.

## 6.7 The Dilemma of Informality: A Study of India's Informal Economy (Background Paper for the FRBM Review Committee)

**Project Leader:** *Radhicka Kapoor*

**Research Team:** *P. P. Krishnapriya and Raavi Aggarwal*

**Commencement:** June 2016

**Date of Completion:** September 2016

**Funded by:** ICRIER

Today, India is counted among the most important of the emerging economies of the world. However, employment conditions in the country remain poor. The labour markets in India can best be characterised by their dualistic structure with the prevalence of an organised sector that co-exists with a large 'unorganised sector'. Despite a decade of rapid economic growth averaging 8.5 per cent, 430.5 million workers (about 92 per cent of India's total workforce) at present hold informal jobs in the country. Indeed, in India, contrary to the predictions of the Lewis model, the extent and importance of the traditional unorganised sector has persisted, and it has not been absorbed by the "modern sector" as expected. The reality is that the informal economy is increasingly the norm, not the exception, and informal workers are not the "marginal" or "temporary" entities depicted in early development theories.

There is urgent need, therefore, to shift the focus of the debate on informality from regulations as a cause for or driving force of the persistence of informality to improving informality by reducing the decent work deficits faced by informal workers along with increasing their productivity, increasing wages, making their earnings more secure and providing a basic social protection floor. This study reviews the key stylised facts on the unorganised/ informal sector in India including the nature of enterprises, their size, spread and scope, and the magnitude and nature of employment in this sector. Only by developing a better understanding of the various aspects of informality can one suggest how best to improve the conditions of workers in this sector.

The paper further examines the growth status of enterprises along the entire 'continuum' of the informal sector, from own account manufacturing enterprises (OAMEs) to establishments and the constraints faced by them. It analyses the role of state level factors and policy measures taken by the government to create an enabling environment for informal enterprises to flourish. Finally, it discusses the lack of social security for India's unorganised workforce in the context of existing schemes and the Unorganised Sector Workers' Social Security Act (2008) and strongly emphasises the need for a universal social protection floor.

## 7. Asian Economic Integration with Focus on South Asia

### 7.1 Developing Gender-responsive Trade Facilitation Measures to Support Women's Entrepreneurship in BBIN

**Project Leader:** *Nisha Taneja*

**Research Team:** *Sanjana Joshi and Samridhi Bimal*

**Commencement:** February 2017

**Expected Date of Completion:** September 2017

**Funded by:** Department of Foreign Affairs and Trade, Australian High Commission and The World Bank (Rs. 70.50 lakh)

ICRIER, in collaboration with the Department of Foreign Affairs and Trade, Australian High Commission and the World Bank, has recently launched a project on Developing Gender-responsive Trade Facilitation Measures to Support Women's (cross-border) Entrepreneurship in Bangladesh, Bhutan, India and Nepal (BBIN). The objective of the project is to ensure that regional integration initiatives in the BBIN are gender sensitive. The project is designed to identify and address the distinct needs of women entrepreneurs and traders involved in cross-border trade within BBIN. The focus would be on building the evidence base for gender responsive trade facilitation measures for cross-border trade and identify policy interventions to support and promote the participation of women in cross-border trade in BBIN. This project is the first systematic initiative to look at trade facilitation within BBIN through the gender lens.

In addition to publishing research papers on this topic, ICRIER organised a workshop titled "Developing Gender-responsive Trade Facilitation Measures to Support Women's Entrepreneurship in BBIN" in New Delhi in April 2017 and the final report will be published as an ICRIER working paper.

### 7.2 India-Pakistan Trade

**Project Leader:** *Nisha Taneja*

**Research Team:** *Sanjana Joshi, Samridhi Bimal and Varsha Sivaraman*

**Commencement:** August 2016

**Expected Date of Completion:** October 2017

**Funded by:** United States Institute for Peace (USIP), WC (Rs. 59.85 lakh)

Despite substantial India-Pakistan bilateral trade normalisation set in motion in 2012, there has not been much increase in India-Pakistan trade. The project examines two key issues. First, it examines trade trends since 2012 and analyses whether new products have entered the trading basket after Pakistan shifted from a positive list to a negative list. It also assesses whether goods traded informally have shifted to the formal channel. Second, it identifies impediments in all transport modes and routes and quantifies transaction costs, which provide a measure of the extent of impediments related to connectivity.

This project aims to better inform the decisions of policy makers and practitioners in both countries about the challenges of India-Pakistan trade. The studies are being carried out in collaboration with

the Sustainable Development Policy Institute (SDPI), Pakistan. Under this project, four research studies are being conducted on the issues mentioned above. Two are being conducted by ICRIER and two by SDPI. The findings of the studies will be disseminated at a conference towards the end of the project in New Delhi.

### 7.3 Strategies for Increasing India's Exports to UAE

**Project Leader:** *Nisha Taneja*

**Research Team:** *Taher Nadeem; Shravani Prakash (External Consultant)*

**Commencement:** March 2017

**Expected Date of Completion:** August 2017

**Funded by:** Department of Commerce, Ministry of Commerce and Industries, Government of India (Rs. 9 lakh)

India and the UAE have agreed to make a commitment to increase bilateral trade by 60 per cent in the next five years. This study focuses on how this goal can be reached by increasing exports of commodities as well as services from India to the UAE. An attempt has been made to identify specific sectors in which untapped export potential can be harnessed. The study also examines regulatory impediments to increasing trade in services and suggests measures to address these.

### 7.4 India's Trade with Sri Lanka, Nepal and Bhutan

**Project Leader:** *Nisha Taneja*

**Research Team:** *Taher Nadeem*

**Commencement:** March 2017

**Expected Date of Completion:** January 2018

**Funded by:** Department of Commerce, Ministry of Commerce and Industries, Government of India (Rs. 22 lakh)

The study on India-Sri Lanka trade seeks to provide inputs into the proposed Economic and Technical Co-operation Agreement between the two countries. In particular, it has examined bilateral trade trends, identified items and sectors in which there is potential to enhance trade and recommended steps that can be taken to prune the sensitive lists (list of tariff lines at HS 6-digit level in which no tariff concession is given to the partner country under the FTA) that each country has for the other. Furthermore, the efficacy of the tariff rate quota imposed on India's imports of tea and readymade garments from Sri Lanka has been evaluated and it has been recommended that the Indian side reconsider the imposition of quota on Sri Lankan imports. Finally, the Sri Lankan side has raised the issue of non-tariff barriers faced by their exporters; these issues have also been examined in this study.

In the case of Nepal, the study looks at trade trends and assesses further trade possibilities. Besides, it takes up issues related to market access and issues related to transit through Nepal.

Despite the challenge posed by the unavailability of data, the study has used whatever limited data is available to assess the broad trends in trade, analysed the efforts to increase investment flows between the two countries and identify barriers to transit through Bhutan.



## 7.5 India-Pakistan Track II Initiative: Improving Trade in Health Services

**Project Leader:** *Nisha Taneja*

**Research Team:** *Sanjana Joshi, Isha Dayal, Samridhi Bimal and Taher Nadeem*

**Commencement:** October 2015

**Date of Completion:** August 2016

**Funded by:** The Asia Foundation (Rs. 74.95 lakh)

Trade normalisation between India and Pakistan is widely recognised as having significant potential for conflict resolution and long lasting peace in the South Asian region. There is a large body of work to guide policymakers on how to realise potential trade but the possibility of enhancing trade in services remains largely unexplored. This project sought to assess trade possibilities between India and Pakistan in the health services sector, examine regulatory and market access barriers and suggest how the trade potential can be tapped. The sector had been selected as it had a large social and humanitarian appeal and potential to enhance people-to-people contact. The project had been undertaken jointly with the Sustainable Development Policy Institute (SDPI) in Islamabad. The research was based on secondary information and data as well as on a primary survey that was conducted in several cities in India and Pakistan.

ICRIER organised an inception meeting on February 19, 2016, to seek inputs from all stakeholders on the proposed survey. The meeting was well attended by business associations engaged in medical services, government officials from the department of trade, commerce, customs and foreign affairs, and trade experts and researchers. The key findings of the study were disseminated at a conference organised in New Delhi in July 2016. The final report has been published as an ICRIER working paper.

## 7.6 East Asia Research Programme

**Project Leader:** *Sanjay Pulipaka*

**Research Team:** *Saranya Sircar*

**Commencement:** March 2016

**Expected Date of Completion:** Ongoing

**Funded by:** Embassy of Japan (Rs. 30.50 lakh)

The objective of this programme is to create a forum for scholars to reflect on political and security issues in the East Asian region. The research and discussion themes include the regional balance of power, regional security architecture, multiple frameworks of engagement (bilateral/trilateral/quadrilateral), territorial/maritime disputes and non-traditional security issues. This year the programme organised an international conference with eminent scholars from countries such as Australia, Japan, the Philippines, Singapore and Vietnam. The programme also organised four panel discussions with young scholars in collaboration with the Japan Foundation, New Delhi. These panel discussions focused on traditional and non-traditional security issues of the larger East Asian region. Further, the programme organised talks by renowned scholars from reputed academic institutions like the University of Cambridge and Keio University. In 2017-2018, the programme will be hosting a project on 'Values and Foreign Policy', with funding from the Tata Trust. Renowned scholars from Asia and Europe will participate.



## 8. Multilateral Trade Negotiations and FTAs

### 8.1 Supporting Indian Trade and Investment for Africa: Independent Project Evaluation

**Project Leader:** *Pankaj Vashisht*

**Project Team:** *Anwarul Hoda and Durgesh K. Rai*

**Commencement Date:** November 2016

**Expected Date of Completion:** December 2020

**Funded by:** Oxford Policy Management (Rs. 40 Lakh)

Supporting Indian Trade and Investment for Africa (SITA) is a DFID-funded aid for trade (AfT) and value-chain programme. It was initiated in 2014 to harness Indian resources (knowledge, technology, capital) to increase higher value-added exports from selected African countries to the Indian market and to third-country markets. The selected programme countries are Ethiopia, Kenya, Rwanda, Tanzania and Uganda. The programme is designed and implemented by the International Trade Centre (ITC). ICRIER, in association with Oxford Policy Management and International Economics, has been assigned the task of evaluating the SITA programme. The evaluation will assess whether the SITA idea works, or the worth, merit and value of the SITA programme is as conceptualised and designed. This includes learning about what does and does not work in DFID's first South-South AfT and value chain programme; whether the programme is successful in harnessing Indian resources (expertise, technology, capital) for the promotion of higher value-added African exports; whether it is successful in increasing access to the Indian market and regional and third markets; and whether it is successful in catalysing greater Indian FDI in programme countries; and whether there is a clear line of sight to poor workers, the intended beneficiaries.

### 8.2 WTO and Trade Policy

**Project Leader:** *Anwarul Hoda*

**Research Team:** *Durgesh K. Rai*

**Commencement:** August 2009

**Expected Date of Completion:** Ongoing

**Funded by:** ICRIER

The World Trade Organization (WTO) and Trade Policy research and capacity building project has been developed to enhance trade policy and WTO research at ICRIER and to provide Indian policymakers with a deeper understanding on how to take forward India's interests in the multilateral trading system. The principal objectives of the research programme are to engage in policy-oriented research; assist the Ministry of Commerce & Industry, Government of India, in policy making; constructively engage with stakeholders at regular intervals; organise stakeholder meetings to elicit suggestions on the possibilities and opportunities for agreement in multilateral trade negotiations; and help India to effectively participate in the reform of the global governance and trade agenda.

### 8.2.1 *Agreement on Fishery Subsidy*

*Anwarul Hoda*

Ongoing

One of the few areas of negotiations in which there is some progress at the WTO is that of fishery subsidy, which is of topical interest currently in the context of depleting fish stocks around the world. The proposed agreement is likely to come up for consideration at the Eleventh Ministerial Conference of the WTO to be held at Buenos Aires from 11 to 14 December, 2017. India has strong concerns in the area in view of the need to protect the livelihood of artisanal fishermen. The paper will explore all relevant issues that need to be factored into India's stance during the negotiations.

### 8.2.2 *Public Stockholding for Food Security in Developing Countries*

*Anwarul Hoda and Durgesh K. Rai*

Ongoing

In the WTO, developing countries face a problem because the rules in the Agreement on Agriculture are being interpreted as placing constraints on the operation of the programme of public stockholding for food security in these countries. The subject is likely to come up for negotiation at the Ministerial Conference scheduled for December 2017 at Buenos Aires. The issue figures high on the agenda of the Government of India for the Ministerial Conference. The proposed policy paper on the subject will examine the issue and make recommendation for the way forward for India.

### 8.2.3 *Environment and Labour on India's Trade Agenda: Lessons from the TPP Agreement*

*Anwarul Hoda and Durgesh K. Rai*

Completed

The withdrawal of the United States from the Trans-Pacific Partnership (TPP) Agreement in January 2017 has virtually removed it from India's agenda for international trade negotiations. However, the Agreement had regulatory provisions as well, encompassing inter alia environment and labour on which rules do not exist at present in multilateral trade agreements. These continue to be of relevance to India and other developing countries as they might turn out to be the archetype for proposals that might be put forward by the developed countries in future in the multilateral, regional or bilateral context. In the past, developing countries did not agree to include provisions for labour and environment in trade agreements because of the fear that developed countries would raise trade barriers on goods and services imported from developing countries on the ground that they adopted low or lower standards than those followed by the developed countries.

In the above context, this paper undertook an evaluation of the labour and environment chapters of the TPP Agreement, with a view to determining India's stand if the same or similar provisions are proposed in multilateral, plurilateral or bilateral agreements in the future. Analysis in the paper

shows that if TPP like provisions are incorporated in multilateral trade agreements for India, there would be only a small area of vulnerability to countermeasures arising from our labour laws and none due to the laws on the environment. The paper does not recommend a change in our stance on keeping environment and labour out of multilateral trade agreements as the current multilateral trade compact, as embodied in the WTO Agreement, does not permit linkage between trade in goods and services with labour and environment and there is no advantage to be gained by developing countries by a move to alter the position. On the other hand, if India accepts the proposition, there is the unwelcome prospect of countermeasures being applied against the country's trade and economic interests. The paper, however, recommends that in bilateral negotiations, if the emerging bilateral agreements respond strongly to India's economic interests, there would be no harm in India having an open mind for discussing the inclusion of provisions on the lines of the TPP Agreement with safeguards. In fact, India could seek additional safeguards to plug the few chinks that remain in our armour against countermeasures.



# **Seminars**

## Indo-Israel Brainstorming Session on Water and Solar Power

May 10, 2017



L to R: Ashok Gulati, Rajat Kathuria and Daniel Carmon at the seminar on *Water and Solar Power*

ICRIER and the Embassy of Israel in India jointly hosted the “Indo-Israel Brainstorming Session on Water and Solar power” on May 10, 2017, at New Delhi. The discussion, organised in two sessions, focussed on what India and Israel can do together to find possible solutions to solve India’s water challenges. The sessions covered four major themes – water use in agriculture, urbanisation and waste water treatment, desalination of sea water, and river pollution and cleaning.

The welcome remarks were delivered by Rajat Kathuria, Director and Chief Executive, ICRIER, and the opening remarks were made by H.E. Daniel Carmon, Israel’s Ambassador to India. Session one included presentations on “Water challenges from Indian perspectives” by Ashok Gulati, Infosys Chair Professor for Agriculture, ICRIER, and “The Israeli story – Policy, Regulation, Practice and Technology” by the experts from Israel.

Possible government to government (G2G), business to business (B2B) and government to business (G2B) strategies were discussed in the second session, which was moderated by Dr. Gulati and had active participation of representatives from the Ministry of Agriculture, Ministry of Drinking Water and Sanitation, Ministry of Rural Development, National Mission for Clean Ganga, major business players in water technology from India and Israel, and scholars. The participants emphasised the need for an integrated approach to solving the water crisis in India, involving government, policy makers, business organisations, consumers and other stakeholders. The setting up of an Indo-Israel Water Working Group (IIWWG) to find solutions through technology, resources and policies was suggested. The speakers also highlighted the need to formulate effective business models to ensure funding from multilateral agencies for water technology. A proper water pricing mechanism was identified as the key element required to promote water conservation in India.

## Pharmaceuticals in India - The Next Leap

April 28, 2017

As part of its research programme on Drug Regulatory Reforms in India, ICRIER’s Health Policy Initiative organised this seminar to mark the culmination and release of research reports and policy briefs on “International

Co-operation for Registration of Medicines: Opportunities for India” and “Challenges and Prospects for Clinical Trials in India: A regulatory perspective”. Both reports were based on extensive desk and field research in four Indian states – Maharashtra, Karnataka, Gujarat and Telangana – and seven countries – US, UK, Switzerland, Germany, South Africa, Singapore and Indonesia – that incorporated the views of more than 200 stakeholders. The seminar was attended by participants representing various stakeholder groups. The key speakers at the seminar included K. L. Sharma, Joint Secretary, Ministry of Health and Family Welfare, Government of India; G. N. Singh, Drugs Controller General of India, Central Drugs Standard Control Organisation, Government of India; Agnes Saint-Raymond, Head of International Affairs Division, European Medicines Agency; and Lov Verma, Former Secretary, Ministry of Health and Family Welfare, Government of India.



L to R: Agnes Saint-Raymond, Ali Mehdi, Lov Verma, Anwarul Hoda, K. L. Sharma and G. N. Singh at the seminar on *Pharmaceuticals in India - The Next Leap*

In his remarks, Mr. Sharma said that the government intended to bring out new rules for new drug approvals and clinical trials that were harmonised with international practices, but adapted to India’s requirements. Dr Singh noted that while India has established itself in the generics space, drug discovery will be the next phase, in which it will be necessary to channelise energies towards generating new molecules and new therapeutics from India. He further pointed out that while India has the resources to move to the next phase, active linkage between academic institutions, national laboratories, and industry has been missing. The inaugural session and panel discussion was followed by a presentation of and discussion on the key research findings and policy recommendations of both the reports.

## Soft Power in the Indo-Pacific

**March 23, 2017**

The East Asia Research Programme at ICRIER in collaboration with the Japan Foundation, New Delhi, organised the 4<sup>th</sup> Young Scholars’ Forum Panel Discussion on “Soft Power in the Indo-Pacific” on March 23, 2017. Sanjay Pulipaka, Senior Consultant, ICRIER, outlined the concept of soft power in international relations. Dr. Michael Malley, Executive Director, Center on Contemporary Conflict, Naval Postgraduate School, Monterey, USA, chaired the discussion and highlighted the distinction between soft power and hard power as well as the significant role that governments can play in shaping soft power. Avantika Deb from the Observer Research Foundation (ORF) noted that although there is steady competition to Japanese soft power capabilities in the



Indo-Pacific region from China and South Korea, Japan has been able to maintain a positive image amongst all other Southeast Asian countries. Niranjana Chandrashekhara Oak from Jawaharlal Nehru University (JNU) outlined the opportunities for and challenges in deploying the Indian Diaspora in Southeast Asia as a soft power tool. He noted that Southeast Asia had been enormously influenced by both India and China in the realms of art, culture, architecture, court etiquette, religion, etc. Tanzoom Ahmed from the Delhi Policy Group (DPG) recounted the historical evolution of US soft power and noted that its decline has weakened the USA's position in terms of establishing itself as a global leader. The discussion also focussed on the growth of the social media and its increasing ability to influence domestic as well as international politics.

## **The Union Budget 2017-18: Reforms and Development Perspectives**

**February 4, 2017**

The well known Budget Seminar once again this year brought together the heads of the five think tanks – CPR, ICRIER, IDFA, NCAER, and NIPFP – to reflect on the Union Budget and its immediate and longer-term implications for the Indian economy. Ashok K. Bhattacharya, Editor, Business Standard, moderated the lively discussion that was followed by an equally engaging interaction with the audience.

All the speakers acknowledged the bearing of demonetisation on this year's Budget through different perspectives such as fiscal consolidation, social sector spending, informal sector activity and agriculture, among others. The imminent Goods and Services Tax (GST) and the ongoing work of the committee looking into fiscal responsibility and budget management was also probed, especially in the context of trying to create a balance between boosting public investments in the backdrop of private sector unwillingness and engendering fiscal rectitude on part of government. Fiscal prudence at a time when there is pressure on the government to spend often gets reflected in downsizing capital and infrastructure spending. The role of crowding in private investment, therefore, assumes critical importance and speakers hoped that the GST will provide the basis for improving the investment climate across states, while also providing a fillip to a long standing objective of tax reform in India, i.e., to increase compliance and enhance the low tax to GDP ratio. The seminar concluded with an interactive session between the audience and the five speakers on several issues including the powers given to tax authorities, the imposition of additional cesses/surcharges, increase in capital spending, MNREGA, protectionism and jobs.

## **Partnerships, Security and Regional Frameworks in the Asia-Pacific Region**

**January 13, 2017**

The East Asia Research Programme at ICRIER in collaboration with the Japan Foundation, New Delhi, organised the 3<sup>rd</sup> Young Scholars' Forum Panel Discussion on "Partnerships, Security and Regional Frameworks in the Asia-Pacific Region" on January 13, 2017. The discussion was chaired by Toshihiro Minohara, Professor, Kobe University, Japan.

In his opening remarks Sanjay Pulipaka, Senior Consultant, ICRIER, briefly outlined the existing partnerships and regional security frameworks in the Asia-Pacific region. Sampa Kundu, from the Institute for Defence Studies and Analyses (IDSA), spoke on the Association of Southeast Asian Nations' (ASEAN) approach to preventing and managing traditional security conflicts, highlighting the security challenges such as big power rivalries and the absence of a robust regional security architecture faced by the regional grouping. Sana Hashmi, Consultant in the Ministry of External Affairs (MEA), mapped the evolution of the Shanghai Cooperation Organisation (SCO) and elaborated on the role that China has played in this Eurasian organisation,

and its relationship with the Central Asian Republics. She further underscored the necessity of, as well as the challenges associated with, the expansion of the SCO. Arnab Dasgupta, from Jawaharlal Nehru University, discussed the concept of human security, and listed the various factors such as displacement of people induced by climate change, economic stress, and conflict that have induced large-scale migration and highlighted the insecurities that migrants have to endure. He called for a broad-based human security approach in responding to forced migrations.

## **Brexit and the Commonwealth: What Next?**

**December 14, 2016**

In collaboration with The Round Table: The Commonwealth Journal of International Affairs, ICRIER organised a panel discussion on “Brexit and The Commonwealth: What Next?” on December 14, 2016. The Journal has also brought out a special issue on the topic and at the event, Kamallesh Sharma, former Secretary-General, Commonwealth of Nations, launched the Indian Chapter of the Round Table.

The discussion revolved around the possibility of the UK seeking closer ties with Commonwealth countries such as India as a consequence of BREXIT. The panellists included Shashi Tharoor, Member of Parliament, India; James Mayall, Emeritus Fellow in International Relations, Sidney Sussex College, Cambridge, UK; Sunanda Datta-Ray, former Editor, The Statesman; Kamallesh Sharma, former Secretary-General, Commonwealth of Nations; and Rajat Kathuria, Director & CE, ICRIER.

Professor Mayall noted that the referendum discussions were conducted on economic issues, ignoring geopolitical realities and stressed that there is need to critically evaluate referendums in representative democracies. Dr. Tharoor pointed out that BREXIT’s core concerns were less about economics and more about immigration. He stated that while post-BREXIT Britain would look to diversify its relationships with other countries and regions around the globe, its attitude on immigration will have an impact on its relationship with Commonwealth countries. For instance, the restrictions on Indian students working in the UK will have an impact on the bilateral relationship. Mr. Datta-Ray highlighted the inconsistency between the UK government’s stance (primarily about trade) and the popular perception (more about migration) on BREXIT. He referred to the three important factors – trade, investment and migration – that are crucial for the future of the Indo-Britain bilateral relationship. Dr. Kathuria focussed on the growing anxieties regarding free trade in Western liberal democracies and the popular backlash against it. He also analysed the BREXIT referendum results in terms of the urban-rural divide as well as other demographic indicators.

## **Job Creation through Labour Reforms in Indian Manufacturing: A Stakeholders’ Perspective**

**December 9, 2016**

One of the major challenges facing the Indian economy is job creation in the manufacturing sector. To contribute to a nuanced and analytical conversation on the subject, senior members of the government, industry, academia, law and labour unions, who form a group of stakeholders associated with the issue, were brought together for a round table discussion as an ICRIER initiative.

The discussion began with opening remarks by Rajat Kathuria, Director & CE, ICRIER. Anil K. Nayak, Central Labour Commissioner, Ministry of Labour and Employment, Government of India, noted that the empowerment of workers in terms of access to due benefits and rights are the prime factors that should guide labour reforms.

Anwarul Hoda, Professor, ICRIER, presented a comparative analysis of India's labour regulations with those prevailing in five Asian countries. Ramapriya Gopalakrishnan, Advocate, Madras High Court, presented an overview of the legal provisions related to contract labour and emphasised the importance of the Contract Labour (Regulation and Prohibition) Act, 1970. Prateek Kukreja, Researcher, ICRIER, presented the findings of ICRIER's field survey conducted in the states of Haryana, Gujarat, Maharashtra, Tamil Nadu and Karnataka that covered the food processing, leather, textiles and garments, auto components and electrical and electronics industries. He said that in-depth interviews of firms provided crucial insights into the labour scenario in general and, more particularly, into the issue of contract workers in Indian manufacturing. The analysis has been published as an ICRIER Working Paper. Pankaj Kumar, Sr. Administrative Officer, Indian Veterinary Research Institute (IVRI), Bareilly compared job quality in the Indian and Chinese manufacturing sectors. The presentations were followed by an interactive discussion which provided useful comments, suggestions and inputs to the presenters for further research.

## Security Challenges and Strategic Partnerships in the Indo-Pacific

**August 19, 2016**

The East Asia Research Programme at ICRIER in collaboration with the Japan Foundation, New Delhi, organised the 2<sup>nd</sup> Young Scholars' Forum Panel Discussion on "Security Challenges and Strategic Partnerships in the Indo-Pacific" in New Delhi on August 19, 2016.

The panel discussion focussed on emerging strategic partnerships in the Indo-Pacific and their impact on regional frameworks of engagement and regional organisations. Prakash Panneerselvam, from the National Institute of Advanced Studies (NIAS), Bengaluru, spoke on India-Japan maritime security co-operation. He provided a detailed account of India-Japan collaboration to effectively handle natural calamity, piracy activity and other security threats endangering the freedom of navigation in the Indo-Pacific region. Dr. Panneerselvam pointed to electronic intelligence (ELINT)/signals Intelligence (SIGINT) stations as possible new areas of co-operation, and called for greater collaboration between India and Japan in building ports, such as the Chabahar port in Iran.

Amrita Jash from Jawaharlal Nehru University, in her presentation, noted that China's One Belt, One Road (OBOR) initiative would greatly affect the Asian economic and security landscape. She presented a detailed account of energy trade and transportation in the Indian and the Pacific Oceans, and assessed the importance of implementing international law in the maritime domain. Dr. Jash also elaborated on the US rebalance policy and its implications for the India-Japan-US trilateral partnership. Gaurav Dutta from the National Maritime Foundation provided a historical account of India's Look East Policy and its transformation into the Act East Policy in recent times. Japan's engagement in India's immediate neighbourhood in various connectivity and infrastructure projects in Bangladesh and Myanmar were highlighted.



# Lectures & Talks

## Goods and Services Tax: Features, Challenges, and Road Ahead

**April 20, 2017**

At a talk on “Goods and Services Tax: Features, Challenges and Road Ahead” organised by ICRIER, Najib Shah, former Chairperson, Central Board of Excise and Customs, explained the nuances and benefits from the goods and services tax (GST). Mr. Shah, as pointed out by former member of the Central Board of Direct Taxes Rajiva Ranjan Singh in his introductory remarks, had been deeply involved in drawing up and overseeing the implementation of the GST.

Mr. Shah pointed out that the multiplicity of taxes under the earlier tax regime had several ill effects. Among the various aspects that Mr. Shah touched upon were the workings of the GST Council, tax slabs, availability of tax credit, filing of returns under the new regime and additional cess. The benefits of GST he listed included lower inflation, greater ease of doing business, decrease in ‘black’ transactions, greater consumer awareness, the gains accruing to poorer states and the stimulus to the ‘Make in India’ campaign. He also touched upon the issue of managing the status of union territories that are not ‘states’ under the Indian Constitution

## Three Forces Converging on Financial Services

**March 27, 2017**

In a talk on “Three Forces Converging on Financial Services”, Tiff Macklem, former Senior Deputy Governor, Bank of Canada & Current Dean, Rotman School of Management, talked about the key forces that have been instrumental in changing the landscape of the financial services sector following the financial crisis of 2008, the lessons for leaders in the industry and the way forward for the sector. The session was moderated by Jaimini Bhagwati, RBI Chair Professor, ICRIER.

Mr. Macklem noted that in the aftermath of the financial crisis of 2008, the initial focus was on stabilising the financial system, but subsequently, attention turned towards preventing such a crisis from recurring. He pointed out there have been concerted efforts to reform financial services and improve its resilience. According to him, there are three major forces that have changed the financial services landscape in the last couple of years. The first was Donald Trump taking over as the President of the US, leading to uncertainty regarding the regulatory environment. The second force is ‘culture’. Mr. Macklem highlighted the need to develop cultural integrity in firms as firms that promoted ‘integrity’ as a core value were found to be more profitable, productive, less burdened by unions and more appealing to prospective employees vis-à-vis other firms. The third force is ‘technology’; many technology-enabled financial ventures have mushroomed over the past few years and are competing with banks in India and abroad. A lively discussion on the consequences and ramifications of financial sector developments on the real economy followed the talk.

## A Longitudinal Analysis of Internal Migration, Divorce and Well-being in China

**March 8, 2017**

The talk on “A Longitudinal Analysis of Internal Migration, Divorce and Well-being in China” was delivered by Alok Bhargava, Professor, School of Public Policy, University of Maryland, on March 8, 2017. The session was chaired by Deb Kusum Das, Consultant, ICRIER.

Dr. Bhargava’s research uses longitudinal data from the Child Health and Nutrition Surveys from 1989-2011, to analyse the effects of internal migration and variables, such as the preference for a son on the incidence

of divorce and the effects of migration and divorce on self-reported health and systolic and diastolic blood pressure. The results show a positive correlation between the time spent away from home and the probability of divorce for both men and women. Additionally, there is some evidence of preference for sons, especially among men, since significantly more men with only daughters were remarried as compared to women with only daughters. There was no statistically significant effect of divorce on self-reported health or on blood pressure, which, Dr. Bhargava explained, may be due to the low incidence of actual divorces of less than 5 per cent in China during the study period. According to him, there is a definite need to collect more refined data, such as that on hours of labour supplied by migrant workers, to develop a more nuanced understanding of the dynamics of internal migration.

## **Japan's Cyber Security Policy**

**February 9, 2017**

In this lecture, Motohiro Tsuchiya, Professor, Keio University, Japan, focussed on the possibilities of cyber warfare and its definitional dimensions. Professor Tsuchiya noted that the operational domain of warfare has shifted to the cyber domain as well. He pointed out that cyber-space is a 'global common' and involves interconnected devices, which makes the domain very fragile. He contended that East Asia, which is dense with undersea cyber cables, is very vulnerable to external attacks and terrorist activities. Sometimes, accidents involving fishing boats also result in the disruption of cyber services. Using detailed maps of global cyber cable networks, he enumerated the various instances when these networks were attacked. Professor Tsuchiya also provided maps that detailed the geographic spread of cable landing stations. The vulnerability of cable networks can negatively affect the command and control of militaries of various countries. He spoke of Japan's response to these diverse cyber threats and listed the response mechanisms that came into play. According to him, responding to cyber attacks is difficult as attribution becomes tough. For instance, the emergence of hired cyber mercenaries complicates the possibility of attribution. Therefore, a robust institutional framework is necessary to protect the cyber domain, and the private sector, which generally does not share information, should be more transparent and collaborative.

## **Gender Parity and Leadership: Key to Growth and Development**

**February 7, 2017**

In this lecture, Kalpana Kochhar, Director, Human Resource Department, International Monetary Fund (IMF), highlighted the issue of women remaining elusive in leadership roles across the world. The session was chaired by Saon Ray, Senior Fellow, ICRIER. Ipsita Kathuria, founder and CEO, TalentNomics, who partnered with ICRIER in organising the event, also shed some interesting light on the subject.

According to Dr. Kochhar, empirical evidence points to the existence of gender gaps remaining in economic opportunities across developing and developed countries alike. While labour force participation rates have started to increase modestly in the Middle East and North African (MENA) region and progress has been observed in Latin America (also reflected in large tertiary education rates), the labour force participation rate in South and East Asia has been declining. When gender gaps in education have narrowed in this region, this is both puzzling and a matter of concern. It is also seen that not only are women over-represented in low-paying occupations, they also have lower access to finance – a problem that has only been exacerbated over the years in the Middle East and South Asia. Besides, wage gaps are the largest between men and 'married women with children', and are much wider than employment gaps.



According to Dr. Kochhar women remain grossly under-represented in leadership roles (political positions and corporate leadership) with an average representation of only 20 per cent across the world. Gender-based legal restrictions do not help because of the prevalence of laws that treat men and women differently in about 90 per cent of the countries. She concluded on the note that gender parity is 'macro-critical', in the sense that substantial macroeconomic gains such as higher economic growth and productivity gains through stronger human capital can be made through equal access to economic opportunities

## **Metropolitan Water Governance in Three Indian Mega Regions: Fragmentation and Consolidation in Mumbai, Chennai and Bengaluru**

**December 21, 2016**

Bharat Punjabi, Lecturer and Research Fellow, University of Toronto, in a presentation on metropolitan water governance focussed on recent literature on water governance in large metropolitan regions in India that points to fragmentation, and hence, deprivation of peri-urban populations, from access to water. In Dr. Punjabi's opinion, the picture is variegated, comprising of both 'consolidation' and 'fragmentation' models. Fragmentation has caused problems in urban water governance in Mumbai, resulting in sub-optimal outcomes. At the same time, the policy of the Tamil Nadu Government to make rooftop water harvesting compulsory under the consolidation model has solved the problem of access to a great extent at a regional level. Hence, there is a need for integration of water and sewerage functions across metropolitan areas to deal with the problem of water access. The interplay of local institutions, rules around water allocation, and politics plays a central role in metropolitan water governance.

The main finding of Dr. Punjabi's research has been that water challenges at the metropolitan level are encumbered by a governance framework that is characterised by a poor appreciation of the water challenge in the contemporary metropolitan context. There has also been a contrasting trend in Indian cities towards inter-municipal co-operation and metropolitan/suburban consolidation that often results in paradoxical governance outcomes around water. Consequently, co-operation around water arrangements coexist with massive failures, often within a metropolitan region. As a solution to mitigate conflict and increase co-operation around water in large and rapidly growing city regions, state and local governments should align metropolitan boundaries with watershed boundaries as has been done recently by some large metropolitan cities in Canada.

## **China and Asian Geopolitics**

**November 4, 2016**

In this talk Stefan Halper, Professor, University of Cambridge, focused on evolving geopolitical issues in the Asia-Pacific region. Specifically, he noted that the US alliance system is coming under increasing stress. With reference to the US policy towards China, he pointed out that there are two contending visions. First, many strategic policymakers in the US worked on the assumption that increased engagement with China on various international platforms would result in the peaceful rise of China. However, such an approach did not yield the desired result. Given the recent territorial assertions of China, the second competing vision – soft containment of China – is gaining ground. Prof. Halper also referred to China's three-dimensional warfare – psychological warfare, media warfare, and legal warfare.



# Conferences

## Re-imagining Globalisation: Views from G20 Countries

June 08-09, 2017



L to R: Arvind Subramanian and Isher Judge Ahluwalia at the 9<sup>th</sup> annual G20 conference on *Re-imagining Globalisation: Views from G20 Countries*

ICRIER's 9<sup>th</sup> G20 conference focused on the challenges to globalisation. Discussions at the conference were structured around six themes: global economic growth and policy co-ordination; evaluating global financial architecture and regulatory practices: progress and way forward; climate financing for sustainable growth; trade and investment in an era of protectionism; migration and its discontents; and the role of think tanks in fostering cooperation amongst the G20.

The conference featured eminent speakers from academia, think tanks, government and industry from India and abroad and included Arvind Subramanian, Chief Economic Adviser, Government of India; Isher Judge Ahluwalia, Chairperson, ICRIER; Viral Acharya, Deputy Governor, Reserve Bank of India; Naina Lal Kidwai, Chair, FICCI Sustainability, Energy & Water Council & Chairman, Max Financial Services Ltd.; Montek Singh Ahluwalia, Former Deputy Chairman of the Planning Commission, India; Naoyuki Yoshino, Dean, Asian Development Bank Institute (ADBI); Y. V. Reddy, Former Governor, Reserve Bank of India; Heribert Dieter, Senior Fellow, The German Institute for International and Security Affairs; Rakesh Mohan, Senior Fellow, Jackson Institute for Global Affairs, Yale University; Ashima Goyal, Professor, Indira Gandhi Institute of Development Research (IGIDR); Errol D'Souza, Professor, Indian Institute of Management Ahmedabad (IIMA); Chetan Subramanian, Professor, Indian Institute of Management Bangalore; Chetan Ghate, Member, Monetary Policy Committee, Reserve Bank of India; Saurabh Garg, Joint Secretary, Department of Economic Affairs, Government of India; Irudaya Rajan, Professor, Centre for Development Studies (CDS); Sebastian Saez, Lead Economist, The World Bank, India; Sher Singh Verick, Deputy Director, Decent Work Team for South Asia and Country Office - India, International Labour Organization (ILO); and Matthias Helble, Senior Economist and Co-Chair Research, ADBI.

On the issue of global economic growth and G20 policy co-ordination, it was pointed out that the G20 provides a platform where countries can come together and co-operate to protect global public goods. G20 can help manage and prevent crises through international co-operation. Economic outcomes for countries were better when their fiscal policies and crisis responses were well co-ordinated than when they functioned unilaterally. In the discussion on the role of think tanks, the need to engage in policy solutions on a broad array of cross-

border challenges relating to financial stability, tax erosion, protectionism, global warming and migration were highlighted. Financing climate change mitigation/adaptation projects was another major issue for discussion, with several participants expressing disappointment with current levels of funding for such projects. Policy uncertainties regarding trade and migration were other areas of concern. Participants noted that addressing these concerns requires that countries open up to one another rather than focus solely on their domestic markets.

## International Conference on Changing Security Dynamics in the Indo-Pacific

February 15-16, 2017



L to R: Shakti Sinha, Rajat Kathuria, K. Padmanabhaiah and Srikanth Kondapalli at the conference on *Changing Security Dynamics in the Indo-Pacific*

The East Asia Research Programme at ICRIER organised an international conference titled “Changing Security Dynamics in the Indo-Pacific” on February 15 and 16, 2017, in Hyderabad. Senior scholars from India, Australia and Southeast Asia participated in the conference that reflected on the power shift in global politics and its implications for India and its extended neighbourhood. It was pointed out that the rapid growth of Asian economies has been accompanied by increased tension because of territorial conflicts. This dichotomy cannot be sustained over the long run. To strengthen security frameworks, the need for a more inclusive regional framework in the Indo-Pacific region was stressed. One issue that was highlighted was that ‘new powers’ should not demonstrate callousness towards global norms, and should instead recognise that playing by rules has a long-term benefit. It was stressed that India should scale up its engagement with like-minded East Asian countries to generate capital for its infrastructure projects. Some scholars noted the need for trilateral co-operation in developing connectivity networks to ensure equitable outcomes. The possibilities of expanding co-operation in the realm of humanitarian assistance and disaster relief (HADR) also featured in the discussion. It was noted that building bridges between South Asia and Southeast Asia might propel existing frameworks such as the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) to emerge as a major trade bloc in the region. It was suggested that a ‘corpus fund’ be established by India, Japan and Australia to promote ‘blue economies’ (ocean economies) in the Indian Ocean Region. The delegates stressed the need for continued conversations to identify measures to address security issues in the Indo-Pacific in a non-confrontational manner.

## Revitalising Global Economic Growth: Views from G20 Countries

August 09-10, 2016



L to R: Arvind Panagariya and Rajat Kathuria at 8<sup>th</sup> annual G20 Conference on  
*Revitalising Global Economic Growth: Views from G20 Countries*

The discussions at ICRER's 8<sup>th</sup> annual G20 Conference were structured around the following seven themes: effectiveness of G20; macroeconomic policy co-ordination among G20 members; financial stability and regulatory architecture; infrastructure development; financing and impact; global trade following Brexit; sustainable energy: opportunities, constraints, and the role of G20 countries; and transfer pricing: base erosion and profit shifting (BEPS) project and beyond.

The conference featured eminent speakers from academia, think tanks, government and industry from India and abroad, including Arvind Panagariya, Vice Chairman, NITI Aayog and G20 Sherpa, Government of India; Stephen Pickford, Senior Research Fellow, Chatham House, London; Heribert Dieter, Senior Research Associate, The German Institute for International and Security Affairs, Berlin; Cesare Onestini, Deputy Head of Delegation, EU, India; Andreas Bauer, Senior Resident Representative in India, IMF; Rathin Roy, Director, NIPFP, Delhi; Hu Yuwei, Research Fellow, Chongyang Institute, Beijing; Thomas Fues, Senior Researcher & Head of Training Department, GDI, Bonn; Amarjeet Singh, Chief General Manager, Office of Chairman and International Affairs, Securities and Exchange Board of India (SEBI); Rajiv Lall, Founder MD & CEO, IDFC Bank; Chetan Ghate, Member, Monetary Policy Committee, Reserve Bank of India; Harsha Vardhana Singh, Executive Director, Brookings India; Tokuo Iwaisako, Professor, Hitotsubashi University, Tokyo; Samiran Chakraborty, Managing Director and Chief Economist, Citi Research, India; Ritu Mathur, Director, Green Growth & Resource Efficiency Division, TERI; and Sanjay Kumar, Senior Adviser, Deloitte India.

The participants noted that in many areas, G20 has been largely ineffective because of the short tenure of the presidency (one year), annual changes in the agenda, and the lack of monitoring and accountability mechanisms to enforce its mandate. While the issue of macroeconomic policy co-ordination is much talked about in G20 summits, in practice, not much progress has been made in ensuring it as central banks have domestic and not international mandates. The same remains true with regard to infrastructure development, even though the G20 forum has mandated that financial support should be provided to developing countries to build infrastructure if infrastructural gaps are massive. It was pointed out that taxation is the area where the G20 has made considerable progress – both the Foreign Account Tax Compliance Act (FATCA) and BEPS have received the support of G20 countries.



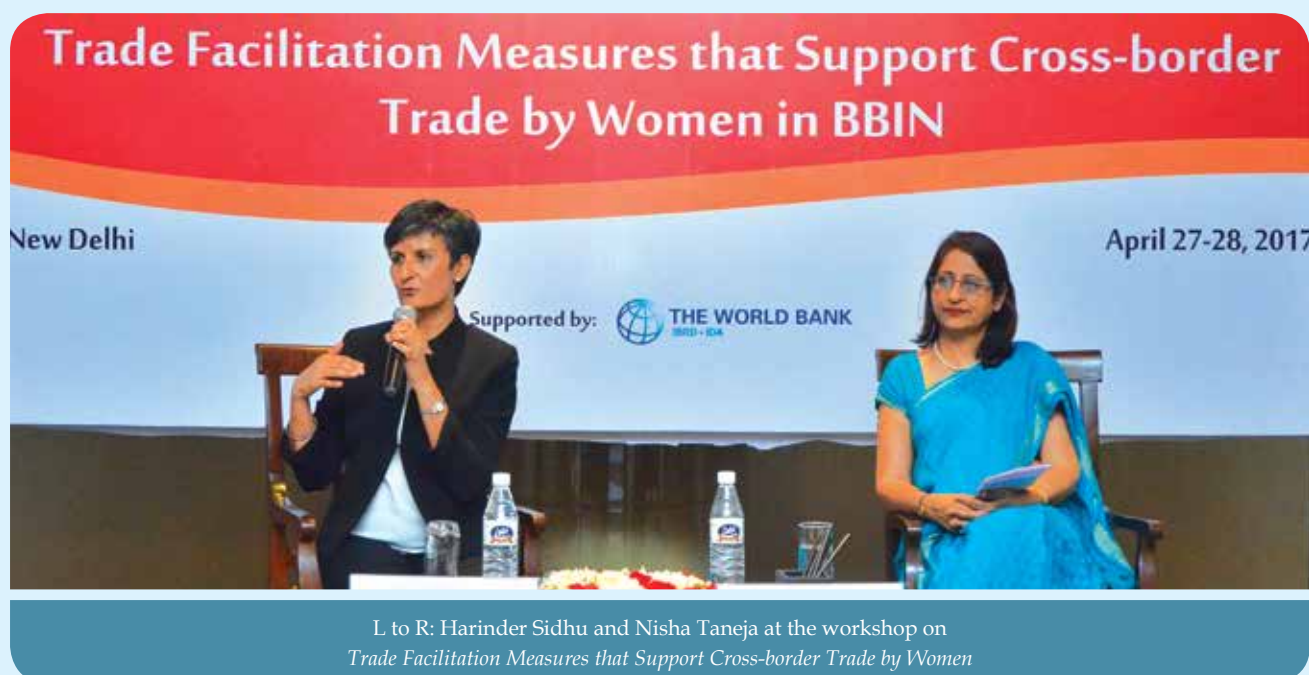


# Workshops



## Trade Facilitation Measures that Support Cross-border Trade by Women

April 27- 28, 2017



The practitioner's workshop on "Trade Facilitation Measures that Support Cross-Border Trade by Women in BBIN" was organised on April 27-28, 2017 at New Delhi, by ICRIER in collaboration with the Department of Foreign Affairs and Trade (DFAT) Australia, The World Bank, and The Asia Foundation (TAF). The workshop brought together government representatives, donor agencies, civil society organisations, and women entrepreneurs from Bangladesh, Bhutan, India, and Nepal (BBIN member countries).

Key highlights of the workshop were the special address by H.E. Harinder Sidhu, Australia's High Commissioner to India and guest remarks by Bhupinder Bhalla, Joint Secretary, Ministry of Commerce, Government of India. Some of the other notable participants included Jim Redden, Adviser, DFAT; Selim Raihan, Executive Director, South Asian Network on Economic Modelling (SANEM), Bangladesh; Reeta Simha, 2<sup>nd</sup> Vice President, Federation of Women Entrepreneurs Association of Nepal; Damchae Dem, Founder and CEO, Bhutan Association of Women Entrepreneurs; Posh Raj Pandey, Executive Chairman, SAWTEE, Nepal; Jesmina Zeliang, Convener, North East, Export Promotion Council for Handicrafts (EPCH); Dolly Khonglah, General Secretary, Meghalaya Exporters Chamber of Commerce; Indrani Deb, Chairperson, FLO North East Chapter; Selima Ahmad, President, Bangladesh Women Chamber of Commerce and Industry (BWCCI); Fahmida Khatun, Executive Director, Centre for Policy Dialogue, Bangladesh; and Mafruha Sultana, Vice Chairman and CEO, Export Promotion Bureau, Bangladesh.

Structured around six sessions the discussions focused on the barriers faced by cross-border women entrepreneurs, identifying enabling measures that support small-medium women entrepreneurs to engage in cross-border trade, sharing potential policy and programming responses to the needs of cross-border women entrepreneurs and barriers to implementing reforms, highlighting opportunities to accommodate gender differentiated trade facilitation needs and impacts, identifying areas for action, and prioritising key actions.

It was noted that in cross-border trade, women traders face more hurdles in addition to those faced in common by all traders. Other issues that were discussed at length included the hurdles faced by women traders in terms of documentary, regulatory and custom procedures. Behavioural issues like gender-based discrimination and harassment were mapped. The challenges to facilitate trade by women, posed by the lack of proper data on the involvement of women in cross-border trade, were also recognised during the workshop. At the end of the workshop, a number of measures to facilitate cross-border trade by women had been identified. Support from the government in imparting gender sensitisation training to customs officials, educating women about customs procedures and raising awareness among women about the opportunities to conduct cross-border trade were some of the solutions that emerged from this workshop.

## India-Japan Partnership for Economic Development in NER

March 29-30, 2017



Shri Sarbananda Sonowal, Hon'ble Chief Minister of Assam, felicitating the delegates of the workshop  
*India-Japan Partnership for Economic Development in NER*

ICRIER organised the 2<sup>nd</sup> workshop on “India-Japan Partnership for Economic Development in NER” on March 29 and 30, 2017, at Kaziranga, Assam, in collaboration with the India Foundation. This workshop was in continuation of the workshop on a similar theme that was organised by ICRIER in January 2016 at Dimapur, Nagaland. The context for this workshop series is the agreement between India and Japan in recent years to co-operate in developing infrastructure in the north eastern region (NER) of India. The objective of these workshops is to bring together senior level representatives from all relevant organisations in both countries to address the challenges in successfully implementing the bilateral partnership as well as brainstorm on the larger long-term vision that could guide this partnership.

This workshop was supported by the Government of Assam; Shri Sarbananda Sonowal, Hon'ble Chief Minister of Assam, delivered the keynote address. The valedictory address was delivered by Shri P B Acharya, Hon'ble Governor of Nagaland. Notable Japanese participants at this workshop included Hideki Asari, Minister (Political), Embassy of Japan in India; So Umezaki, Director, Economic Integration Studies Group, Inter-

disciplinary Studies Center, IDE JETRO; Naoyuki Yoshino, Dean, Asian Development Bank Institute (ADBI); Akio Okamura, Director, Planning Division, South Asia Department, JICA; Hidenobu Fujiwara, JICA Country Officer for India; Takeshi Honjo, Director General, Japan External Trade Organization (JETRO) Mumbai and Shinichi Nakabayashi, Director, ADBI.

In his opening remarks, Hideki Asari, Minister (Political), Embassy of Japan, New Delhi, said that Japan appreciates the importance India attaches to its north-eastern region. He noted that Prime Minister Abe's emphasis on 'free and open Indo-Pacific' has tremendous synergy with Prime Minister Modi's 'Act East Policy', particularly with respect to intra and inter-region connectivity to promote the flow of people and goods and it is in this wider strategic context that the two countries are co-operating in the North East. Mr. Asari said that co-operation in the north-eastern region will contribute to a stronger India, leading to prosperity not only in India but also beyond.

The Hon'ble Chief Minister of Assam, Sarbananda Sonowal, noted that the title of the three sessions in the workshop clearly showed the resurgence of Japan's partnership in the NER and that the India-Japan engagement with focus on development of the NER is going to be on the permanent agenda of the development strategy of the eight states in this region. He pointed out that his government has announced a separate department for Act East Policy and that his vision was "to turn this corridor into the epicentre of the Act East Policy with three Cs as three pillars: communication, commerce and culture." He hoped that Japan would enhance its engagement with this region and gradually expand support for infrastructure development to economic engagement and inflow of investment by Japanese companies.

In his valedictory address, Shri P. B. Acharya, Hon'ble Governor of Nagaland, stressed the need for such workshops and made an emotional appeal to the delegates to have a result oriented focus in the deliberations. He noted that the region has abundant natural resources the resources, human power, and stability and emphasised that with all these things, it can march ahead with a strong partnership with Japan, a close friend of India.

## **Stakeholder Consultation on Drug Serialisation and Traceability in India**

**March 3, 2017**

India's role as a leader in the global pharmaceutical market carries with it the responsibility to collaborate with global stakeholders to help ensure the security of the global pharmaceutical supply chain. To address some of these issues, ICRIER, in collaboration with RxGPS, Washington DC, hosted a stakeholder consultation on pharmaceutical serialisation and traceability in India. It was attended by more than 60 representatives from Indian and global pharmaceutical companies (including the Indian Drug Manufacturers' Association), patient and public health advocates (including Partnership for Safe Medicines India and the World Health Organization), global regulatory authorities (including the US Food and Drug Administration and the US Department of Commerce), and Indian regulators (including the Central Drugs Standard Control Organization, the National Pharmaceutical Pricing Authority and Pharmexcil).



L to R: Bejon Misra, Susan Winckler and S. Eswara Reddy at the workshop on  
*Drug Serialisation and Traceability in India*

During the meeting, Indian regulators requested that a document to capture industry inputs for their consideration and potential future action be prepared. A number of recommendations to aid India achieve its dual goal of remaining a leader in the global pharmaceutical market and advancing supply chain security for the benefit and protection of patients were discussed. These recommendations, along with the deliberations of the consultation, are contained in a White Paper, which is available on ICRIER's Health Policy Initiative website ([www.icrier-health.org](http://www.icrier-health.org)).





# Special Dialogues



## Conversations on Urbanisation

Cities are integral to India's rapid growth, particularly in its current stage of development. To discuss and identify the key challenges and opportunities for Indian cities and towns as they prepare to deliver a better quality of life and act as engines of growth, ICRIER, in February 2014, jointly with India Habitat Centre (IHC), launched a series of interactive discussions between the IHC membership and eminent experts, titled, 'Conversations on Urbanisation', mostly moderated by Isher Judge Ahluwalia, Chairperson, ICRIER. These are listed below. The following six conversations were organised this year:



Speakers at the various *Conversations on Urbanisation*

## Bio-remediation of Dumpsites

July 24, 2017

The 19<sup>th</sup> Conversation on "Bio-remediation of Dumpsites" on July 24, 2017 was led by Raagini Jaain, founder of Geetanjali Envirotech, an organisation based in Mumbai that organises rag-pickers and unemployed labourers in door-to-door collection of segregated solid waste, composting of organic waste, and sorting the recyclables. Ms Jaain is a national expert on the Government of India's Swachh Bharat Mission. She has over 30 years of experience in recycling of solid waste, sewage treatment, and waste management, and 15 years experience of

working on sanitation and waste management with the Indian Army. Her work has been appreciated widely and has fetched her several laurels including Woman Entrepreneur of the Year 2016 award at the Clean & Green India Conference.

In her field, Ms Jaain has successfully developed a rapid bio-remediation process for waste management that uses naturally occurring organisms to break down hazardous substances into less toxic or non toxic substances. These methods are simple and low cost solutions for reducing garbage hills and permanently reduce the emission of harmful gases and leachate. The organic waste gets composted through the windrow technique while the inorganic materials, once stable, are bio-mined. Ms Jaain introduced this bio-remediation process to the audience through a short film. She highlighted the notable features of the process as including about 40 per cent volume reduction in fresh waste after 4 weeks; time taken for old waste is up to 6 weeks; the proprietary culture used has seven types of different enzymes and microbes that multiply at the rate of 80 times an hour; these microbes thrive on high-fat content and hence are especially effective at treating waste from slaughterhouses; and compost produced is absolutely safe. She currently operates and manages her services in 45 cities across 11 different states in India.

### *Enhancing Energy Efficiency in Urban India*

**April 13, 2017**

The 18<sup>th</sup> Conversation on “Enhancing Energy Efficiency in Urban India” was led by Ajay Mathur, Director General of The Energy and Resources Institute (TERI) and Member, Prime Minister’s Council on Climate Change. Dr. Isher Judge Ahluwalia, Chairperson, ICRIER, moderated the discussion.

Stressing the need to improve energy efficiency using new technologies Dr. Mathur pointed out that there is no dearth of solutions to improve energy efficiency. It is awareness and adoption that are the major problems. Illustrating the efficiency gains and cost effectiveness achieved through popularising LED bulbs, he pointed out that the introduction of efficient versions of existing technologies can critically increase energy efficiency in urban areas. Dr. Mathur cited the example of Visakhapatnam, which used innovative technologies in street lighting to improve energy efficiency and service delivery. According to him, a key element is long-term infrastructure planning, which can bring in large energy efficiency gains. For example, compact cities could make as much as a 15 per cent difference to energy efficiency. With regard to the transport sector, Dr. Mathur pointed out that urban zoning acts as a major constraint in improving energy efficiency. A striking example of the energy gains in urban transportation that could be made through efficient city design is Barcelona. The extended discussion that followed focused on current infrastructural problems and possible solutions.

### *Greening Our Cities*

**February 27, 2017**

The 17<sup>th</sup> Conversation on “Greening our Cities” was initiated by Justice Swatanter Kumar, Chairperson, National Green Tribunal (NGT) on 27<sup>th</sup> February, 2017. Dr. Isher Judge Ahluwalia, Chairperson, ICRIER, moderated the discussion.

Justice Kumar observed that in India there is a tendency to celebrate western approaches to promote environmental consciousness. However, one must recognise that India is bestowed with significant cultural

knowledge and resources that can be used for environmental protection. Reflecting on the constitutional provisions that focus on the environment, he noted that few countries in the world can boast of such provisions. Referring to recent legal pronouncements, Justice Kumar pointed out that the Supreme Court of India has recognised that fundamental right to life includes the right to clean and decent environment. Further, India has developed robust institutional frameworks, such as the National Green Tribunal, which is the only tribunal in the world to have such unique powers to provide 'inexpensive justice on environmental issues.'

According to Justice Kumar, the concept of 'Greening of Cities' should not be confined to sewage and municipal solid waste management; it should also include clean air and clean water, which in fact are the most important resources. He did agree that while there are numerous laws regarding the environment, implementation is tardy and requires collective efforts on the part of government institutions and civil society. For instance, Delhi generates about 14 thousand metric tonnes of waste, which can be disposed of properly only through collective action involving various government departments as well as civil society organisations.

### *An Update on Air Quality of Delhi*

**December 13, 2016**

The 16<sup>th</sup> Conversation on "An Update on Air Quality of Delhi" was led by Dr. Sunita Narain, Director General, Centre for Science and Environment (CSE) on December 13, 2016.

In her remarks, Dr. Narain stressed that air quality in Delhi cannot be improved without a comprehensive approach involving the entire National Capital Region (NCR). Listing road dust, automobile emissions, and domestic and industrial emissions as major sources of pollution in Delhi, she outlined a possible plan to identify heavily polluting vehicles plying on the city's roads and suggested that these should either be phased out or prohibited from entering the city. Expressing concern over the lack of data on air quality in India, Dr. Narain also outlined ways in which good quality, real time data acquisition can be made possible. She pointed that the problem of bad air affects all sections of society in equal measure. To address this menace, therefore, concerted efforts should be made involving people from across society.

### *Internet and Cities: How it's Changing the Way We Live*

**October 20, 2016**

The 15<sup>th</sup> Conversation on "Internet and Cities: How it's Changing the Way We Live" on October 20, 2016, was led by Rajat Kathuria, Director & CE, ICRIER. He pointed out that the Internet was pervasive in cities because of the ubiquity of the smart phone. According to Dr. Kathuria, lower data tariff and increasing willingness of consumers to pay for the convenience of interconnectedness on the demand side and massive price reduction of devices on the supply side have led to a surge in daily activity on the Internet. Even when juxtaposed against the vast populations of India and China, daily records of 207 billion emails, 4.2 billion Google searches and 36 million Amazon purchases are quite staggering. He pointed out that an Indian 'phono sapien' spends an average of three hours on a mobile device, i.e., just two hours less than an average user in the United States. Urban Indian children spend about four hours a day on the Internet, mostly on mobile devices and communication apps such as Facebook and WhatsApp.

He also highlighted the technology-enabled shift from conventional ownership towards a shared model. The emergence and rapid expansion of players like Ola, Uber, OYO rooms and AirBnB indicates the exciting possibility of efficiently matching demand and supply like never before. The internet, while transforming urban interactions on shopping, learning, dating, banking, commuting, travelling and sharing, has the potential to contribute to the compactness of a city and therefore, sustainability. Finally, Dr. Kathuria shared his concerns around India's regulatory preparedness to cope with the massive levels of activity on the Internet. According to him, the longstanding tussle between innovation and regulation, privacy and profits are in sharper focus, making policy formulation more challenging.

### *Health Challenges in Urban India*

**August 5, 2016**

The 14<sup>th</sup> conversation titled "Health Challenges in Urban India" was led by Naresh Trehan, Chairman and MD, Medanta, Gurugram. Focusing on the poor air quality in cities and the resulting ill effects, Dr. Trehan emphatically stated that unless the government and citizens take stringent and determined action, the problem of air pollution and associated health risks would only worsen. Sharing his thoughts on the public and private health infrastructure in India, he pointed out that several improvements in primary health care services are needed to provide a better quality of life to citizens. According to him, patient admissions in hospitals can be reduced by almost 50 per cent if there are good primary health care centres. Dr. Trehan also stressed the need for a bottom-up (grassroots) approach, along with the need for a participatory approach involving private players, NGOs and public health systems to achieve universal health care.



## India-Japan



L to R: Yoichi Nemoto, Rajat Kathuria and Ajay Shankar at the 7<sup>th</sup> ICRIER- PRI Workshop on *Advancing India -Japan Economic Engagement*

ICRIER has been at the forefront of efforts to improve mutual understanding between India and Japan and, since 2007, has emerged as the key centre for regular dialogue among scholars, industry representatives, policy practitioners and media persons on issues relating to Japan and Indo-Japanese relations. In 2010, ICRIER entered into a memorandum of understanding with the Policy Research Institute (PRI), a think tank under the Ministry of Finance, Japan, and since then, the two institutions have been jointly organising an annual workshop to facilitate discussions among experts on subjects relating to India-Japan economic co-operation. The workshop is held alternatively in Tokyo and New Delhi.

The 7<sup>th</sup> ICRIER-PRI Workshop on the theme “Advancing India-Japan Economic Engagement” was held on March 8, 2017, at New Delhi. In his welcome remarks Rajat Kathuria, Director & CE, ICRIER, noted that it was opportune that the 7<sup>th</sup> ICRIER-PRI workshop was taking place in a year that has been officially designated as a year of India-Japan friendly exchanges. He pointed out that in harmony with the strengthening of India-Japan relations in recent years, the ICRIER-PRI workshop provides a wonderful opportunity to reflect upon and discuss comprehensively the economic engagement between the two countries and put forward tangible policy inputs to create an enabling environment for deepening bilateral economic engagement further. The keynote remarks at the workshop were delivered by Ajay Shankar, Former Secretary, Department of Industrial Policy & Promotion (DIPP), Ministry of Commerce. From macro economic trends in the two countries to the reform measures in India to attract foreign direct investment and official development assistance, the workshop discussed the potential for India-Japan co-operation in the context of rising global protectionism. Notable Japanese participants at the workshop included Yoichi Nemoto, President, PRI, Sungyun Kim, President and Managing Partner, Nomura Research Institute India Private Limited, Takema Sakamoto, Chief Representative, JICA India Office, and Shujiro Urata, Professor, Waseda University.

## India-Korea



Participants at the 15<sup>th</sup> Korea-India Dialogue (Seoul)

The India-Korea Dialogue is jointly organised by ICRIER and the Seoul Forum on International Relations (SFIA). Since 1999, this annual dialogue has been organised alternately in New Delhi and Seoul. It is the only regular forum for discussion between experts from the two countries. It brings together scholars, industry representatives, and senior policy practitioners, and is structured around relevant political, economic and strategic issues that India and the Republic of Korea face as members of the dynamic Asian economy and the prospects for greater bilateral co-operation. The recommendations and suggestions emanating from the dialogue are compiled into a joint statement every year that is shared with the foreign ministries of both countries. In recognition of the important role played by the dialogue in strengthening bilateral co-operation, in 2014 it was agreed to elevate the dialogue to track 1.5.

The theme of the 15<sup>th</sup> dialogue held in Seoul on November 18-19, 2016, was "Korea-India Special Strategic Partnership: Responding to Emerging Global and Regional Challenges". The discussion at the 15<sup>th</sup> dialogue was structured into the following sessions: India-Korea strategic co-operation in the new world security order; upgrading India-Korea CEPA to realise its full potential; bilateral strategic co-operation in defence industries; India-Korea collaboration in energy; rising income inequality and SME's capacity building; and enhancing cultural and education exchange between India and Korea.

CHOI Arjuna Jong-moon, Deputy Minister for Multilateral and Global Affairs, Ministry of Foreign Affairs, Korea, and Vikram Doraiswami, Ambassador of India to Korea, addressed the dialogue participants. Notable participants from Korea included AHN Choong Yong Chairman, Korea Commission for Corporate Partnership; CHAE Wook, Professor, Kyung Hee University and former President, Korea Institute for International Economic Policy; HA Bong-Soo, Executive Vice-President and Chief Global Business Officer, Korea Electric Power Corporation (KEPCO); JUNG Ku-Hyun, President, Seoul Forum for International Affairs; LEE Hong Koo, former Prime Minister ROK and Chairman, The Seoul Forum for International Affairs; LEE KyungTae, Chief Editor, Korea Observer; and PAK Yongduk Managing Director, International Energy Cooperation Group, Korea Energy Economics Institute (KEEI).



## India-China



Participants at the India-China Dialogue (Beijing)

Two of the world's biggest economies, China and India, are at critical turning points. Both countries will see an unprecedented scale and pace of change, thanks to rapid industrialisation and urbanisation. Both countries are also facing common and ongoing challenges because of congestion, severe air pollution and a high dependence on energy imports. And for both, there are opportunities to manage these rapid changes while also delivering strong economic growth. In March 2017, ICRIER, in collaboration with Tsinghua University and New Climate Economy (NCE), the flagship initiative of the Global Commission on the Economy and Climate, initiated a dialogue around shared challenges and opportunities for climate action between India and China that will boost economic growth and inclusive development.

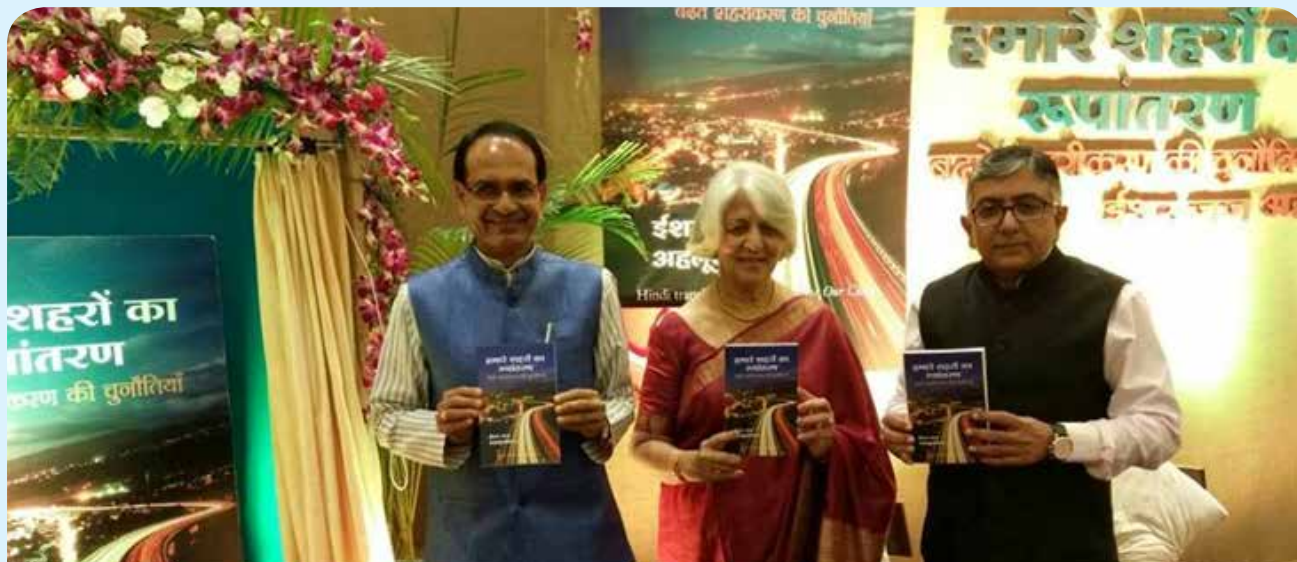
The first Dialogue was convened at Tsinghua University in Beijing on March 16-17, 2017. The Chinese and Indian delegations – headed respectively by Liu Yuanhua, Chairman of the Chinese National Expert Committee on Climate Change and Shyam Saran, Former Indian Foreign Secretary – held a productive dialogue around shared challenges and opportunities for climate action that will boost economic growth and inclusive development. The delegations agreed to meet annually, with the second dialogue to take place on January 28-30, 2018 in New Delhi, with four specific work streams – finance, energy, climate change and growth, and South-South co-operation – to be pursued through targeted collaborative and individual analysis in the lead up to the dialogue.



# **Books / Reports Releases**

## Transforming our Cities

July 25, 2017



L to R: Hon'ble Chief Minister of Madhya Pradesh Shri Shivraj Singh Chouhan, Isher Judge Ahluwalia and Vikas Rakheja at the release of the book हमारे शहरों का रूपांतरण

The book, 'Transforming our Cities' by Isher Judge Ahluwalia was translated in Hindi by Bharti Pandit and Pramod Joshi as 'हमारे शहरों का रूपांतरण' and published by Manjul Publishing House. The book launch event was organised by the Dainik Bhaskar Group at Bhopal in July 2017.

## Scaling up Rooftop Solar Power in India: The Potential of Municipal Solar Bonds

June 21, 2017

The report, 'Scaling up Rooftop Solar Power in India: The Potential of Municipal Solar Bonds', was released on June 21, 2017. The report, a collaborative effort between ICRIER, Stockholm Environment Institute (SEI) and Climate Policy Initiative (CPI), explores the role of municipal bonds in financing renewable energy expansion, particularly rooftop solar systems, in India. It also illustrates the feasibility of financing solar rooftop systems through municipal bonds by looking at two separate urban contexts in India – Surat and NDMC.

Delivering the keynote address, Ashok Lavasa, Finance Secretary, Ministry of Finance, Government of India, remarked that the study comes at an opportune moment, coinciding with the revival of the municipal bond market in India. He pointed out that although renewable energy has grown significantly in recent years, rooftop solar is yet to catch on in a big way. Delivering a special address, Sharmila Chavaly, Joint Secretary (I&E), Department of Economic Affairs, Ministry of Finance, spoke about the process of municipal bond revival that the ministry is undertaking. Explaining the various models that could be used by urban local bodies to access the capital market, Ms. Chavaly highlighted the need to promote the engagement of cities with the capital market to finance infrastructure needs.



Authors and panellists at the release of the report  
*Scaling up Rooftop Solar Power in India: The Potential of Municipal Solar Bonds*

The report release was followed by a presentation of the key findings and a panel discussion. The panel discussion was chaired by Gireesh Shrimali, Director, CPI India, and key speakers included Geetali Tare, Financial Advisor, New Delhi Municipal Council (NDMC), Alekhya Datta, Fellow, TERI, and Manish Pathak, Assistant Vice President, ICRA Ltd. The speakers discussed the ongoing efforts by urban local bodies to promote municipal bonds and challenges to rooftop solar deployment. It was pointed out that municipal bonds are a welcome break from the traditional models of financing and would force municipal governments to improve their financial discipline, accounting standards and project management efficiency. Rooftop solar deployment in the country is also constrained by the lack of availability of low-cost debt finance. Given the ambitious intended nationally determined contributions (INDC) targets, India needs to expand this segment rapidly, while attracting a significant amount of investment. The report, bringing together the potential of municipal bonds and need for cheaper debt capital in the rooftop solar sector, suggests a model where local governments can take the lead role in promoting rooftop solar energy.

## The Sustainable Infrastructure Imperative: Financing for Better Growth and Development

November 30, 2016

The India launch of the 2016 New Climate Economy report 'The Sustainable Infrastructure Imperative: Financing for Better Growth and Development', was held on November 30, 2016. Speaking on the occasion, Naina Lal Kidwai, Chair, Sustainability Council, Federation of Indian Chambers of Commerce and Industry (FICCI) spoke of the challenge of financing sustainable growth, and emphasised the need to develop the case for climate change to attract institutional investments to the renewable energy sector. The panel discussion on 'Imperatives of Low Carbon Growth in India' was chaired by Shyam Saran, former Foreign Secretary, Government of India. He pointed out that India needs a complete shift from its current pattern of fossil fuel-based growth to renewable energies based growth.





L to R: Shyam Saran, Isher Judge Ahluwalia, Nicholas Stern, Naina Lal Kidwai, Arunabha Ghosh and Ajay Mathur at the release of the report *The Sustainable Infrastructure Imperative: Financing for Better Growth and Development*

In his remarks, Ajay Mathur, Director-General, The Energy and Resources Institute (TERI), stated that public policy interventions, such as creating research opportunities for storage possibilities of produced energy, ensuring investment in public transport, and enhancing the efficiency of already existing power stations, are key to attaining energy efficiency in India. Arunabha Ghosh, CEO, Council on Energy, Environment and Water (CEEW), pointed out the need for granularity of policy at an/the industry level and said that regulatory fixes are necessary for promoting sector-wise sustainability.

## Better Cities, Better Growth: India's Urban Opportunity

November 29, 2016

The launch of the New Climate Economy (NCE) report on Indian urbanisation titled, 'Better Cities, Better Growth: India's Urban Opportunity', took place in New Delhi on November 29, 2016. The report has been jointly prepared by ICRIER and World Resources Institute (WRI), in partnership with the University of North Carolina at Chapel Hill and the World Bank.

Throwing new lights on India's urbanisation, the study examines the patterns of urban transformation, and the costs of getting urbanisation wrong, and points to the opportunities for smarter urban growth in India. This report draws on an innovative new combination of night-time lights (satellite) data, with census, environmental and economic data to paint a picture of recent trends in India's urbanisation and the relationships that exist in Indian cities between the type of urban expansion and transport connectivity, and economic performance. The report also draws on case studies undertaken in four Indian cities to provide a more detailed picture of urban service provisions and the costs associated with these.



L to R: Neeraj Mandloi, Isher Judge Ahluwalia, Nicholas Stern, Naina Lal Kidwai and Rajat Kathuria at the release of the report *Better Cities, Better Growth: India's Urban Opportunity*

The keynote address at this event was delivered by Neeraj Mandloi, Joint Secretary, Ministry of Urban Development, Government of India, and was followed by a special address by Lord Nicholas Stern, IG Patel Professor of Economics and Government, London School of Economics and President of the British Academy, and Isher Judge Ahluwalia, Chairperson, ICRIER. An introduction to NCE's work in India was provided by Naina Lal Kidwai, Chair, Sustainability Council, Federation of Indian Chambers of Commerce and Industry (FICCI). The report was presented by Anil Markandya and Nick Godfrey. The panel discussion on the findings of the report was chaired by Aniruddha Dasgupta, Global Director, WRI Ross Center for Sustainable Cities. The speakers at the event pointed out that challenges related to governance and finance are the biggest bottlenecks faced in the smart urbanisation process in India.

## South Asia's Turn: Policies to Boost Competitiveness and Create the Next Export Powerhouse

**November 10, 2016**

A seminar was organised by ICRIER in collaboration with the World Bank on November 10, 2016, in New Delhi to release the report 'South Asia's Turn: Policies to Boost Competitiveness and Create the Next Export Powerhouse'. The report edited by Gladys Lopez-Acevedo, Denis Medvedev and Vincent Palmade, highlights features of the South Asian region that could enable it to turn into an export powerhouse, create jobs, reduce poverty and boost shared prosperity. Speaking on the occasion, Amitabh Kant, CEO, NITI Aayog, pointed out that the consistent growth required to alleviate poverty is not possible without penetrating global markets, which requires firms to be competitive. He talked of five important initiatives that needed to be undertaken to make firms competitive. These were ease of doing business, integration in the global supply chain, innovation, cluster industrial development and productivity growth. In his remarks, Junaid Kamal Ahmad, Country Director, World Bank, reiterated his belief in the importance of trade and competitiveness in alleviating poverty in South Asia.





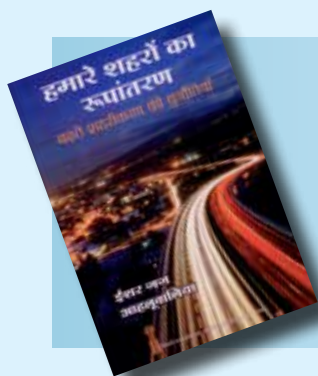
L to R: Rajat Kathuria, Junaid Kamal Ahmad, Amitabh Kant, Denis Medvedev and Vincent Palmade at the release of the report *South Asia's Turn: Policies to Boost Competitiveness and Create the Next Export Powerhouse*

The report release was followed by a panel discussion chaired by Anabel Gonzalez, Senior Director, Trade and Competitiveness, World Bank. The panellists included Saon Ray, Senior Fellow, ICRIER, Deepak Bhardwaj, Vice President, Samsung, Anup Wadhawan, Additional Secretary, Ministry of Commerce & Industry, Ajit Keshav Ranade, Chief Economist, Aditya Birla Group, and Harsha Singh, Executive Director, Brookings. The discussion emphasised that the policy structure in place must be granular, continuously updated and should address sector-specific problems while keeping global factors in perspective. In order to create jobs in organised manufacturing, there is a need to understand the life cycle of firms so that entrepreneurship could be encouraged.



# **Publications**

## Books



### हमारे शहरों का रूपांतरण

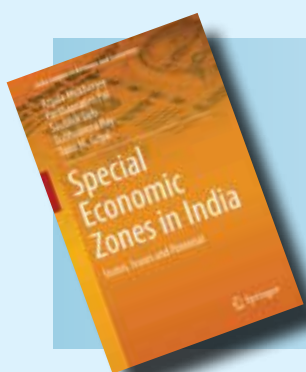
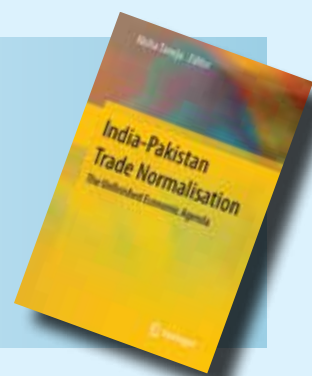
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मंजुल पब्लिशिंग हाउस, 2017, 248 पृष्ठ

### India-Pakistan Trade Normalisation: the Unfinished Economic Agenda

edited by Nisha Taneja and Isha Dayal

Springer, 2017, 390 pages



### Special Economic Zones in India: Status, Issues and Potential

by Arpita Mukherjee, Parthapratim Pal, Saubhik Deb,  
Subhobrota Ray and Tanu M. Goyal

Springer, 2016, 254 pages

### Global Economic Cooperation: Views from G20 Countries

edited by Rajat Kathuria and Neetika Kaushal Nagpal

Springer, 2016, 265 pages



### Challenges of Indian Tax Administration

edited by Rajiva Ranjan Singh

LexisNexis, 2016, 709 pages

## Reports

### **Getting Punjab Agriculture Back on High Growth Path: Sources, Drivers and Policy Lessons**

by Ashok Gulati, Ranjana Roy and Siraj Hussain  
ICRIER, June 2017, 68 pages



### **Scaling up Rooftop Solar Power in India: The Potential of Municipal Solar Bonds**

by Indro Ray, Saurabh Trivedi, Gregor Vulturius, Amrita Goldar,  
Sandeep Paul, Labanya P. Jena and Aarsi Sagar  
SEI, ICRIER and CPI, June 2017, 48 pages



### **Challenges and Prospects for Clinical Trials in India: A Regulatory Perspective**

by Ali Mehdi, Rahul Mongia, Deepmala Pokhriyal and Seema Rao  
Academic Foundation, April 2017, 88 pages

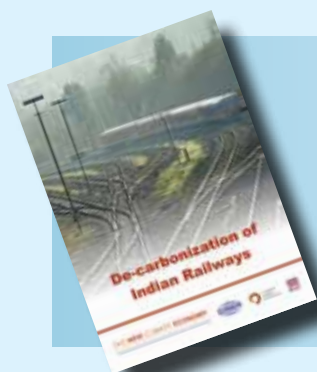


### **International Cooperation for Registration of Medicines: Opportunities for India**

by Vasudha Wattal, Pallavi Joshi, Aashna Arora and Ali Mehdi  
Academic Foundation, April 2017, 84 pages



## Reports



### **De-carbonization of Indian Railways**

by Saon Ray, Kuntala Bandyopadhyay and T. S. Ramakrishnan  
ICRIER, WRI and NCE, July 2016, 123 pages

### **Better Cities Better Growth: India's Urban Opportunity: Synthesis Paper for Policy Makers**

ICRIER, WRI, NCE and Coalition for Urban Transitions  
July 2016, 76 pages



### **Quantifying the Value of an Open Internet for India**

by Rajat Kathuria, Mansi Kedia, Vatsala Shreeti and Parnil Urdhwareshe  
ICRIER, July 2016, 53 pages

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- WP No. 339. Ashok Gulati, Pallavi Rajkhowa and Pravesh Sharma, "Making Rapid Strides-Agriculture in Madhya Pradesh: Sources, Drivers, and Policy Lessons", April 2017
- WP No. 338. Jaimini Bhagwati, M. Shuheb Khan and Ramakrishna Reddy Bogathi, "Can Asset Reconstruction Companies (ARCs) be Part Solution to the Indian Debt Problem?", April 2017
- WP No. 337. Anwarul Hoda, Pallavi Rajkhowa and Ashok Gulati, "Transforming Agriculture in Odisha: Sources and Drivers of Agriculture Growth", March 2017
- WP No. 336. Anwarul Hoda, Pallavi Rajkhowa and Ashok Gulati, "Unleashing Bihar's Agriculture Potential: Sources and Drivers of Agriculture Growth", March 2017
- WP No. 335. Smriti Verma, Ashok Gulati and Siraj Hussain, "Doubling Agricultural Growth in Uttar Pradesh: Sources and Drivers of Agricultural Growth and Policy Lessons", March 2017
- WP No. 334. Pankaj Vashisht, "Destruction or Polarization: Estimating the Impact of Technology on Jobs in Indian Manufacturing", March 2017
- WP No. 333. Nisha Taneja, Samridhi Bimal, Isha Dayal and Taher Nadeem, "India-Pakistan Trade: Opportunities for Medical Value Travel", March 2017
- WP No. 332. Bishwanath Goldar, Deb Kusum Das, Sreerupa Sengupta and Pihu Chandra Das, "Domestic Value Addition and Foreign Content: An Analysis of India's Exports from 1995 to 2011", January 2017
- WP No. 331. Anwarul Hoda and Durgesh K. Rai, "Labour Regulations in India: Improving the Social Security Framework", January 2017
- WP No. 330. Jaivir Singh, Deb Kusum Das, Homagni Choudhury and Prateek Kukreja, "Law, Skills and the Creation of Jobs as 'Contract' Work in India: Exploring Survey Data to Make Inferences for Labour Law Reform", September 2016
- WP No. 329. Ashok Gulati, Stuti Manchanda and Rakesh Kacker, "Harvesting Solar Power in India!", August 2016
- WP No. 328. Montek Singh Ahluwalia, Himanshu Gupta and Nicholas Stern, "A More Sustainable Energy Strategy for India", July 2016
- WP No. 327. Nisha Taneja, Samridhi Bimal and Isha Dayal, "India's Informal Trade with Pakistan", July 2016
- WP No. 326. Nisha Taneja, Saon Ray and Devyani Pande, "India - Pakistan Trade: Textiles and Clothing", June 2016
- WP No. 325. Rajiva Ranjan Singh, "Improving Taxation Environment: Attracting Foreign Direct Investment", June 2016



- WP No. 324. Jaimini Bhagwati, M. Shuheeb Khan and Ramakrishna Reddy Bogathi, "Financial Sector Legislative Reforms Commission (FSLRC) & Financial Sector Regulation in India", June 2016
- WP No. 323. Mihir Shah, "Urban Water Systems in India: A Way Forward", May 2016
- WP No. 322. Udaya S. Mishra, S. Irudaya Rajan, William Joe and Ali Mehdi, "Surveillance of Chronic Diseases: Challenges and Strategies for India", May 2016
- WP No. 321. Ali Mehdi, Divya Chaudhry, Priyanka Tomar and Pallavi Joshi, "Prevention of Chronic Diseases: Reorienting Primary Health Systems in India", May 2016
- WP No. 320. Saon Ray and Smita Miglani, "Innovation (and Upgrading) in the Automobile Industry: The Case of India", May 2016
- WP No. 319. Kuntala Bandyopadhyay, "The Impact of Global Labour Standards on Export Performance", May 2016
- WP No. 318. Nisha Taneja, Isha Dayal and Samridhi Bimal, "Facilitating India-Pakistan Trade through the Land Route", May 2016

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- Ali Mehdi, Rahul Mongia, Deepmala Pokhriyal and Seema Rao, "Challenges and Prospects for Clinical Trials in India: A Regulatory Perspective", HPI Policy Brief 6, May 2017
- Ali Mehdi, Vasudha Wattal, Pallavi Joshi and Aashna Arora, "International Cooperation for Registration of Medicines: Opportunities for India", HPI Policy Brief 5, May 2017
- Udaya S. Mishra, S. Irudaya Rajan, William Joe and Ali Mehdi, "Surveillance of Chronic Diseases Challenges and Strategies for India", HPI Policy Brief 4, May 2016
- Ali Mehdi, Divya Chaudhry, Priyanka Tomar and Pallavi Joshi, "Prevention of Chronic Diseases: Reorienting Primary Health Systems in India", HPI Policy Brief 3, May 2016

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- Department of Foreign Affairs & Trade (DFAT), Government of Australia
- Economic Research Institute for ASEAN and East Asia (ERIA)
- Embassy of Japan, New Delhi
- Ford Foundation
- HT Media Ltd.
- Housing and Urban Development Corporation Ltd. (HUDCO)
- London School of Economics (LSE)
- IDFC Foundation
- IPE Global Limited
- International Bank for Reconstruction and Development (IBRD)
- International Monetary Fund (IMF)
- Leavitt Partners
- Ministry of Commerce and Industry, Government of India
- Ministry of External Affairs, Government of India
- Monsanto Holdings (P) Ltd.
- National Bank for Agriculture and Rural Development (NABARD)
- NCDEX Investor (Clients) Protection Fund Trust
- Organisation for Economic Co-operation and Development (OECD)
- Oxford Policy Management (OPM)
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- Tata Education and Development Trust
- The Asia Foundation
- Toshiba International Foundation (TIFO)
- United States Institute of Peace (USIP)
- World Bank
- World Health Organization (WHO)
- World Resources Institute (WRI)
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Mr. Ramakrishna Reddy Bogathi  
Ms. Surbhi Ghai  
Ms. Vrinda Gupta  
Ms. Sajal Jain  
Ms. Avantika Kapoor  
Mr. Abhishek Kumar  
Ms. Manasi Lohumi  
Ms. Stuti Manchanda  
Ms. Disha Mendiratta  
Mr. Rohin Nautiyal  
Mr. Taher Nadeem  
Mr. Sandeep Paul  
Mr. Utkarsh Patel  
Ms. Priyanka Tomar  
Ms. Anisha Samantara  
Ms. Richa Sekhani  
Mr. Sameedh Sharma  
Ms. Serene Vaid

## Administration

### Secretary

Mr. Rajeev Kapil

### Senior Manager (Admin. & Events)

Mr. Manmeet Ahuja

### IT Manager

Mr. Raj Kumar Shahi

### Senior Accounts Executive

Mr. Prabhat Kumar

### Accounts Executive

Mr. Rishi Kumar

### Account Assistant

Mr. Ram Kumar

### Library cum Doc. Officer

Ms. Chhaya Singh

### Private Secretaries

Mr. Rahul Arora  
Ms. Christina Das  
Mr. Anu Mohandas  
Ms. Priti Rajput  
Mr. Rajinder Singh Rawat  
Mr. M. Janardhan Reddy

### Consultants

Ms. Uma Joshi  
Ms. Hilda Kathuria

### Office Assistants

Ms. Sonia Chopra  
Mr. Sharad Natha Jha  
Mr. Krishan Kumar  
Ms. Aric Mary  
Ms. Neha Saini

### Jr. Office Assistant

Mr. Rajesh Chaudhary

### Reprographic Attendant

Mr. Pherum Singh

### Driver

Mr. Ashok Kumar Singh

### Senior Office Attendants

Mr. Ajay Pal  
Mr. R. M. Yadav  
Mr. Jovinder

### Library Attendant

Mr. Deepak

### Office Attendant

Mr. Jeet Singh



## External Consultants

### Homagni Choudhury

Aberystwyth University  
Ceredigion, UK

### Michelle Chow

Consultant, Wealth Planning and Tax  
Withers, Hong Kong

### Noshir Dadrawala

CEO, Centre for Advancement of Philanthropy  
Mumbai

### Deb Kusum Das

Associate Professor, University of Delhi  
Delhi, India

### Andrew Guinn

Researcher, University of North Carolina  
Chapel Hill

### Yamini Gupta

Assistant Professor, University of Delhi  
Delhi, India

### Siraj Hussain

Former Secretary  
Ministry of Agriculture, Government of India  
Delhi, India

### Renu Kohli

Independent Consultant  
Delhi, India

### Anil Markandya

Former Scientific Director/ Distinguished  
Ikerbasque Professor  
Basque Centre for Climate Change  
Basque, Spain

### Udaya Mishra

Professor, Centre for Development Studies  
Thiruvananthapuram, Kerala, India

### T. S. Ramakrishnan

Associate Professor, T A Pai Management Institute  
Manipal, Karnataka, India

### Irudaya Rajan

Professor, Centre for Development Studies  
Thiruvananthapuram, Kerala, India

### Seema Rao

Advocate  
Supreme Court of India and Delhi High Court  
New Delhi

### Pravakar Sahoo

Professor, Institute of Economic Growth  
Delhi

### Jaivir Singh

Professor, Centre for the Study of Law and  
Governance, Jawaharlal Nehru University  
New Delhi

### Bharat R. Sharma

Scientist Emeritus  
International Water Management Institute  
Delhi, India

### Pravesh Sharma

Co-founder and CEO  
Sabziwala.com, Greater Kailash-1  
Delhi, India

### Meenu Tewari

Professor, University of North Carolina at  
Chapel Hill, USA



# Faculty Activities



DIRECTOR & CHIEF EXECUTIVE

**RAJAT KATHURIA**

### Appointed

- Member of the Implementation Committee for Intended Nationality Determined Contribution (INDC), Ministry of Environment, Forest & Climate Change, June 2016
- Member of Confederation of India Industry (CII) Committee on International Trade Policy and Exports 2016- 2017

### International Conferences / Seminars / Workshops

- Participant, “Circular Economy: Solutions to Societal Challenges”, Government of Flanders, Flanders, April 24-28, 2017
- Speaker, “Urbanisation”, China-India Dialogue, The New Climate Economy, organised by Tsinghua University and ICRIER, Beijing, March 16-18, 2017
- Dinner talk, “India’s Growth Challenge” at “15<sup>th</sup> India-Korea Dialogue: The Korea-India Special Strategic Partnership: Responding to Emerging Global and Regional Challenges”, organised by Seoul Forum and ICRIER, Seoul, November 18, 2016
- Speaker, session on “Rising Income Inequality and Capacity Building” at “15<sup>th</sup> India-Korea Dialogue: The Korea-India Special Strategic Partnership: Responding to Emerging Global and Regional Challenges”, organised by Seoul Forum and ICRIER, Seoul, November 19, 2016
- Chair, plenary session on “Technology and Labour Adjustment” at “Jobs & Development Conference”, organised by World Bank, Washington DC, November 2-3, 2016
- Speaker, “India’s Structural Transformation” at the “Inaugural New Climate Economy Summit”, New Climate Economy, London, June 28-30, 2016
- Speaker, International Think Tank 20 Conference on “The 2030 Agenda and Pathways to Sustainable Development”, German Development Institute/Deutsches Institut für Entwicklungspolitik (DIE) and the Kiel Institute for the World Economy (IFW), Berlin, May 10-14, 2016

### National Conferences / Seminars / Workshops

- Panellist, “Annual Research Conference of Department of Economic and Policy Research (DEPR)”, organised by Reserve Bank of India, Kerala, June 22-23, 2017
- Speaker, “Disruptive Technologies and the Future of Work in India” at “2<sup>nd</sup> Indian Think Tank Forum”, organised by Observer Research Foundation, New Delhi, June 19-21, 2017
- Lecture on “Trade and Industrialisation Policy in India” at Summer School on International Trade Theory and Practices, RIS-Exim Bank, New Delhi, June 20, 2017
- Speaker, “Jobs, Ease of Business and Entrepreneurship”, Lal Bahadur Shastri National Academy of Administration, Mussoorie, June 12-14, 2017
- Panellist, session on “Demonetization: The Indian Experience” in “The Asian Undergraduate Summit”, organised by Hindu College and National University of Singapore, New Delhi, June 5-9, 2017
- Speaker, “Growth and Climate: Friends and Foes”, The International Centre, Goa, May 5, 2017
- Speaker, “GCI Digital Literacy Practicum”, US Embassy, New Delhi, April 19, 2017
- Presentation, “Trade Facilitation in Services: Supply of Services through Commercial” at workshop on “Trade Facilitation in Services”, organised by World Bank and Ministry of Commerce, New Delhi, March 23-24, 2017

- Participant, “Advancing Indo-Japan Economic Engagement”, organised by ICRIER and PRI, March 8, 2017
- Speaker, “Jobs and Economic Growth” in “Transforming India 2030: Strategies for Sustainable Development Goals”, jointly organised by Symbiosis International University, UN Information Centre for India and Bhutan, NITI Aayog and RIS, Pune, February 15-17, 2017
- Speaker, “Competition Challenges in the Digital Economy/Platform Markets”, in international conference on “Competition Regulation and Competitiveness, Shaping Tomorrow”, New Delhi February 10-11, 2017
- Co-chaired, plenary session on “International Congress on Green Urban Futures : Mountain and the City”, Urban Futures and Centre for Urban Green Spaces, New Delhi, February 9-10, 2017
- Speaker, “The Union Budget 2017-18: Reforms and Development Perspectives”, jointly organised by CPR, CRIER, ID, NCAER and NIPFP, New Delhi, February 4, 2017
- Speaker, Post Budget Discussion on “India’s growth paradigm in the light of recent development”, organised by The Economics Club, International Management Institute, New Delhi, February 3, 2017
- Speaker, “Impact of the Broadband on the Economy”, in the seminar “Brainstorming Broadband: Developing a roadmap for India”, jointly organised by TRAI and NIPFP, New Delhi, January 18, 2017
- Panellist, session on “Digitalization and Economic Development”, in “International Conference on Digital Library”, TERI, December 13-16, 2016
- Speaker, “Economic Development in India”, biannual meet of Swedish companies, Embassy of Sweden, New Delhi, December 13, 2016
- Panellist, “Launch of Research paper on GST for Handset Industry: Incentivising Domestic Handset Manufacturing under GST”, organised by Broadband, India Forum and Ernst & Young, New Delhi, December 12, 2016
- Speaker, in the session “Emerging Global Economic Scenario: Issues for the India Corporate World”, “4<sup>th</sup> Advanced Leadership Programme (ALP)- 2016 : Winning the Corporate Olympiad Leadership Challenges”, organised by National HRD Network, Bangaluru, December 10-16, 2016
- Panellist, session on “Economic Growth and Industrialisation” in workshop on “Job Creation in Manufacturing Sector: Strategy for Sustainable Economic Growth in South Asia”, organised by The Asia Foundation, South Asia Centre for Policy Studies and Research & Information System for Developing Countries, New Delhi, December 5, 2016
- Speaker, “From Voice to Data: The revolution within”, Annual Economics Colloquium – 1<sup>st</sup> Annual Lecture Series 2016-17, Janki Devi Memorial College, New Delhi, September 27, 2016
- 16<sup>th</sup> Annual Retreat Lecture, Association of Finance Professionals of India (AFPI), Varanasi, September 23-24, 2016
- Panellist, session on “The Digital Economy, “Indian Think Tank Dialogue on Rising Powers”, 8<sup>th</sup> BRICS Academic Forum, Observer Research Foundation, Goa, September 19-22, 2016
- Speaker, “BRICS Smart Cities Conclave”, 3<sup>rd</sup> BRICS Urbanisation Forum Meeting, Ministry of Urban Development, Government of India in consultation with the Ministry of External Affairs, Visakhapatnam, September 14-16, 2016
- Speaker, “Regulatory Environment in India and Tariff Fixation Issues”, Foreign Service Institute, New Delhi, September 9, 2016
- Speaker, Advanced Professional Programme in Public Administration, Indian Institute of Public Administration, New Delhi, August 8, 2016

- Panellist, session on “Sustainable Development Goals: Role for Smart City – Smart Villages” at “Stakeholder Consultation on Smart Cities-Smart Villages”, University of Cambridge, Kronstadt Indus, Neeti Foundation and Smart Villages, Ranchi, August 3, 2016
- Speaker, session on “Business and Economics” at roundtable discussion on “Transforming Uttar Pradesh”, Hardnews Magazine and Fredrich Ebert Stiftung, Lucknow, July 28, 2016
- Speaker at D&B’s Release of Publication “Manufacturing India 2025”, Dun & Bradstreet, New Delhi, July 12, 2016
- Speaker, “Policy Talk: Food-Water-Energy Nexus and Connectivity” in Knowledge Forum on Climate Resilient Development in Himalayan and Downstream Regions, Ministry of Agriculture and Farmers Welfare, International Centre for Integrated Mountain Development, Kathmandu and Institute of Economic Growth, New Delhi, June 16-17, 2016
- Chief Guest and Inaugural Address at “International Programme in Management for Executives (IPMX)”, IIM-Lucknow, Noida, April 4, 2016
- Speaker, “Development and Urban Spaces” at Janki Devi College, New Delhi, April 1, 2016

## Publications

### Books / Reports / Chapters in Books

- “A Study on the Financial Health of India’s Telecom Sector”, with Mansi Kedia and Parnil Urdhwareshe, combined study by COAI and ICRIER, New Delhi, April 2017
- “Quantifying the Value of an Open Internet for India”, with Mansi Kedia, Vatsala Shreeti and Parnil Urdhwareshe, ICRIER, July 2016

### Papers in Referred Journals

- “Infrastructure and Connectivity in India: Getting the Basics Right”, with Purva Singh in *Asian Economic Policy Review*, issue no. 2, vol. no. 11, July 2016
- “Growth? Yes, but India Must Do More for Those Left Behind”, in *Global Asia*, issue no. 38, vol. 11, June 2016

### Working Papers / Policy Briefs

- The Status of Financial Inclusion, Regulation and Education in India”, with Abheek Barua and Neha Malik, Asian Development Bank Institute (ADB) working paper series, no. 568, April 2016

HONORARY PROFESSOR

**SHANKAR ACHARYA**

### Appointed

- Chairman, Committee on Change of Financial Year. The Government of India appointed the Committee in July 2016 and the Committee duly submitted its report in December 2016.

### National Conferences / Seminars / Workshops

- Chaired the session on “Global Economic Growth and Policy Coordination” at Conference on Re-imagining Globalisation : Views from G20 countries, organised by ICRIER, Delhi, June 8, 2017
- Chaired the session on “Macro-Economic Trends in India and Japan” at 7<sup>th</sup> ICRIER-PRI workshop on Advancing India-Japan Economic Engagement, organised by ICRIER- PRI , Delhi, March 8, 2017

- Speaker, session on “The Global Economy: Opportunities and challenges” in the 2<sup>nd</sup> NITI Aayog – DRC dialogue, organised by NITI Aayog, Delhi, November 15, 2016
- Chaired the session on “Effectiveness of G20” in Revitalizing global economic growth : Views from G20 Countries, organised by ICRIER , Delhi, August 9, 2016
- Speaker, session on “Restoring higher growth in Emerging Markets” in the Growth Net 4<sup>th</sup> Annual Meeting organised by Confederation of Indian Industry, Delhi, April 8, 2016

## PROFESSORS

### ***JAIMINI BHAGWATI***

#### **National Conferences / Seminars / Workshops**

- Chaired the session on “Evaluating Global Financial Architecture and Regulatory Practices – Progress and Way Forward” at “9<sup>th</sup> Annual International G20 Conference Re-imagining Globalisation: Views from G20 countries”, organised by ICRIER, New Delhi, June 8-9, 2017
- Lecture on “Employment Opportunities for the Youth of Assam”, event organised by Cotton College, Guwahati, May 27, 2017
- Discussant, “Roundtable Discussion on Trumps’ 100 Days in Office and Implications for India”, organised by FSI-KAS, New Delhi, May 11, 2017
- Speaker, “Cross Border Insolvency” at an interactive session, organised by Insolvency and Bankruptcy Board of India, New Delhi, May 10, 2017
- Participant, “Second Meeting of the CII Expert Group on International Trade Policy 2016-17”, CII, New Delhi, March 29, 2017
- Chaired, a talk on “Three Forces Converging on Financial Services”, ICRIER, New Delhi, March 27, 2017
- Speaker, seminar on “Reassessing the Impact of Demonetization on Agriculture and Informal Sector: the Right Way to Study Data and Early Leads from the States’ ”, organised by India Development Foundation (IDF), New Delhi, January 24, 2017
- Discussant, “Post Demonetization Budget : A PIF Roundtable” organised by Pahle India Foundation (PIF), New Delhi, January 10, 2017
- Speaker, roundtable discussion on “Reforms and Governance in India” at ASSOCHAM, December 20, 2016
- Discussant, a discussion organised by Friedrich-Ebert-Stiftung with German Delegation led by Thuringia State Secretary Mr. Georg Maier, new Delhi, November 26, 2016
- Lecture on “Is the Financial Sector a Giant Vampire Squid Wrapped Around the Face of Humanity?” at a meeting of the Association of Indian Diplomats, New Delhi, November 24, 2016
- Speaker, workshop on “Doing Good: Assessing the Environment for the Giving and Receiving of Charity in Asia” organised by ICRIER, New Delhi, November 15, 2016
- Speaker, session on “BBL for the Internal Launch of Bangladesh Diagnostic Trade Integration Study (DTIS)”, New Delhi, November 7, 2016
- Speaker, session on “EU India Policy Dialogue on Global Governance and Security”, at a roundtable discussion on “India-EU Collaboration”, organised by Carnegie Endowment for International Peace – India, New Delhi, November 3, 2016

- Speaker, “Interface between the Legislators and the Assamese Diaspora in Promoting Assam Abroad” at a conference “Sabal Bidhayak – A series of Orientation Programmes”, organised by The Assam Legislative Assembly, Guwahati, October 3, 2016
- Keynote Speaker, “MLA as an Agent for Change and Development In Assam” at Assam Assembly-Workshop, Guwahati, October 2, 2016
- Chaired the session on “Financial Stability and Regulatory Architecture” at “8<sup>th</sup> Annual G20 conference”, New Delhi, August 09, 2016
- Speaker, discussion on “Act East by Northeast” organised by Brookings India, New Delhi, August 23, 2016
- Participant, discussion on the book “Who Moved My Interest Rate? Leading the Reserve Bank of India through Five Turbulent Years” by Dr. D. Subbarao, organised by Brookings India, New Delhi, August 3, 2016
- Lecture on “Role of Foreign Policy in Extending International Footprint of Indian Business” at IIM Indore, August 3, 2016
- Lecture on “Economic Strategising for Regional and Global Balance: Indo-China and Global Perspective” organised by CDM, Hyderabad, July 22, 2016
- Participant, launch of study on “Enhancing India-Myanmar Border Trade” organised by RIS and Ministry of Commerce and Industry, New Delhi, June 15, 2016
- Speaker, seminar on “India and EU” at the 61<sup>st</sup> Professional Course for Foreign Diplomats (PCFD)”, organised by The Foreign Service Institute (FSI), New Delhi, April 12, 2016

## ASHOK GULATI

### Appointed

- Director on the Central Board of Directors of Reserve Bank of India (RBI) appointed by the Government of India
- Director on the Board of Directors of the National Bank for Agriculture and Rural Development (NABARD)
- Director on the Board of Directors of NCDEX e-Markets Limited (NeML)
- Director on the Board of Directors of the TERI University
- Director on the Board of Directors of the SRIJAN India.
- Member of the Rajasthan Chief Minister’s Task Force for Agriculture
- Member of the CII Expert Group on Economy
- Co-Chair of the Task Force for G-20 on “Ending Hunger in Sustainable Agriculture” (Chair – Joachim von Broun).
- Member of the Program Advisory Committee of Eurasian Center for Food Security (ECFS), Moscow

### International Conferences / Seminars / Workshops

- Presentation on “Exploring India-China Cooperation in Agriculture & Food” at the session Cooperation in Agriculture in the conference “2<sup>nd</sup> India China Think Tank Forum”, organised by the Chinese Academy of Social Sciences (CASS) and Indian Council of World Affairs (ICWA), Beijing, China, June 24, 2017
- Presentation on “Innovations Reshaping Indian Agri-Landscape: Outlook 2017 and beyond” at the session Global perspective on Agriculture in the “ABARES Outlook 2017 Conference”, organised by the Department of Agriculture and Water Resources, Government of Australia, Canberra, March 8, 2017



- Presentation on “Farm Productivity, non-farm job growth and structural transformation” at the International Conference “The Future of Small Farms” organised by the Syngenta Foundation for Sustainable Agriculture in Basel, Switzerland, January 24, 2017
- Keynote Speaker at the session on “Water, Food and Agriculture: Challenges for Farmers and Agribusiness” in the conference of Global Forum for Food and Agriculture, 2017, organised by the Federal Ministry of Food and Agriculture, Berlin, Germany, January 21, 2017
- Presentation on “India Africa: Envisioning – Shared Growth through Innovations in Agri-technology and Institutions” at the Annual Meeting on Program of Accompanying Research for Agricultural Innovation (PARI), Nairobi, Kenya, December 12, 2016
- Presentation on “Policy Effectiveness for Food, Water and Energy Security in South Asia at the Workshop on Policy Challenges in Sustaining Higher Food Production while conserving Water and Energy”, organised by Australian Centre for International Agricultural Research (ACIAR), Canberra, Australia, August 31, 2016
- Presentation on “Innovating to Save on Losses & Wastages in Agri-Value Chains: Global and Indian Experience” at the Session on “From Farm Gate to Fork: Packaging, Transport and Processing” in the Crawford Fund Organisation Annual Conference 2016 on the topic ‘Waste Not, Want Not: The Circular Economy to Food Security’ at Canberra, Australia, August 30, 2016
- Panellist in the Session “Role of Livestock & Horticulture in Inclusive Transformation of Rural Economies” and “Policy Priorities for the Agricultural Sector to Foster Inclusive Rural Transformation” at the workshop “Poverty, Agriculture, and Rural Transformation in India”, organised by the Bill and Melinda Gates Foundation, Seattle, USA, May 17-18, 2016

#### **National Conferences / Seminars / Workshops**

- Presentation on “India’s Water Challenges: what India & Israel can do together to find possible solutions?” in the “Indo-Israel Brainstorming Session on Water and Solar Power”, jointly organised by the Embassy of Israel and ICRIER, New Delhi, May 10, 2017
- Panellist at the “Post Budget Panel Discussion”, organised by the NCDEX, New Delhi, February 02, 2017
- Participated in the inaugural session of “Vibrant Gujarat Summit, 2017”, organised by the Government of Gujarat, Ahmedabad, January 10, 2017
- Presentation at the ITC Lecture on the topic of “State of the Agri-economy and Rural Sector in India and what Lies Ahead”, organised by the ITC, Kolkata, January 07, 2017
- Participated in the “Indo-Israel Agriculture Programme”, organised by the Embassy of Israel in Karnal, Haryana, January 05, 2017
- Plenary speaker at the “IEEE R10 Humanitarian Technology Conference 2016” organised by Dayalbagh Educational Institute (Deemed University), Agra, December 12, 2016
- Keynote Speaker at the Global Rajasthan Agri-Tech Meet (GRAM), 2016 organised by Government of Rajasthan and FICCI, Jaipur, November 09, 2016
- Keynote Speaker at the “India - UK Tech Summit, 2016”, organised by Confederation of Indian Industry, New Delhi, November 08, 2016
- Spoke at “Phase V Mid-Career Training Program of IAS Officers on Agriculture Issues related to Enhancing Productivity, Improving Farm Incomes and Mitigating Rural Distress” at Lal Bahadur Shastri National Academy of Administration (LBSNAA), Mussoorie, October 04, 2016
- Presentation at the “Policy level Dialogue/BMGF Round Table Discussion”, organised by the Bill and Melinda Gates Foundation, Bhubaneswar, September 29, 2016



- Participated at the “Task Force Meeting” with the Chief Minister of Madhya Pradesh organised by the Department of Farmer Welfare and Agriculture Development, Government of Madhya Pradesh, September 24, 2016
- Discussion on “Pulses in India” with the Chief Economic Advisor, Ministry of Finance, Government of India, New Delhi, September 9, 2016
- Panellist in the discussion on “Promoting Diversity in Food Systems for Improved Nutritional Outcomes”, organised by the TCI TERINA, New Delhi, August 5, 2016
- Chaired the session on “Enabling Environment for Doubling Farmers’ Income at the National Seminar on Doubling of Farmers’ Income by 2022”, on the occasion of NABARD 35<sup>th</sup> Foundation Day at Vigyan Bhawan, New Delhi, July 12, 2016
- Talk on “Disruptions in Agriculture Technology in India”, organised by TedxMDAE, Mumbai, July 6, 2016
- Presentation on “Driving Agriculture Growth and Alleviating Poverty in Eastern India (Uttar Pradesh, Bihar and Odisha)” in the workshop on “Studying Drivers of Agricultural Growth in selected Indian States with Focus on Role of Agricultural Extension Systems”, organised by the ICRIER and Bill and Melinda Gates Foundation, New Delhi, June 17, 2016

## Publications

### Books / Reports / Chapters in Books

- “Fertilizer Subsidies: Which way forward?”, edited with Jikun Huang and Ian Gregory, IFDC / FAI publication, February, 2017
- “Fertilizer Subsidy, Key issues and Policy Options” co-authored with Pritha Banerjee, Chapter No. 22, in C. Ramasamy & K. R. Ashok (Co-ed.), *Vicissitudes of Agriculture in the Fast Growing Indian Economy: Challenges, Strategies and the Way forward*, Academic Foundation, New Delhi, July 2016
- “Food Inflation in India, Diagnosis and Remedies”, co-authored with Shweta Saini, Chapter No. 25, in Uma Kapila (ed). *Indian Economy since Independence*, 27<sup>th</sup> Edition 2016-17, Academic Foundation, New Delhi, October, 2016

### Papers in Refereed Journals

- “Emerging Water Crisis in India: Key Issues and Way Forward”, co-authored with Pritha Banerjee in *Indian Journal of Economics*, vol. xcvi, no. 383, January, 2017

### Working Papers / Policy Briefs

- “Making Rapid Strides- Agriculture in Madhya Pradesh: Sources, Drivers, and Policy Lessons” co-authored with Pallavi Rajkhowa and Pravesh Sharma, ICRIER working paper, no. 339, April, 2017
- “Transforming Agriculture in Odisha: Sources and Drivers of Agriculture Growth” co-authored with Anwarul Hoda and Pallavi Rajkhowa, ICRIER working paper, no. 337, March, 2017
- “Unleashing Bihar’s Agriculture Potential: Sources and Drivers of Agriculture Growth” co-authored with Anwarul Hoda and Pallavi Rajkhowa, ICRIER working paper, no. 336, March, 2017
- “Doubling Agricultural Growth in Uttar Pradesh: Sources and Drivers of Agricultural Growth and Policy Lessons”, co-authored with Smriti Verma and Siraj Hussain, ICRIER working paper, no. 335, March, 2017
- “Harvesting Solar Power in India” co-authored with Stuti Manchanda and Rakesh Kacker, ICRIER working paper, no. 329 also published by Centre for Development Research (ZEF), University of Bonn, Germany under the same title, ZEF working paper, no. 152, August, 2016

## **ANWARUL HODA**

### **International Conferences / Seminars / Workshops**

- Panellist in session on “Possible Content and Shape of Initiative to Facilitate Trade in Services”, at the Workshop on “Trade facilitation in Services”, co-organised by the Department of Commerce, Government of India and the World Bank, New Delhi, March 23, 2017
- Presentation on “Labour Regulations and Growth of Manufacturing and Employment in India: Balancing Protection and Flexibility” in the conference on “Jobs and Development” organised by The World Bank, Washington DC, USA, November 2-3, 2016

### **National Conferences / Seminars / Workshops**

- Chaired, presentation “the Impact of GST on Trade” by Mr. Pravin Krishna, Chung Ju Yung Distinguished Professor of International Economics and Business at Johns Hopkins University and Ms. Eva Van Leemput, Economist at the Board of Governors of the Federal Reserve System, New Delhi, 14 June, 2017
- Chaired, session on “Trade and Investment in an Era of Protectionism” at the 9<sup>th</sup> Annual G20 Conference, New Delhi, June 8-9, 2017
- Gave a talk on “India-Japan Cooperation in the Context of Rising Global Protectionism” at the 7<sup>th</sup> ICRIER-PRI workshop on “Advancing India-Japan Economic Engagement” jointly organised by ICRIER and Policy Research Institute (PRI), Ministry of Finance, Japan, New Delhi, March 8, 2017
- Presentation on “Trade and Investment Barriers Affecting International Production Networks in India” in the workshop on “Integrating South and East Asia: Economics of Regional Integration and Development” organised by ADB-ICRIER, New Delhi, February 17, 2017
- Chaired the meeting to finalize the report of the expert group on “Strengthening of Institutional Mechanism for Regular Collection and Compilation of Data on International Trade in Services” organised by CSO, MoSPI, New Delhi, February 15, 2017
- Chaired and moderated the session on “Need for Reform in Labour Regulations to Stimulate Job Creation in Indian Manufacturing” in the “Round Table Discussion on Job Creation through Labour Reforms in Indian Manufacturing: A Stakeholders’ Perspective”, organised by ICRIER, New Delhi, December 9, 2016
- Chaired the session on “Trade in an Era of Brexitism” at the 8<sup>th</sup> Annual G20 Conference “Revitalizing Global Economic Growth: Views from G20 countries” organised by ICRIER, New Delhi, August 10, 2016

### **Publications**

#### **Working Papers / Policy Briefs**

- “Environment and Labour on the Trade Agenda: Lessons for India from the TPP Agreement”, with Durgesh Rai, ICRIER working paper, no. 340, July 2017
- “Transforming Agriculture in Odisha: Sources and Drivers of Agricultural Growth”, with Pallavi Rajkhowa and Ashok Gulati, ICRIER working paper, no. 337, March 2017
- “Unleashing Bihar’s Agriculture Potential: Sources and Drivers of Agriculture Growth”, with Pallavi Rajkhowa and Ashok Gulati, ICRIER working paper, no. 336, March 2017
- “Labour Regulations and Manufacturing in India: Improving the Social Security Framework”, with Durgesh Rai, ICRIER working paper, no. 331, January 2017

#### **Other Activities**

- Invited by the WTO Secretariat to prepare a revised edition of the earlier publication “Tariff Negotiations and Renegotiations under the GATT and the WTO” (CUP, 2001) to take into account the developments in the WTO up to 2016. This work was completed on 30 June, 2017

**SIRAJ HUSSAIN****International Conferences / Seminars / Workshops**

- Speaker, conference on “Ashwamedh Elara India Dialogue on Indian Economy: Demonetisation – A New Paradigm or Faux Pas in India”, Elara Capital, Singapore, January 11, 2017

**National Conferences / Seminars / Workshops**

- Speaker, round table discussion on “Contract Farming and Land Leasing”, FICCI, New Delhi, June 12, 2017
- Keynote Speaker, conference on “Impact of High GST Rates proposed on processed food items and its impact on agriculture and allied sectors”, All India Food Processors Association, New Delhi, May 30, 2017
- Panellist, Indo-Israel brainstorming session on “Water and Solar Power”, jointly organised by Embassy of Israel and ICRIER, New Delhi, May 10, 2017
- Chaired the session on “Commodity Derivative Markets: How to Deepen and Improve the liquidity”, SEBI International Commodity Derivatives Conference, 2017, Mumbai, February 17, 2017
- Panellist, round table discussion on “Agriculture Marketing Reforms: A Way Forward”, FICCI, New Delhi, January 11, 2017
- Chaired and moderated the session on “Value Addition & Marketing Solutions for the New Age Agriculture” in the Global Rajasthan Agriculture Meet (GRAM), jointly organised by FICCI and Government of Rajasthan, Jaipur, November 10, 2016
- Panellist, dialogue on “Crop Insurance”, FICCI, New Delhi, October 05, 2016

**Publications****Working Papers / Policy Briefs**

- “Doubling Agricultural Growth in Uttar Pradesh: Sources and Drivers of Agricultural Growth and Policy Lessons”, co-authored with Ashok Gulati and Smriti Verma, ICRIER working paper, no. 335, March, 2017

**ARPITA MUKHERJEE****Appointed**

- Member of the Associated Chambers of Commerce of India (ASSOCHAM) Direct Selling Task Force
- Recipient of the Rashtriya Gaurav Award of India International Friendship Society in June 2016
- Member of the Editorial Board of the Journal International Review of Public Administration (IRPA), published by Taylor and Francis Group
- Reviewer of Journal of International Commerce, Economics and Policy, World Scientific, Singapore; Journal of International Business Education (JIBE), Nielson Journals Publishing, Scotland, UK and South Asian Economic Journal (SAEJ), SAGE Journals Publishing in association with Institute of Policy Studies, Sri Lanka and Research and Information System for Developing Countries, India

**International Conferences / Seminars / Workshops**

- Conducted interactive meetings with policy makers in Bhutan on “Organic Policy in Bhutan: Implication for India Bhutan trade”. The meetings were set up by the National Organic Programme, Bhutan from March 12-18, 2017
- Chaired the panel discussion “Trade Agreements and Regional Integration in South Asia” at the 58<sup>th</sup> Annual Convention entitled as ‘Understanding Change in World Politics’, of the International Studies Association (ISA), in Baltimore, USA, February 24, 2017

- Participated in the working group on “South Asia in World Politics” at the ISA Annual Convention, Baltimore, USA, February 21, 2017
- Conducted interactive meetings with policy makers and industry in the UK on “Organic Policy in the UK” and “Scope for the UK-India collaboration in Organic Food Products”. The meetings were set up by the UK Department for International Trade and UK India Business Council, January 2017
- Presentation on “Ensuring Nutritional Security: A Survey of Urban Indian Consumers” at the “2016 China India Insights Conference”, Yale School of Management, London Business School, London, July 22, 2016

#### **National Conferences / Seminars / Workshops**

- Presentation on “Trade Facilitation in Services and Mode 3” at the workshop on “Trade Facilitation in Services (TFS)”, jointly organised by the Department of Commerce, Ministry of Commerce & Industry and World Bank, New Delhi, March 23-24, 2017
- Chaired the “Panel Discussion on IT Sector” at the international symposium on “India’s Strategy of Economic Growth and Development: Experiences and Way Forward”, jointly organised by Science & Education Section, Embassy of the Islamic Republic of Iran, New Delhi, Department of Economics, Jamia Millia Islamia, New Delhi, Department of Economics, Allamah Tabataba’i University, Iran and Union of Iranian Students of Islamic Associations in India, at Jamia Millia Islamia, New Delhi, March 09, 2017
- Gave lectures on “Services Value Chain & Merchandise Linkages” at “3-week training programme for DGFT officers”, Indian Institute of Foreign Trade, New Delhi, March 06, 2017
- Presentation on “Integrating South and Southeast Asia through Services Value Chain: The Case of India and Thailand” at the workshop on “Integrating South and East Asia: Economics of Regional Integration and Development”, jointly organised by Asia Development Bank and ICRIER, New Delhi, February 17, 2017
- Panellist in the session “Role of industry in forgoing bilateral, regional and global partnerships on skills” at the second annual conference on “Mobility and the Business Case for Migration”, International Migration and Diaspora Division, Federation of Indian Chambers of Commerce & Industry, New Delhi, December 05, 2016
- Chaired the technical session on “China and India: Trade, Development & International Relations” and made presentation on “SEZs in India and China: A Comparative Study” at the international conference on “India, China and the New World Order: Economic, Social and Cultural Dimensions”, jointly organised by International Management Institute Kolkata and Sichuan Academy of Social Sciences China, Kolkata, November 24, 2016
- Presentations on “Value Chains in Services Trade” and “Barriers to Services Trade, Domestic Regulations and Services Trade Reforms” at the workshop on “Services Trade Reforms in Asia: In Search of a Comprehensive Approach” jointly organised by the Asian Development Bank Institute, Japan, Research and Information System for Developing Countries, ASEAN India Centre and International Management Institute, Kolkata, in Kolkata, October 26-27, 2016
- Gave lecture on “Service Sector Liberalization” at OP Jindal Global University, Sonapat, Haryana, November 09, 2016
- Panellist, seminar on “Promoting India’s Exports to Japan under India-Japan CEPA”, jointly organised by RIS in collaboration with Ministry of Commerce and Industry and Japanese Embassy, New Delhi, October 06, 2016
- Gave lecture on “India’s trade in services and trade negotiations, Where do we stand?” at Lady Shri Ram College for Women, organised by the Economics Associations, New Delhi, September 22, 2016
- Presentation on “Overview of GATS Agreement” at the Training Programme on “Basics of WTO and International Trade for the Deputy Secretary of Department of Commerce”, Indian Institute of Foreign Trade, New Delhi, September 20, 2016

- Presentation on “Overview of GATS Agreement” at the Training Programme on “Basics of WTO and International Trade for the interns of Department of Commerce”, Indian Institute Foreign Trade, New Delhi, September 14, 2016
- Presentation on the key findings at the release of the report titled “Institutional Framework for Collection of Statistics on Trade in Services: Four Pilot Surveys on Trade in Audiovisual, Logistics, Professional and Telecommunication Services” and launch of the Survey on Medical Value Travel, jointly organised by ICRIER and Directorate General of Commercial Intelligence and Statistics, Kolkata, New Delhi, June 7, 2016
- Chaired the panel discussion on “Food Supply Chain, Logistics, Skill Development and R&D” at the release of the report on “India-UK Collaborations and Investments in Food Supply Chain: Opportunities, Concerns and the Way Forward”, Dun & Bradstreet Tangram Research Advisory Services, New Delhi, April 27, 2016

## Publication

### Books / Reports / Chapters in Books

- “SPS Barriers to India’s Agriculture Export: Learning from the EU Experiences in SPS and Food Safety Standards” with Ecorys Nederland BV & Ecorys India Private Ltd. funded by European Community, represented by the Delegation of the European Union to India, December 2016
- “Special Economic Zones in India: Status, Issues and Potential”, co-authored with Parthapratim Pal, Saubhik Deb, Subhobrota Ray and Tanu M. Goyal, Springer, August 2016
- “Institutional Framework for Collection of Statistics on Trade in Services: Four Pilot Surveys on Trade in Audiovisual, Logistics, Professional and Telecommunication Services”, co-authored with Tanu M. Goyal, Bhavook Bhardwaj and Raj kumar Shahi, Academic Foundation, June 2016
- “India-UK Collaborations and Investments in Food Supply Chain: Opportunities, Concerns and the Way Forward”, co-authored with Dipankar De, Nikhil Khurana, Tanu M. Goyal, Bhavook Bhardwaj and Rohini Sanyal, Academic Foundation, April 2016

### Papers in Refereed Journals

- “Ensuring Nutrition Security: A Survey of Urban Indian Consumers’ Purchase and Consumption of Fruits and Vegetables” with Souvik Dutta and Suvi Agrawal in *Journal of Business and Economics* published by Academic Star Publishing Company, New York, USA, issue no. 2, vol. no. 8, February 2017, pgs. 246-266
- “Trade Agreements and Services Value Chain: The Case of India and Thailand” with Tanu M. Goyal in *Applied Finance and Accounting*, issue no. 1, vol. no. 3, Published by Redfame Publishing, Oregon, USA, <http://redfame.com/journal/index.php/afa/article/view/1840/2091> (last accessed on June 22, 2017) February 2017, pgs. 11-23
- “Integrating South and Southeast Asia through Services Value Chain: The Case of India and Thailand” with Tanu M. Goyal in *Asia Pacific Journal of Rural Development (APJORD)*, issue no. 2, vol. no. XXVI, published by Centre on Integrated Rural Development for Asia & the Pacific (CIRDAP), Dhaka, Bangladesh, December 2016, pgs. 37-71

### Others

- “Reforms needed to sustain services growth in India” in Eas Asia Forum, June 2017. <http://www.eastasiaforum.org/2016/06/14/reforms-needed-to-sustain-services-growth-in-india/> (last accessed on June 22, 2017)
- “Nutraceutical, Functional Foods, and Dietary Supplements Industry Market in Asia” with Avantika Kapoor in NuFFoods Spectrum, Volume 4, Issue 10, June 2017. [http://www.nuffoodsspectrum.in/inner\\_view\\_single\\_details.php?page=1&content\\_type=&vrtcl\\_panel\\_nm=&ele\\_id=NOR\\_59310c25b57a02.12975370](http://www.nuffoodsspectrum.in/inner_view_single_details.php?page=1&content_type=&vrtcl_panel_nm=&ele_id=NOR_59310c25b57a02.12975370) (last accessed on June 22, 2017)



- “New approach needed to fix India’s unemployment woes” with Avantika Kapoor in East Asia Forum, June 2017. <http://www.eastasiaforum.org/2017/06/02/new-approach-needed-to-fix-indias-unemployment-woes/#comments> (last accessed on June 22, 2017)
- “Less Cash Economy: India vis-à-vis the World” with Tanu M. Goyal in Yojana, Ministry of Information & Broadcasting <https://afeias.com/wp-content/uploads/2017/03/Yojana-Less-Cash-Economy-India-Vis-A-Vis-the-world-11-03-2017.pdf> (last accessed on June 22, 2017), New Delhi, February 2017, pgs 28-32
- “Barriers to India’s Agriculture, Processed Food Exports” in Food & Beverage News, <http://www.saffronmedia.in/eMagazines/fnb/2016/FNBDec16312016/index.html> (last accessed on June 22, 2017) Mumbai, December 2016, pgs 25-26
- “India Needs a Comprehensive Services Policy” in The Dollar Business, Volume 3, Issue 11, <https://www.thedollarbusiness.com/magazine/flip/november2016> (last accessed on June 22, 2017) Telangana, November 2016, pgs 49-50

## **NISHA TANEJA**

### **International Conferences / Seminars / Workshops**

- Presentation on “Trade Facilitation Agreement of the WTO: Implications for South Asia” at the Conference on “Trade and Transport Facilitation in South Asia – A regional perspective”, Kathmandu, November 29-30, 2016
- Discussant at the “15<sup>th</sup> Korea-India Dialogue” in the session on “Upgrading India-Korea CEPA for Its Full Potential” Organized by The Seoul Forum for International Affairs (SFIA) & ICRIER, Seoul, Korea, November 18-19, 2016
- Participant at the India-Pakistan Seed Community for “Transforming India-Pakistan Relations”, Dubai, November 13-14, 2016
- Presentation on “Aspects of South Asian Economic Integration”, in the “14<sup>th</sup> Annual SANEI Conference”, Kathmandu, November 7-8, 2016
- Presentation on “Nepal’s Transit through India” at conference on “First India-Nepal Bilateral Dialogue: Exploring New Vistas”, Kathmandu, November 2-3, 2016
- Presentation on “National Trade Portal and Single Window” at conference hosted by the United States Department of State and the United States Agency for International Development, Colombo, August 9-10, 2016
- Participant at the India-Pakistan Seed Community for “Transforming India-Pakistan Relations”, Kathmandu, July 15-17, 2016
- Presentation on “India-Pakistan Trade in Health Services”, Islamabad, June 19-22, 2016
- Participant at the “Fourth Asia Think Tank Summit”, entitled “Sustainable Development Goals in the Asian Landscape”: Think Tanks as Catalysts for Policy Analysis and Implementation, Korea, June 8-10, 2016

### **National Conferences / Seminars / Workshops**

- Panellist, session on “Enabling Connectivity- International Conventions and Treaties” at the Launch Meeting of project titled “Bangladesh-Bhutan-India-Nepal Motor Vehicles Agreement: Facilitating implementation and stakeholder buy-in in the BBIN sub-region” organized by CUTS, Kolkata, February 16-17, 2017
- Participant, roundtable discussion on “Facilitating across Border Trade in South Asia” organized by FICCI and Central Board of Central Excise, Delhi, September 27, 2016
- Presented a paper on “Trade in Health Services between India and Pakistan” and Chaired the session on “Way Forward for Enhancing Trade in Health Sector between India and Pakistan” at a Conference organized by ICRIER and SDPI, Delhi, July 27, 2016



- Participant, T20 and Gateway of India Dialogue on “T20 meeting: Global Economic Governance”, Mumbai, June 13-14, 2016
- Discussant, conference on “Technology Transfer, Capacity Building, and Policy Engagement” organized by IPE Global, Delhi, May 5, 2016

## Publications

### Books / Reports / Chapters in Books

- “India-Pakistan: Trade Perception Survey II”, with Samridhi Bimal, Isha Dayal and Muhammad Usman Khan, Academic Foundation, New Delhi, March 2017
- “India-Pakistan Trade Normalisation: The Unfinished Economic Agenda”, edited with Isha Dayal Springer, January 2017
- “Exploring the Trade in textiles between India and Pakistan”, in *India-Pakistan Trade Normalisation: The Unfinished Economic Agenda*, co-authored with Saon Ray and Devyani Pande, Springer, January 2017
- “Emerging Issues in India-Pakistan Trade: An Introduction”, in *India-Pakistan Trade Normalisation: The Unfinished Economic Agenda*, co-authored with Rohan Ray, Isha Dayal and Samridhi Bimal, Springer, January 2017
- “India’s Informal Trade with Pakistan”, in *India-Pakistan Trade Normalisation: The Unfinished Economic Agenda*, Springer, January 2017
- “Facilitating India-Pakistan Trade through the Land Route”, in *India-Pakistan Trade Normalisation: The Unfinished Economic Agenda*, co-authored with Samridhi Bimal and Isha Dayal, Springer, January 2017
- “India-Pakistan: 2<sup>nd</sup> Trade Perception Survey”, in *India-Pakistan Trade Normalisation: The Unfinished Economic Agenda*, co-authored with Isha Dayal and Muhammad Usman Khan, Springer, January 2017

### Working Papers / Policy Briefs

- “India-Pakistan Trade: Opportunities for Medical Value Travel”, co-authored with Samridhi Bimal, Isha Dayal and Taher Nadeem, ICRIER working paper, no. 333, March 2017
- “India’s Informal Trade with Pakistan”, co-authored with Samridhi Bimal, ICRIER working paper, no. 327, July 2016
- “Facilitating India-Pakistan Trade through the Land Route”, co-authored with Isha Dayal, ICRIER working paper, no. 318, May 2016

## SENIOR FELLOWS / CONSULTANTS

### SAON RAY

#### Appointed

- Member of Project Steering Committee of Study on “Comparing Renewable and Fossil Energy in India” by CPI, ISB and JNU
- Editorial Committee of Harvest - The Journal (<http://www.harvestjournal.net/>)
- Ph D Supervision of Mr. Ashish Gossain on An Analysis of Global Innovation Value Chains in the Indian Pharmaceuticals Industry (with Saradindu Bhaduri at Center for Studies in Science Policy/JNU)

#### International Conferences / Seminars / Workshops

- Presentation on “Energy” at “China India Dialogue 2016”, Beijing, August 18-19, 2016
- Presentation on “De-carbonisation of Indian Railways – Demand Side” at report launch organised by ICRIER and Climate Policy Initiative with NCE, New Delhi, July 22, 2016

- Presentation on “De-carbonisation of Indian Railways – Demand Side” at stakeholder workshop organised by ICRIER and Climate Policy Initiative, New Delhi, June 22, 2016

### **National Conferences / Seminars / Workshops**

- Panellist, discussion on “Regional Trading Blocs and Emerging Trading Systems”, organised by World Trade Center, Pune, May 24, 2017
- Presented on “Impact of Railways on Economic Growth in the BRICS”, organised by JNU, New Delhi, April 18, 2017
- Discussant, discussion on “India-U.S. Cooperation on Clean Energy and Climate Change”, organised by CEEW and NRDC, New Delhi, February 22, 2017
- Chaired, talk on “Gender Parity and Leadership: Key to Growth and Development” by Kalpana Kochhar of IMF, organised by ICRIER, New Delhi, February 07, 2017
- Lecture on “GVCs and export dynamism”, Manav Rachna University, Faridabad, January 17, 2017
- Chaired, session on “Metropolitan Water Governance in three Indian Mega Regions: Fragmentation and Consolidation in Mumbai and Chennai” by Bharat Punjabi, Munk School of Global Affairs, University of Toronto at ICRIER, New Delhi, December 21, 2016
- Panellist, discussion on “Urban Climate Change Resilience: Knowledge Sharing Workshop,” organised by NUIA, New Delhi, December 16, 2016
- Panellist, discussion on “Biofuels and implementation of the Ethanol Blending Programme” at the Release of the Paper “Fuel Blending in India: Learnings and Way Forward” organised by The University of Petroleum and Energy Studies, Dehradun along with the Centre for Study of Science, Technology & Policy, Bangalore and PLR Chambers, New Delhi, December 09, 2016
- Panellist, discussion on book “Labour in Global Value Chains in Asia” edited by Dev Nathan, Meenu Tewari and Sandip Sarkar, New Delhi, December 02, 2016
- Lecture on “A comparison of automobile industries in India and China”, at Mid Career Training Programme phase-I for Deputy Secretary level Indian Foreign Service Officers of 2004-2008, Foreign Service Institute, New Delhi, November 10, 2016
- Panellist, discussion at launch of World Bank Group’s report on “South Asia’s Turn: Policies to Boost Competitiveness and Create the Next Export Powerhouse”, New Delhi, November 10, 2016
- Panellist, discussion on “Sensitizing policy-making and practice” at conference on “Enabling policy frameworks for climate resilient cities” organised by TERI, with support from the Rockefeller Foundation, New Delhi, July 08, 2016
- Panellist, discussion on “Understanding existing and future use of resources in Indian automobile Industry” at workshop on “Resource Use and Efficiency Potential in Indian Automobile Industry”, organised by TERI and GIZ, New Delhi, May 30, 2016
- Panellist, discussion on release of “Stitches to Riches”, organised by World Bank and ICRIER, New Delhi, April 25, 2016
- Discussant, discussion with Belgian delegation and Mayor of Leuven on “Smart Cities”, organised by Council on Energy, Environment and Water (CEEW), New Delhi, April 19, 2016

### **Publications**

#### **Books / Reports / Chapters in Books**

- “Exploring the Trade in Textiles and Clothing between India and Pakistan”, with Nisha Taneja and Devyani Pande, in Taneja, Nisha and Isha Dayal (eds.), *India Pakistan Trade Normalisation: The Unfinished Economic Agenda*, New Delhi, Springer, 2017
- “De-carbonization of Indian Railways”, co-authored with Kuntala Bandyopadhyay and T. S. Ramakrishnan, July 2016

**Working Papers / Policy Briefs**

- “India-Pakistan Trade: Textiles and Clothing”, co-authored with Nisha Taneja and Devyani Pande, ICRIER working paper, no. 326, June 2016
- “Innovation (and upgrading) in the Automobile Industry: The Case of India”, co-authored with Smita Miglani, ICRIER working paper, no. 320, May 2016

**Others**

- “The Role of FDI in Fostering Growth in the Automobile Sector in India”, co-authored with Smita Miglani, in *Asia-Pacific Tech Monitor*, April-June, 2016

**PRAVESH SHARMA****Appointed**

- Visiting Faculty at Lal Bahadur Shastri National Academy of Administration (LBSNAA), Mussoorie
- Adviser (Part-time), Agriculture, Federation of Indian Chambers of Commerce and Industry (FICCI)

**National Conferences / Seminars / Workshops**

- Moderator, round table discussion on “Contract Farming and Land Leasing”, organised by FICCI, New Delhi, June 12, 2017
- Speaker, training for IAS Officers on “Politics, Political Economy and Public Policy”, Lal Bahadur Shastri National Academy of Administration (LBSNAA), Mussoorie, June 06, 2017
- Panellist, “Indo-Israel Brainstorming Session on Water and Solar Power”, jointly organised by the Embassy of Israel and ICRIER, New Delhi, May 10, 2017
- Moderator, policy roundtable discussion on “Agriculture Credit”, organised by FICCI, New Delhi, April 12, 2017
- Moderator, policy roundtable discussion on “Agriculture Marketing”, organised by FICCI, New Delhi, January 11, 2017
- Speaker, training for IAS Officers on “Agricultural Marketing and National Agriculture Market”, Lal Bahadur Shastri National Academy of Administration (LBSNAA), Mussoorie, December 12, 2016
- Speaker, training for IAS Officers on “Political Economy of Governance in India”, Lal Bahadur Shastri National Academy of Administration (LBSNAA), Mussoorie, November 17, 2016
- Moderator, policy roundtable discussion on “Agriculture Insurance”, organised by FICCI, New Delhi, October 05, 2016
- Speaker, training for IAS Officers on “Political Economy of Agricultural Policies in India”, Lal Bahadur Shastri National Academy of Administration (LBSNAA), Mussoorie, October 04, 2016
- Speaker, training for IAS Officers on “Politics, Political Economy and Public Policy”, Lal Bahadur Shastri National Academy of Administration (LBSNAA), Mussoorie, June 29, 2016
- Presentation on “Review of Agricultural Extension Services (AES) in India: Current status, trends and the way forward” in the workshop on “Studying Drivers of Agricultural Growth in selected Indian States with focus on Role of Agricultural Extension Systems”, organised by the ICRIER and Bill and Melinda Gates Foundation, New Delhi, June 17, 2016

**Publications****Working Papers / Policy Briefs**

- “Making Rapid Strides-Agriculture in Madhya Pradesh: Sources, Drivers, and Policy Lessons” co-authored with Ashok Gulati and Pallavi Rajkhowa, ICRIER working paper, no. 339, April, 2017

## FELLOWS

### AMRITA GOLDAR

#### International Conferences / Seminars / Workshops

- Presentation on “Leveraging Finance and Access to Global Value Chains for Promoting Sustainability Standards in India’s MSME Sector” at the workshop on “Sustainability Standards”, organised by Deutsches Institut für Entwicklungspolitik (DIE), Berlin, April 25-26, 2017

#### National Conferences / Seminars / Workshops

- Presentation on “Scaling up Rooftop Solar Power in India: The Potential of Municipal Solar Bonds” at a seminar organised by ICRIER, New Delhi, June 21, 2017
- Presentation on “Evaluation of Market Access Initiative” at a workshop organised by the Ministry of Commerce, Government of India, New Delhi, July 4, 2017

#### Publications

##### Books / Reports / Chapters in Books

- “Scaling up Rooftop Solar Power in India: The Potential of Municipal Solar Bonds”, co-authored with I. Ray, S. Trivedi, G. Vulturius, S. Paul, L.P. Jena, and A. Sagar, Jointly published by SEI and ICRIER and Climate Policy Initiative, June 2017
- “Greening the G20 Agenda: A Way Forward”, co-authored with Parthasarathi Shome in P. Shome (ed.), *The G20 Development Agenda: An Indian Perspective*, Cambridge University Press, 2016
- “Implications of Fossil Fuel Subsidy Rationalisation in India: SAM Modeling Methodology and Results”, co-authored with S. Saluja in ADB Report, *Fossil Fuel Subsidies in Asia: Trends, Impacts and Reforms*, Asian Development Bank, Manila, 2016

### RADHICK KAPOOR

#### International Conferences / Seminars / Workshops

- Presentation on “Informality in the Formal Sector: Evidence from India’s Manufacturing Sector” in “4<sup>th</sup> DIAL Conference on Development Economics”, University of Paris, Dauphine, June 29-30, 2017

#### National Conferences / Seminars / Workshops

- Participated in Asian Forum on Global Governance, New Delhi, October 2016

#### Publications

##### Books / Reports / Chapters in Books

- “The Dilemma of Informality”, in Background Paper, vol. iv, *FRBM Review Committee Report*, Feb 2017

##### Working Papers / Policy Briefs

- “Informality in the Formal Sector: Evidence from India’s Manufacturing Sector”, co-authored with P.P. Krishnapriya, IGC working paper, May 2017

### ALI MEHDI

#### Appointed

- Member, Task Force on 2030 Agenda, Think-Tank 20 (T20) under German G20 Presidency
- Member, Think\_SDGs Network, The Graduate Institute (Switzerland) and IDRC (Canada)

#### International Conferences / Seminars / Workshops

- Participated in “Task Force on the 2030 Agenda at Global Solutions for G20: The Think 20 Summit”, Berlin, May 29-30, 2017

- Speaker, session on “SDGs and health: What is India doing?”, World Health Summit, Montreal, May 08, 2017
- Participated (online) at the South Asia Health Consultation with Policy Research Institutions, Islamabad, December 05, 2016
- Participated in the Task Force on the 2030 Agenda at the High-level Kickoff Conference of Think 20 (T20) Process under German Presidency, Berlin, November 30 - December 02, 2016
- Participated in the “XIII AMNET International Conference on Chronic Diseases”, Las Cruces, November 9-11, 2016
- Presentation on “The challenge of job creation in fragile situations: A case study of Kashmir” at The “World Bank Jobs and Development Conference”, Washington DC, November 03, 2016

## Publications

### Books / Reports / Chapters in Books

- “International cooperation for registration of medicines: Opportunities for India”, co-authored with Vasudha Wattal, Pallavi Joshi and Aashna Arora, Academic Foundation, New Delhi, 2017.
- “Challenges and prospects for clinical trials in India: A regulatory perspective”, co-authored with Rahul Mongia, Deepmala Pokhriyal and Seema Rao, Academic Foundation, New Delhi, 2017.

### Papers in Refereed Journals

- “Chronic disease in India: An impending economic crisis and evolving response”, *Global Heart*, issue no. 4, vol no. 11, 2016

### Working Papers / Policy Briefs

- “SDGs and Health: A Vision for Public Policy”, co-authored with Zoe Boutilier, Ilona Kickbusch, Sunisha Neupane, Miriam Sangiorgio, Michaela Told and Peter Taylor, Policy brief for T20 Task Force on 2030 Agenda, German G20 Presidency, May 19, 2017
- “Surveillance of Chronic Diseases: Challenges and Strategies for India”, co-authored with Udaya Mishra, Irudaya Rajan and William Joe, ICRIER working paper, no. 322, May 2016
- “Prevention of Chronic Diseases: Reorienting Primary Health Systems in India”, co-authored with Divya Chaudhry, Priyanka Tomar and Pallavi Joshi, ICRIER working paper, no. 321, May 2016

## SANJAY PULIPAKA

### International Conferences / Seminars / Workshops

- Presentation on “Vietnam - India development cooperation: New Context, New Vision”, HoChi Minh National Academy of Politics, Vietnam, August 25-26, 2016
- Participated in the “Visiting Program for Young Sinologists 2016”, Beijing, China, July 2-22, 2016
- Presentation at the “The Second Inter-Himalaya Development Forum”, Mangshi, Yunnan, China, 10-13 July, 2016

### National Conferences / Seminars / Workshops

- Panellist, round table discussion on “25 Years of ASEAN-India Partnership”, Research and Information System for Developing Countries, New Delhi, June 22, 2017
- Participated in the “Mapping Strategic Narratives in the Bay of Bengal Region”, A Carnegie India, and Friedrich-Ebert Stiftung Workshop, New Delhi, June 14, 2017

- Participant, discussion on “Chinese Maritime Strategy in IOR and Implications for India’s Maritime Security Engagement in the Region”, The United Service Institution (USI), May 29, 2017
- Presentation on “China’s Belt and Road Initiative” at the conference on “Focus on China: Current Issues and Developments”, Chennai, April 20-21, 2017
- Presentation, “Young Thinkers Conference (YTC)”, The British High Commission, New Delhi, February 23, 2017
- Talk on “India in the Asia Pacific: Strengthening Asian Multipolarity,” American Centre, New Delhi, January 31, 2017
- Chaired a panel discussion with Vietnamese delegates on “India-Vietnam Relations” Zakir Hussain College, Delhi University, December 16, 2016
- Chair and Moderator in the session on “India’s state governments: Key stakeholders in India’s Act East Policy”, at the International Conference on “South Asia – Looking East”, New Delhi, September 08-11, 2016

## **Publications**

### **Books / Reports / Chapters in Books**

- “Economic Warfare to Support National Security”, in Gurmeet Kanwal (edt.), *The New Arthashastra*, New Delhi, Harper Collins, 2016

### **Papers in Refereed Journals**

- “Northeast India – An Overview of Political Frameworks, Economy, and Connectivity”, co-authored with Harisha Gorthi and Saranya Sircar, *Indian Journal of Public Administration*, issue no.3, vol. no. XLXII, July-September 2016

### **Working Papers / Policy Briefs**

- “India in the Asia Pacific: Strengthening Asian Multipolarity”, *CSCAP Regional Security Outlook*, 2017

## **PANKAJ VASHISHT**

### **International Conferences / Seminars / Workshops**

- Presentation on “Technical Change and Task Content of Jobs in India” in a conference “Jobs for Development”, organised by World Bank Jobs Network, World Bank Headquarters, Washington DC USA, November 2-3, 2016
- Presentation on “Labour in the Era of Digital Revolution: Insights for Developing India”, at a conference on “Economic and Finance”, organised by Rimini Center for Economic Analysis, Wilfrid Laurier University, Waterloo Canada, September 16-18, 2016

## **Publications**

### **Working Papers / Policy Briefs**

- “Destruction or Polarization: Analyzing the Impact of Technology on Jobs in Indian Manufacturing”, ICRIER working paper, no. 334, March 2017

## **RESEARCH ASSOCIATES / CONSULTANTS**

## **SAMRIDHI BIMAL**

### **International Conferences / Seminars / Workshops**

- Panellist in first India-Pakistan SEED community (for economic and commercial bilateral relations) round table meeting, organised by Friedrich-Ebert-Stiftung (FES), Kathmandu, July 16, 2016



### National Conferences / Seminars / Workshops

- Panellist, round table discussion on “India-Pakistan Economic Cooperation”, organised by ICRIER, New Delhi, April 20, 2016

### Publications

#### Books / Reports / Chapters in Books

- “India-Pakistan: Trade Perception Survey II”, with Nisha Taneja et al., Academic Foundation, New Delhi, 2017
- “India’s Informal Trade with Pakistan”, with Nisha Taneja, in *India-Pakistan Trade Normalisation: The Unfinished Economic Agenda*, Springer, New Delhi, 2017
- “India-Pakistan: 2<sup>nd</sup> Trade Perception Survey”, with Nisha Taneja and Isha Dayal, in *India-Pakistan Trade Normalisation: The Unfinished Economic Agenda*, Springer, New Delhi, 2017
- “Facilitating India-Pakistan Trade Through the Land Route”, with Nisha Taneja and Isha Dayal, in *India-Pakistan Trade Normalisation: The Unfinished Economic Agenda*, Springer, New Delhi, 2017
- “Emerging Issues in India-Pakistan Trade: An Introduction”, with Nisha Taneja, Rohan Ray, and Isha Dayal, in *India-Pakistan Trade Normalisation: The Unfinished Economic Agenda*, Springer, New Delhi, 2017

#### Papers in Refereed Journals

- “Determinants of Foreign Direct Investment in South Asia: Analysis of Economic, Institutional and Political Factors”, *Journal of South Asian Studies*, January 2017

#### Working Papers / Policy Briefs

- “India-Pakistan Trade: Opportunities for Medical Value Travel”, co-authored with Nisha Taneja, Isha Dayal and Taher Nadeem, ICRIER working paper, no. 333, March, 2017
- “Establishing India’s National Trade Facilitation Committee- A Proposal”, co-authored with Nisha Taneja and Shravani Prakash, ICRIER working paper, no. 317, March 2016
- “An Analysis of Nepal’s Transit through India” co-authored with Nisha Taneja and Isha Dayal, ICRIER working paper, no. 316, March, 2016

## DIVYA CHAUDHRY

### Publications

#### Papers in Refereed Journals

- “Antimicrobial Resistance: The Next Big Epidemic”, co-authored with Priyanka Tomar, *International Journal of Community Medicine and Public Health*, July, 2017

#### Working Papers / Policy Briefs

- “Job Creation in Jammu and Kashmir: Sectoral Perspectives”, co-authored with Ali Mehdi and Priyanka Tomar (submitted to the National University of Singapore), 2017
- “Prevention of Chronic Diseases: Reorienting Primary Health Systems in India”, co-authored with Ali Mehdi, Priyanka Tomar and Pallavi Joshi, ICRIER working paper, no. 321, May 2016
- “Prevention of Chronic Diseases: Reorienting Primary Health Systems in India”, co-authored with Ali Mehdi, Priyanka Tomar and Pallavi Joshi, HPI policy brief, no. 3, May 2016

## **TANU M. GOYAL**

### **National Conferences / Seminars / Workshops**

- Presented a paper on “Trade Agreements and Services Value Chain: The Case of India and ASEAN Countries” at Kolkata Dialogue 2017 - “Act East: India’s ASEAN Journey”, Kolkata, May 30, 2017
- Presented a paper on “Trade Agreements and Services Value Chain: The Case of India and Thailand” at the international conference on “Services, Investments and Global Value Chains”, organised by the Centre for WTO Studies and Indian Institute of Foreign Trade (IIFT), New Delhi, July 28-29, 2016

### **Publications**

#### **Books / Reports / Chapters in Books**

- “Special Economic Zones in India: Status, Issues and Potential” with Arpita Mukherjee, Parthapratim Pal, Saubhik Deb, Subhobrota Ray, New Delhi, Springer (India) Private Limited, June 2016
- “Institutional Framework for Collection of Statistics on Trade in Services: Four Pilot Surveys on Trade in Audiovisual, Logistics, Professional and Telecommunication Services”, with Arpita Mukherjee, Bhavook Bhardwaj and Raj Kumar Shahi for the Directorate General of Commercial Intelligence and Statistics (DGCI&S), New Delhi, Academic Foundation, June 2016
- “India-UK Collaborations and Investments in Food Supply Chain: Opportunities, Concerns and the Way Forward”, with Dipankar De, Arpita Mukherjee, Nikhil Khurana, Bhavook Bhardwaj and Rohini Sanyal, New Delhi, Academic Foundation, April 2016

#### **Papers in Refereed Journals**

- “Trade Agreements and Services Value Chain: The Case of India and Thailand”, with Arpita Mukherjee in *Applied Finance and Accounting*, RedFame Publications, issue no. 1, vol. no. iii, February, 2017
- “Integrating South and Southeast Asia through Services Value Chain: The Case of India and Thailand” with Arpita Mukherjee in *Asia Pacific Journal of Rural Development*, issue no. 2, vol. no. xxvi, December, 2016

## **PALLAVI JOSHI**

### **National Conferences / Seminars / Workshops**

- Presentation on “International Cooperation on registration of medicines – Opportunities for India”, at the stakeholder seminar on “Pharmaceuticals in India: The Next Leap”, New Delhi, April 28, 2017

### **Publications**

#### **Books / Reports / Chapters in Books**

- Report on “International Cooperation on registration of medicines – Opportunities for India” co-authored with Vasudha Wattal, Aashna Arora and Ali Mehdi, Academic Foundation, April 2017

#### **Working Papers / Policy Briefs**

- “International Cooperation on Registration of Medicines – Opportunities for India” co-authored with Vasudha Wattal, Aashna Arora and Ali Mehdi, HPI policy brief, no. 5, April 2017
- “Prevention of Chronic Diseases: Reorienting Primary Health Systems in India” co-authored with Ali Mehdi, Divya Chaudhry and Priyanka Tomar, ICRIER working paper, no. 321, May 2016
- “Prevention of Chronic Diseases: Reorienting Primary Health Systems in India” co-authored with Ali Mehdi, Divya Chaudhry and Priyanka Tomar, HPI policy brief, no. 3, May 2016

**MANSI KEDIA****National Conferences / Seminars / Workshops**

- Presentation on “Making Indian Pharmaceuticals Competitive: The Dilemma for Regulation” at the conference on “Economics of Competition Law”, organised by Competition Commission in India with Rajat Kathuria and Smriti Chandrashekar, March 03, 2017
- Presentation on findings from our study on “Barriers to Compliance and Cost of Compliance for Direct Taxes in India”, Central Board of Direct Taxes, Ministry of Finance, Government of India, New Delhi, October 21, 2016

**Publications****Books / Reports / Chapters in Books**

- “A Study on the Financial Health of India’s Telecom Sector” co-authored with Rajat Kathuria and Parnil Urdhwarashe for Cellular Operators Association of India, April 2017
- “Quantifying the Value of an Open Internet for India”, co-authored with Rajat Kathuria, Vatsala Shreeti and Parnil Urdhwarashe, Academic Foundation, New Delhi, July 2016

**P. P. KRISHNAPRIYA****International Conferences / Seminars / Workshops**

- Presentation on “Effects of Information on Energy Related Choices” at the “Sustainable Energy Transitions Initiative (SETI) Second Annual Meeting”, Sanford School of Public Policy, Duke University, North Carolina, May 9-11, 2017
- Discussant at the Jobs and Development Conference, The World Bank, Washington DC, November 2-3, 2016

**National Conferences / Seminars / Workshops**

- Presentation on “Effects of Information on Energy Related Choices” at the ISI Delhi Seminar Series, May 4, 2017
- Presentation on “Large data sets: NSS and other secondary survey data” at the St. Stephen’s College Academic Conclave, University of Delhi, March 29-31, 2017
- Presentation on “Effects of Information on Energy Related Choices” at the annual conference on “Economic Growth and Development”, Indian Statistical Institute, Delhi, December 19-21, 2016
- Presentation on “Effects of Information on Energy Related Choices” at the CoRe- IGIDR PhD Colloquium, Indira Gandhi Institute of Development Research, Mumbai, November 8-11, 2016
- Presentation on “Effects of Information on Energy Related Choices” at the Delhi workshop, Centre for research on the Economics of Climate, Food, Energy and Environment (CECFEE) of the Indian Statistical Institute, October 15-16, 2016
- Presentation on “Effects of Information on Energy Related Choices” at the summer conference on “Economics: Theory Meets Empirics”, Indian Institute of Technology, Delhi, April 8-9, 2016

**Publications****Papers in Refereed Journals**

- “Fuel choices and respiratory health in India” co-authored with Rohini Somanathan, *The Indian Journal of Economics*, Special Centennial Issue, issue no. 384, vol. no. xcvi, July 2016

### Working Papers / Policy Briefs

- “The Contractualisation of India’s Workforce: Explanations and Implications”, co-authored with Radhicka Kapoor, IGC working paper, no. F-35316-INC-1, April 2017

### PRATEEK KUKREJA

#### National Conferences / Seminars / Workshops

- Presented paper titled “Labour Regulations and Informalisation in Organised Textile and Clothing Industry in India” at the “58<sup>th</sup> Annual Conference of Indian Society of Labour Economics”, Guwahati, November 24-26, 2016
- Presented study on “Contract Labour Law and Employment in India: Inferences for Labour Law Reform in Manufacturing Industries” at the “Round table Discussion on Job Creation through Labour Reforms in Indian Manufacturing: A Stakeholders’ Perspective”, organised by ICRIER, New Delhi, December 09, 2016

#### Publications

##### Papers in Refereed Journals

- “The Relationship between Trade Openness and Regional Inequality: Case of Indian Manufacturing Industries”, *Journal of Regional Development and Planning*, issue no. 2, vol. no. v, 2016

##### Working Papers / Policy Briefs

- “Factors Influencing Indian Manufacturing Firms’ Decision to Hire Contract Labour”, with Jaivir Singh, D.K. Das, H. Choudhary and K. Abhishek, ICRIER working paper no. 341, July, 2017
- “Law, Skills and the Creation of Jobs as ‘Contract’ Work in India: Exploring Survey Data to Make Inferences for Labour Law Reform”, with Jaivir Singh, D.K. Das and H. Choudhary, ICRIER working paper, no. 330, August, 2016

### SMITA MIGLANI

#### Publications

##### Books / Reports / Chapters in Books

- Report on Capacity Building initiative for Trade Development in India jointly as a part of the consortium headed by Ecorys, Netherlands, May 2017
- Study on Performance Benchmarking of Housing and Urban Development Corporation Limited commissioned by HUDCO. (Final Report submitted in March 2017)

##### Working Papers / Policy Briefs

- “Innovation (and upgrading) in the Automobile Industry: The Case of India”, ICRIER working paper, no. 320, May 2016

##### Others

- “Start your Engines: Automobile Exports, Comparing India and China”, Blog Post for *Ideas for India*, International Growth Centre (IGC), July 2016
- “The Role of FDI in Fostering Growth in the Automobile Sector in India”, with Saon Ray, *Asia-Pacific Tech Monitor*, April-June 2016

**VASUDHA WATTAL****National Conferences / Seminars / Workshops**

- Presentation on “International Cooperation for Registration of Medicines: Opportunities for India” at the stakeholder seminar on “Pharmaceuticals in India: The Next Leap”, ICRIER, New Delhi, April 28, 2017

**Publications****Books / Reports / Chapters in Books**

- “International Cooperation on Registration of Medicines: Opportunities for India”, co-authored with Pallavi Joshi, Aashna Arora and Ali Mehdi, Academic Foundation, New Delhi, 2017

**Working Papers / Policy Series**

- “International Cooperation on Registration of Medicines: Opportunities for India”, co-authored with Pallavi Joshi, Aashna Arora and Ali Mehdi, HPI policy brief, no. 5, New Delhi, July 2017

**RESEARCH ASSISTANT****PRIYANKA TOMAR****Publications****Papers in Refereed Journals**

- “Antimicrobial Resistance: The Next Big Epidemic”, co-authored with Divya Chaudhry, *International Journal of Community Medicine and Public Health*, July, 2017

**Working Papers / Policy Briefs**

- “Job Creation in Jammu and Kashmir: Sectoral Perspectives”, co-authored with Ali Mehdi and Divya Chaudhry (submitted to the National University of Singapore) 2017
- “Prevention of Chronic Diseases: Reorienting Primary Health Systems in India”, co-authored with Ali Mehdi, Divya Chaudhry and Pallavi Joshi, ICRIER working paper, no. 321, May 2016
- “Prevention of Chronic Diseases: Reorienting Primary Health Systems in India”, co-authored with Ali Mehdi, Divya Chaudhry and Pallavi Joshi, HPI policy brief, no.3, May 2016



# **Audited Annual Accounts**



# Audited Annual Accounts

## V SAHAI TRIPATHI & CO CHARTERED ACCOUNTANTS

C-593, LGF, Defence Colony  
New Delhi - 110024  
Tel. : +91-11- 46612531-33  
Fax : +91-11- 46540520  
E-Mail : vst@sahaitripathi.com

### AUDITORS' REPORT

The Members,  
Indian Council for Research on  
International Economic Relations,  
Core 6A, 4<sup>th</sup> Floor,  
India Habitat Centre,  
Lodi Road,  
New Delhi

We have audited the accounts of your Council and certify that the annexed Income and Expenditure Account for the year ended March 31, 2017 and Balance Sheet as at March 31, 2017 for the year read with the Statement of Accounting Policies and Notes thereon have been correctly drawn from the books of accounts and vouchers examined and the information and explanations given to us.

It is further certified that: -

- (a) We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of our audit;
- (b) Proper books of accounts have been kept by the Council so far as it appears from our examination of those books;
- (c) The Council's Balance Sheet and Income and Expenditure account dealt with by this report are in agreement with the books of accounts and in our opinion and to the best of our information and according to the explanations given to us, the said accounts give a true and fair view:
  - (i) in the case of the Balance Sheet of the state of affairs of the Council as at March 31, 2017; and
  - (ii) in the case of the Income and Expenditure account of the excess of Income over Expenditure for the financial year ending on March 31, 2017

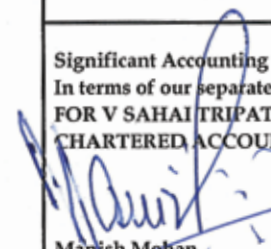

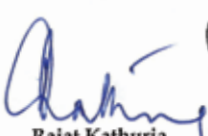
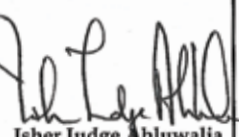


New Delhi  
Dated: August 25, 2017

For V SAHAI TRIPATHI & CO  
Chartered Accountants  
Firm Regn No: 000262N

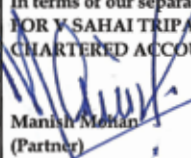


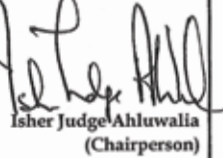
  
(Manish Mohan)  
Partner  
M. No: 091607

**Indian Council for Research on International Economic Relations**  
**Balance Sheet as at March 31, 2017**

Particulars	Current Year Amount (₹)	Previous Year Amount (₹)
<b><u>SOURCES OF FUND</u></b>		
<b>Endowment Fund</b>	<b>345,471,469</b>	<b>304,971,469</b>
Opening Balance	304,971,469	304,451,469
Life Membership fee received during the year	-	20,000
Donations received during the year	40,000,000	-
Transferred from General Fund to RBI - Chair EF	500,000	500,000
<b>Building Fund</b>	<b>150,000,000</b>	<b>100,000,000</b>
Opening Balance	100,000,000	100,000,000
Received during the year	50,000,000	-
Interest on Investment of Building Fund during the year	402,546	2,241,325
Transfer towards rent & maintenance paid to IHC	(402,546)	(2,241,325)
<b>Fixed Assets Fund-Net Block</b>	<b>56,674</b>	<b>72,480</b>
Fixed Assets Fund-Gross Block	4,000,000	4,000,000
(Accumulated depreciation reserve)	(3,943,326)	(3,927,520)
<b>General Fund</b>	<b>73,826,168</b>	<b>48,867,661</b>
Opening Balance	48,867,661	25,816,924
Transferred From Income & Expenditure Account	24,958,507	23,050,737
<b>Investment Equalisation Reserve</b>	<b>195,637</b>	<b>342,862</b>
<b>Current Liabilities &amp; Provisions(As per Schedule 4)</b>	<b>33,596,164</b>	<b>24,927,034</b>
Current Liabilities	14,463,583	7,668,918
Provisions	11,851,462	6,016,159
Grant received in advance	7,281,119	11,241,957
<b>TOTAL</b>	<b>603,146,112</b>	<b>479,181,506</b>
<b><u>APPLICATIONS OF FUND</u></b>		
<b>Fixed Assets (As per Schedule 1)</b>	<b>158,864,058</b>	<b>110,302,752</b>
Gross Block	202,287,785	152,865,516
Accumulated depreciation reserve	(43,423,727)	(42,562,764)
<b>Investments (As per Schedule 2)</b>	<b>352,230,000</b>	<b>331,730,000</b>
Long-term Investment	352,230,000	331,730,000
<b>Current Assets, Loans &amp; Advances(As per Schedule 3)</b>	<b>92,052,054</b>	<b>37,148,756</b>
Cash and Bank	69,440,000	17,222,036
Loans, Advances & Other Recoverables	14,362,121	10,785,899
Grant Receivable	5,316,457	6,033,466
Prepaid Expenses	2,933,476	3,107,354
<b>TOTAL</b>	<b>603,146,112</b>	<b>479,181,506</b>
<p>Significant Accounting Policies and Notes (Schedule 7)</p> <p>In terms of our separate report of even date</p> <p><b>FOR V SAHAI TRIPATHI &amp; CO</b></p> <p><b>CHARTERED ACCOUNTANTS</b></p>		
 <b>Manish Mohan</b> (Partner) M. No. 091607	 <b>Rajeev Kapil</b> (Secretary)	 <b>Rajat Kathuria</b> (Director & CE)
		 <b>Isher Judge Ahluwalia</b> (Chairperson)



**Indian Council for Research on International Economic Relations**  
**Income & Expenditure account for the year ended March 31, 2017**

Particulars	Current Year Amount (₹)	Previous Year Amount (₹)
<b>A. INCOME</b>		
<b>Grants</b>	<b>146,867,686</b>	<b>143,109,578</b>
Received during the year	143,623,857	156,378,465
Receivable during the year	5,316,457	6,033,466
Received during the year for previous year	(6,033,466)	(19,842,534)
Brought Forward from Previous Year	11,241,957	11,782,138
Carried Forward for next year	(7,281,119)	(11,241,957)
<b>Income/Profit on Investment</b>	<b>24,103,359</b>	<b>24,787,707</b>
Interest on Investments for the year	24,505,905	27,029,032
Transfer to Building Fund	(402,546)	(2,241,325)
<b>Transfer from Building Fund for Extra office space</b>	<b>402,546</b>	<b>2,241,325</b>
<b>Interest on Savings Bank Account</b>	<b>2,341,761</b>	<b>2,163,283</b>
<b>Exchange Rate Fluctuation</b>	<b>(26,578)</b>	<b>598,130</b>
<b>Other Income</b>	<b>815,877</b>	<b>2,273,122</b>
<b>TOTAL (A)</b>	<b>174,504,651</b>	<b>175,173,145</b>
<b>B. EXPENDITURE</b>		
<b>Research Expenses:-</b>	<b>117,953,040</b>	<b>119,438,174</b>
Salaries & Allowances	52,171,195	52,209,534
Consultancy Charges	27,707,990	25,364,222
Travel Expenses	15,320,998	14,391,183
Workshops Seminars & Meetings	12,013,157	19,448,326
Publication Expenses	2,065,397	1,689,549
Communication Expenses	1,258,692	1,515,897
Library Expenses	7,415,611	4,819,463
<b>Administrative Expenses:-</b>	<b>23,688,954</b>	<b>21,663,359</b>
Salaries & Allowances	20,360,841	18,215,676
Professional Services	509,375	352,861
Office Expenses	2,732,113	3,083,322
Fees and Subscriptions	86,625	11,500
<b>Bad Debts Written Off</b>	<b>448,833</b>	<b>-</b>
<b>Overheads:-</b>	<b>4,768,399</b>	<b>8,469,519</b>
Rent/Utility & Electricity Charges	3,377,993	7,192,855
Repair and Maintenance	1,069,508	955,766
Property Tax	320,898	320,898
<b>TOTAL (B)</b>	<b>146,859,226</b>	<b>149,571,052</b>
<b>Surplus/(Deficit) before Depreciation (A-B)</b>	<b>27,645,425</b>	<b>25,602,093</b>
Depreciation	1,945,285	2,078,658
Transfer of Depreciation to Fixed Assets Fund Account	(15,806)	(27,301)
Loss on Sale of Fixed Assets	1,329	-
TDS Paid on Demand	256,110	-
<b>Surplus/(Deficit) before appropriation</b>	<b>25,458,507</b>	<b>23,550,737</b>
Appropriated to RBI Chair Endowment Fund	500,000	500,000
<b>Surplus/(Deficit) after appropriation</b>	<b>24,958,507</b>	<b>23,050,737</b>
<b>TOTAL</b>	<b>174,504,651</b>	<b>175,173,145</b>
<b>Significant Accounting Policies and Notes to Accounts (Schedule 7)</b> In terms of our separate report of even date <b>FOR V. SAHAI TRIPATHI &amp; CO</b> <b>CHARTERED ACCOUNTANTS</b>		
 <b>Manish Mehan</b> (Partner) M. No. 091607	 <b>Rajeev Kapil</b> (Secretary)	 <b>Rajat Kathuria</b> (Director & CE)
		 <b>Isher Judge Ahluwalia</b> (Chairperson)





**Indian Council for Research on International Economic Relations**  
**Details of Fixed Assets (FY 2016-17)**

Own Assets:												Schedule 1
Particulars	Rate of Depreciation (%)	Gross Block					Depreciation			Net Block		
		As at 01.04.2016	Additions		As at 31.03.2017	As at 01.04.2016	For the Year	Upto 31.03.2017	Deductions	As at 31.03.2017	As at 31.03.2016	
			More than 180 days	Less than 180 days								
												Own
Air Conditioners	15%	35,250	-	37,620	37,620	35,250	23,969	2,822	23,969	34,798	11,281	
Building	10%	22,186,295	-	-	-	-	17,592,798	459,350	-	4,134,147	4,993,497	
Car	15%	939,111	-	-	-	-	200,735	110,756	-	311,491	738,376	
Computers	60%	9,925,371	595,050	132,300	9,590,320	1,062,401	9,372,205	727,390	1,060,353	551,078	553,165	
Electrical Fittings	10%	1,063,525	-	-	1,063,525	739,708	32,382	727,390	772,090	291,435	323,817	
EPABX	15%	105,820	-	-	105,820	84,409	84,409	3,212	-	18,199	21,411	
Fax	15%	160,210	-	-	160,210	152,916	152,916	1,094	-	6,200	7,294	
Cell Phone	15%	421,513	-	61,000	421,513	181,916	181,916	40,515	-	222,431	239,597	
Furniture & Fixtures	10%	12,999,730	-	-	12,999,730	-	8,720,877	427,885	-	9,148,762	4,278,853	
Laser Printer	60%	1,071,324	-	-	1,071,324	-	922,021	89,582	-	1,011,603	149,303	
Misc. Equipments	15%	248,482	39,949	-	288,431	154,068	20,151	20,151	-	114,192	94,394	
Multimedia Presentation System	15%	270,400	-	-	270,400	262,040	262,040	1,254	-	263,294	8,360	
Overhead Projector	15%	257,770	-	-	257,770	178,623	178,623	11,872	-	190,495	79,147	
Refrigerator	15%	14,500	-	-	14,500	9,818	9,818	702	-	10,520	4,682	
Scanner	60%	39,975	-	-	39,975	-	39,121	512	-	39,633	854	
Total As at 31.3.2017		49,739,276	634,999	230,920	49,507,544	1,097,651	38,635,244	1,929,479	1,084,322	10,027,143	11,104,031	
Total As at 31.3.2016		49,313,602	89,425	336,248	49,739,275	-	36,583,887	2,051,357	-	11,104,031	12,729,715	

Funded Assets:

Funded Assets:												(₹)
Particulars	Rate of Depreciation (%)	Gross Block					Depreciation				Net Block	
		As at 01.04.2016	Additions		As at 31.03.2017	Sales/ Written Off	As at 01.04.2016	For the Year	Upto 31.03.2017	Deductions	As at 31.03.2017	As at 31.03.2016
			More than 180 days	Less than 180 days								
Land*		2,246,820	-	-	-	2,246,820	-	-	-	2,246,820	2,246,820	
Computers**	60%	3,655,612	-	-	-	3,655,612	3,645,131	6,289	3,651,420	4,192	10,481	
EPABX**	15%	87,620	-	-	-	87,620	57,052	4,585	61,637	25,983	30,568	
Laser Printer**	60%	168,050	-	-	-	168,050	167,568	289	167,857	482	193	
Overhead Projector**	15%	88,718	-	-	-	88,718	57,769	4,643	62,412	26,306	30,950	
Total		6,246,820	-	-	-	6,246,820	3,927,520	15,806	3,943,326	2,303,494	2,319,300	
Capital Work-In-Progress*		94,599,256	18,865,275	33,068,890	-	146,533,421	-	-	-	146,533,421	94,599,256	
Capital Advances		2,280,165	-	-	-	2,280,165	-	-	-	-	2,280,165	
Total		96,879,421	18,865,275	33,068,890	-	146,533,421	-	-	-	146,533,421	96,879,421	
Grand Total As at 31.3.2017	0	152,865,517	38,365,549	66,368,700	3,377,816	202,287,785	42,562,764	1,945,285	43,423,727	158,864,058	110,302,752	
		105,362,073	39,878,373	67,076,786	6,590,731	152,865,516	40,484,106	2,078,658	42,562,764	110,302,751	64,877,967	

Against Building Fund  
Against Capital Grant



## Indian Council for Research on International Economic Relations

FY 2016-17

## Schedule 2

Investments:

Particulars	Current Year (₹)	Previous Year (₹)
<b>Investments in Fixed Deposit with Banks:</b>	<b>268,750,000</b>	<b>248,750,000</b>
Bank of India	96,100,000	32,000,000
Canara Bank	62,900,000	47,000,000
IDBI Bank	2,500,000	2,500,000
IndusInd Bank	49,500,000	107,750,000
Kotak Mahindra Bank	57,750,000	59,500,000
<b>Investment in GOI Bonds</b>	<b>33,480,000</b>	<b>32,980,000</b>
<b>Investment in Mutual Funds:</b>	<b>50,000,000</b>	<b>50,000,000</b>
Birla Sunlife Dynamic Bond Fund -Ret-Grth (195769 units of Rs.10 each)	5,000,000	5,000,000
Birla Sunlife Frontline Equity Fund (20955 units of Rs.10 each)	3,300,000	3,300,000
Franklin India Corporate Bond Opp. - Debt Fund (699408 units of Rs.10 each)	10,000,000	10,000,000
HDFC Equity Fund (7576 units of Rs.10 each)	3,400,000	3,400,000
ICICI Prudential LTP - Growth (288992 units of Rs.10 each)	5,000,000	5,000,000
IDFC - DBF - Reg - Growth (284733 units of Rs.10 each)	5,000,000	5,000,000
Kotak Select Focus Fund (150561 units of Rs.10 each)	3,300,000	3,300,000
SBI Blue Chip Fund - Growth (186553 units of Rs.10 each)	5,000,000	5,000,000
UTI Dynamic Bond - Debt Fund (638211 units of Rs.10 each)	10,000,000	10,000,000
<b>Total</b>	<b>352,230,000</b>	<b>331,730,000</b>



Indian Council for Research on International Economic Relations		
FY 2016-17		
Schedule 3		
Current Assets, Loans & Advances:		
Particulars	Current Year (₹)	Previous Year (₹)
<b>A) Current Assets</b>	<b>69,440,000</b>	<b>17,222,036</b>
-Cash in Hand		
(As per Schedule 3A)	60,500	142,909
-Balances with Bank in Saving Account		
(As per Schedule 3B)	69,379,500	15,405,414
-Balances with Bank in US Dollar Account	-	1,673,712
<b>B) Loans, Advances &amp; Other Recoverables</b>	<b>14,362,121</b>	<b>10,785,899</b>
- Advances Recoverable in Cash or in Kind	7,075,647	6,793,636
- LIC Fund for Gratuity A/c	3,551,860	-
- Interest Accrued	3,079,831	3,360,263
- Other Recoverables	632,000	632,000
- Royalty Receivable	22,783	-
<b>C) Grants Receivable</b>	<b>5,316,457</b>	<b>6,033,466</b>
<b>D) Prepaid Expenses</b>	<b>2,933,476</b>	<b>3,107,354</b>
<b>Total</b>	<b>92,052,055</b>	<b>37,148,754</b>

#### Schedule 3A

##### Imprest:

Particulars	Current Year (₹)	Previous Year (₹)
Petty Cash-Imprest	3,042	2,321
Petty Cash - Imprest (USD)	57,458	140,588
<b>Total</b>	<b>60,500</b>	<b>142,909</b>

#### Schedule 3B

##### Bank Accounts- INR:

Particulars	Current Year (₹)	Previous Year (₹)
ICICI Bank Ltd A/c No: 000701062084	806,603	92,103
Kotak Mahindra Bank A/c No: 01720010028420	31,142,817	13,865,408
SCB (AE) A/c No: 52011022120	-	377,737
State Bank of India A/c No: 30614820322	18,235	1,070,166
Kotak Mahindra FCRA A/c - 9911779692	37,411,845	-
SCB USD A/C NO: 3582023815001	-	1,673,712
<b>Total</b>	<b>69,379,500</b>	<b>17,079,126</b>





## Indian Council for Research on International economic Relations

FY 2016-17

## Schedule 4

**Current Liabilities & Provisions:**

Particulars	Current Year (₹)	Previous Year (₹)
<b>A) Current Liabilities:-</b>	<b>14,463,583</b>	<b>7,668,918</b>
-Sundry Creditors	6,496,973	3,213,513
-Statutory Dues	3,055,002	896,432
-Retention Money - Builder	4,911,608	3,558,973
<b>B) Provisions:-</b>	<b>11,851,462</b>	<b>6,016,159</b>
-Expenses Payable	3,605,470	3,626,134
-Provision for Gratuity (as per LIC computation)	8,245,992	2,390,025
<b>C) Grants Received in Advance:</b>	<b>7,281,119</b>	<b>11,241,957</b>
<b>Total</b>	<b>25,350,172</b>	<b>22,537,009</b>

## Schedule 5

**Other Income:**

Particulars	Current Year (₹)	Previous Year (₹)
Royalty	110,418	-
Interest on Income Tax Refund	219,051	445,017
Sundry balances Written back	204,859	1,482,020
Income Recognized on Discount GOI Invt.	116,196	122,402
Misc. Receipts	162,597	223,684
Sale of Publication	2,756	-
<b>Total</b>	<b>815,877</b>	<b>2,273,123</b>



Indian Council for Research on International economic Relations	
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Schedule 6	
Details of Grant Receivable as on 31.3.2017 :	
Particulars	(₹)
Opening as on 1.4.2016	6,033,466
Less: Written off during the year	0
Less: Received during the year	6,033,466
Grant Receivable for previous F/Ys:	0
ADD: Grant Receivable for F/Y: 2016-2017	5,316,457
Closing as on 31.3.2016	5,316,457

**Working:**

Details of Grant Receivable as on 01.04.2016	(₹)
Grant Receivable A/c - COAI	558,900
Grant Receivable - TECC	995,325
Grant Receivable - IPE	3,428,015
Grant Receivable - BP	193,000
Grant Receivable - Talentnomics	477,087
Grant Receivable - UNU	381,139
<b>Total</b>	<b>6,033,466</b>

**Grant Received During The Year for receivable of PY:**

Particulars	(₹)
Grant Receivable A/c - COAI	558,900
Grant Receivable - TECC	995,325
Grant Receivable - IPE	3,428,015
Grant Receivable - BP	193,000
Grant Receivable - Talentnomics	477,087
Grant Receivable - UNU	381,139
<b>Total</b>	<b>6,033,466</b>

**Grant Receivable as at 31.3.2017:**

Particulars	(₹)
Grant Receivable A/c - Amway	1,274,000
Grant Receivable - BHC	3,073,237
Grant Receivable - Facebook	969,220
<b>Total</b>	<b>5,316,457</b>

**Other Recoverables as at 31.3.2017:**

Particulars	(₹)
Grant Receivable - Indo Nepal Cooperation	32,000
Grant Receivable - NTB Portal	600,000
<b>Total</b>	<b>632,000</b>

**Grant Received in Advance as at 31.03.2017:**

Particulars	(₹)
Grant Received in Advance - BMGF I	1,537,292
Grant Received in Advance - DFAT	1,171,699
Grant Received in Advance - Ford Fndn	2,488,795
Grant Received in Advance - Idfc	2,083,333
<b>Total</b>	<b>7,281,119</b>



**Indian Council for Research on International Economic Relations  
For the Year ended March 31, 2017**

**SCHEDULE – 7**

**SIGNIFICANT ACCOUNTING POLICIES AND NOTES TO ACCOUNTS**

**Accounting Policies**

• **Basis of Preparation of Financial Statements**

The financial statements of ICRIER have been prepared under the historical cost convention, on the accrual basis of accounting, in accordance with Generally Accepted Accounting Principles ("GAAP") in India. The financial statements are prepared to comply, in all material respects, with all the applicable accounting principles in India. The management evaluates all recently issued or revised Accounting Standards on an ongoing basis.

• **Use of Estimates**

The preparation of the financial statements in conformity with GAAP requires that the management makes estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent liabilities as at the date of the financial statements and the reported amounts of income and expenses during the reported period. Examples of such estimates include future obligations under employee benefit plans, the useful lives of fixed assets etc. Contingencies are recorded when it is probable that a liability will be incurred, and the amount can be reliably estimated. When no reliable estimate can be made, a disclosure is made as contingent liability. Actual results could differ from those estimates.

• **Depreciation/ Amortization**

ICRIER follows the written down value method for providing depreciation at rates provided in the Income Tax Act, 1961 except for assets below Rs. 5,000 which are fully depreciated in the year of purchase.

Depreciation on additions to assets which are put to use for a period of more than one hundred and eighty days is provided for the full year and on additions made and put to use for less than one hundred and eighty days, fifty percent of the prescribed depreciation rate is provided. No depreciation is provided in assets sold/disposed of during the year.

• **Income Recognition**

Grants are accounted for when there is reasonable certainty of their ultimate collection. The accounting policy is based on prudence and certainty.

Interest accrued on fixed/term deposits is treated as income under revenue accounts of the year in which it is accrued using the time proportion method, based on underlying interest rates on accrual basis.

• **Fund Accounting**

Donations received towards the corpus are carried forward in the Balance Sheet under Endowment Fund. Interest earned thereupon is used as per the terms or conditions imposed by Donor.

Funds received for creation of chair/ professorship are kept intact and interest earned thereupon is used as per the terms or conditions imposed by Donor.

• **Fixed Assets**

Fixed assets purchased from own funds are stated at cost including taxes, duties, freight and other incidental expenses and taxes incurred in relation to acquisition and installation of the same.

Fixed assets purchased out of specific funds received from grantor(s) or donor(s), have also been capitalized and the depreciation on same has been computed as per the policy of ICRIER. The depreciation charged on such Fixed Assets has been reduced from the corresponding respective fund balance.

Incidental expenditure during construction period incurred up to the date of commissioning is capitalized. Cost of acquisition/construction is inclusive of freight, taxes & other incidental expenses.

Capital work in progress is stated at cost.

Expenditure on books and publications is charged to the Income and Expenditure account but a separate record of items purchased is maintained.

• **Investments**





Investment for fixed period is shown as long term investment at their cost. Provision for diminution in the value is made only if in the opinion of the management the fall in value is of a permanent nature.

The discount received or premium paid at the time of making the investment will be amortized over the period of maturity of the investment by crediting and debiting the income and expenditure accordingly.

- **Employee Benefits**

- **Short-Term Employee Benefits**

Short-term employee benefits including salaries, social security contributions, and non-monetary benefits (such as medical care) for current employees are estimated and measured on an undiscounted basis.

- **Defined Benefit Plan**

Liabilities for gratuity funded in terms of a scheme administered by the Life Insurance Corporation of India are determined by valuation made at the end of each financial year. Provision for liabilities pending remittance to the fund is carried in the Balance Sheet.

The employee's gratuity scheme is the Company's defined benefit plan. The Gratuity liability payable under the payment of Gratuity Act, 1972, provides a lump sum payment to vested employees at retirement, death, incapacitation or termination of employment, of an amount based on the respective employee salary and tenure of employment. The liability to pay arises once an employee completes five years of tenure of service in an organization. It is paid/ payable to employee at the time of retirement or on resignation, or on death to his dependents. Company accrues liability towards contribution to gratuity on the basis of valuation conducted by LIC.

- **Earned leaves**

Encashment of earned leave salary is accounted for on the basis of actual payment to the employees at the time of retirement/leaving.

- **Fixed Deposits with Bank Categorized as Investments**

Investments have been made in Fixed Deposits in Scheduled Banks in compliance with Section 11(5) of the Income Tax Act, 1961.

Funds received from Funding Agencies/ Donor(s) and the remaining unutilized, have been categorized under Cash & Cash Equivalents.

- **Basis of Accounting**

All Income & Expenses in the annual accounts are for "on-going" operations of ICRIER. All recognized gains and losses are accounted on accrual basis of accounting.

- **Grant Accounting:**

Grants are accounted for as income when there is reasonable certainty, i.e., either grant has been received and realized or sanction orders have been received. Unless there is reasonable certainty regarding their ultimate collection, grants are not recorded.

In cases where projects for which the grants were received have not been completed, the unspent grants are estimated and are carried forward as a liability. In subsequent years unspent grants are transferred to the Income and Expenditure Account to match them with related costs which they were intended to cover.

- **Provisions and Contingencies**

A Provision is recognized when there is a present obligation as a result of an obligating event that probably requires an outflow of resources and a reliable estimate can be made of the amount of the obligation. A disclosure for a contingent liability is made where there is a possible obligation that may, but probably will not, require an outflow of resources or where there is a possible obligation or a present obligations in respect of which the likelihood of outflow of resources is remote, no provision or disclosure is made.

Contingent Liabilities are disclosed after an evaluation of the facts and legal aspects of the matters involved. Contingent Assets are neither recognized, nor disclosed. Provisions, Contingent Liabilities and Contingent Assets are reviewed at each Balance Sheet.



**B). Notes to Accounts**

- **Current Assets, Loans and Advances**

In the opinion of ICRIER, the current assets, loans and advances of ICRIER have a realizable value to the extent shown in the accounts and the provision for all known liabilities including depreciation are adequate.

- **Taxation**

The Director General of Income Tax (Exemptions) has with effect from the financial year 2006-07 and onwards granted us exemption from income tax under sub-clause (iv) of section 10 (23C) subject to our fulfilling certain conditions including application of 85% of our income during the year and investment of our surplus funds in specified investments. Therefore, no provision for income tax is made. Assessment of ICRIER up to the AY-2014-15 has been completed with Nil demand on ICRIER. The assessment for the AY 2015-16 is underway.

- **Depreciation on Funded Assets**

During the year ended 31<sup>st</sup> March, 2017, depreciation has been charged on funded assets with effect from date of purchase of such assets. The accumulated depreciation has been netted from the Gross Value of Fixed Assets. The corresponding depreciation on same have been shown separately under Schedule-1 on Fixed assets and such amount of depreciation is deducted from Fixed Assets Fund appearing in the Balance Sheet.

- **Provisions for Employee Benefits**

During the year based on valuation made by the Fund Manager (M/s Life Insurance Corporation India Ltd.), an amount of Rs.11,00,000 has been remitted to the Fund Manager against the demand of Rs.46,94,132. The Fund value as on 31.03.2017 after interest is Rs.35,51,860. Provision of Rs.58,55,967 has been created to the extent of shortfall in the Fund Value as on 31.03.2017.

- **Contingent liability**

Contingent liability on account of a labour dispute awaiting settlement in the Hon'ble Delhi High Court is estimated at Rs.10,00,000.

An additional amount in respect to the change in circle rates may be payable to Delhi Government for the Saket Building as and when any such change takes place in future.

Interest on Building Fund Investments amounting to Rs. 4,02,546 for this year has, as per decision of the Board, has been transferred to Income to meet the cost of rent & maintenance charges for extra space taken from IHC.

During the year ended March 31, 2017, Rs. 5,00,000 has been appropriated to the Endowment Fund from the Income & Expenditure account which on account of Income from Investment made, as per the terms and conditions of RBI- Chair Fund Endowment Grant.

- **Related Party Transaction**

During the year, the Director General of ICRIER has been paid Rs.53,52,968 as gross remuneration for whole time employment.

- **Comparative Figures**

Previous year's figures have been re-grouped or re-arranged wherever necessary.

The Figures in the Income & Expenditure Account and Balance Sheet are rounded off to the nearest rupee.

Financial Statements consist of Balance-sheet and Income & Expenditure along-with annexed Schedules, significant accounting policies and notes to accounts. **Schedules 1 to 7** form an integral part of the Balance Sheet and Income & Expenditure Account.





## ICRIER Donors

ICRIER cherishes its status as the country's premier autonomous and independent economic policy think-tank. It has been able to nurture its treasured autonomy by establishing an Endowment Fund, the income from which helps to meet administration expenses and support research on important topics where project grant is not immediately available. Income from the endowment fund has also helped to enhance ICRIER's research capacity and networking.

We appreciate the generosity of our donors and assure them that ICRIER will continue to strive to maintain its focus on policy-oriented research and achieve international standards in the quality of its research output. Prominent corporate donors to ICRIER's Endowment and Building Fund include:

- Abhishek Industries
- American Express Foundation
- Bajaj Auto Ltd.
- Bank of Credit and Commerce International (BCCI)
- Bank of Baroda
- Bank of India
- Bharat Forge Ltd.
- Bharti Enterprises
- Bharati & Suresh Shroff Memorial Trust
- Canara Bank
- Central Bank of India
- Citibank
- Corporation Bank of India
- Delhi International Airport (P) Ltd.
- Deutsche Bank
- DLF Ltd.
- DSP Merrill Lynch Ltd.
- ESSAR Group
- Financial Technologies (India) Ltd.
- Ford Foundation
- Fortis Group of Companies/Religare Enterprises
- GE Fund
- Housing Development Finance Corporation Ltd.
- HDFC Assets Management Company
- HDFC Bank
- HDFC Standard Life Insurance
- Hindustan Lever
- ICICI Bank Ltd.
- Indian Hotels Company Ltd.
- Industrial Development Bank of India
- Infosys Foundation
- Infosys Technologies Ltd.
- Infrastructure Development Finance Company
- ITC Ltd.
- Jamnalal Bajaj Foundation
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- Kotak Mahindra Bank Ltd.
- Max Financial Services Ltd.
- Ministry of Finance
- Mitsui Tokyo Kobe Bank
- Nandan Mohan Nilekani
- NASSCOM
- Oriental Bank of Commerce
- Pirojsha Godrej Foundation
- Punjab & Sind Bank
- Punjab National Bank
- Ranbaxy Laboratories Ltd.
- Reliance Industries Ltd
- Reserve Bank of India
- Rohan Narayana Murty
- State Bank of India
- Sterlite Industries
- Tata Chemicals
- Tata Consultancy Services
- Tata Iron & Steel Co.
- Tata Sons
- Trident Group
- Union Bank of India
- Unit Trust of India
- WP Carey Foundation

## About ICRIER

ICRIER, one of India's leading think tanks, was established in August 1981 as a not-for-profit research organisation to provide a strong economic basis for policy making. Under the current Chairperson, Dr. Isher Judge Ahluwalia, ICRIER has continued and reinforced the pursuit of its original vision and in the process significantly expanded the scope of its research activities.

ICRIER is ably supported by a Board of Governors, which includes leading policy makers, academicians, opinion makers and well-known representatives of the corporate world.

ICRIER's success lies in the quality of its human capital. Led by Dr. Rajat Kathuria, Director & Chief Executive, ICRIER's research team consists of highly qualified professors, senior fellows, fellows, research associates and assistants and consultants.

ICRIER conducts thematic research in the following eight thrust areas:

- Macroeconomic Management, Financial Liberalisation and Regulation
- Global Competitiveness of the Indian Economy – Agriculture, Manufacturing and Services
- Challenges and Opportunities of Urbanisation
- Climate Change and Sustainable Development
- Physical and Social Infrastructure including Telecom, Transport, Energy and Health
- Skill Development, Entrepreneurship and Jobs
- Asian Economic Integration with Focus on South Asia
- Multilateral Trade Negotiations and FTAs

International conferences, seminars, public policy workshops, public lectures and publications form an integral part of ICRIER's outreach activities. ICRIER maintains a wide network of resource persons from India and abroad. It strives to attract well-qualified researchers, provides them a stimulating and scholarly work environment and encourages researchers to work in teams. ICRIER's research is widely cited by both academia and the popular press, and has over the years provided critical inputs for policy making.





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