Indian Council for Research on
International Economic Relations

"Linking India with the World"

ANNUAL REPORT
2015-2016

ICRIER

Indian Council for Research on
International Economic Relations

Annual Report
2015-2016

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ICRIER

Foreword by the Chairperson

Isher Judge Ahluwalia
Chairperson, ICRIER

The Annual Report for 2015-16 documents ICRIER's activities in the year just gone by. It has been a year of solid achievements both academically and in policy recommendations. It is a matter of deep satisfaction that the University of Pennsylvania, in its Go To Think Tank report, continues to rank ICRIER as the highest rated Indian Think Tank with respect to impact on public policy. Our international ranking in this category improved from 37 in 2014 to 31 in 2015.

The demand for evidence based policy research is increasing all over the world as governments recognise that they must supplement expertise available within the governmental system with research conducted outside. This is also evident in India and it opens up further opportunities for a think tank like ICRIER to make substantive contributions to the policy making process. ICRIER's research agenda is well crafted to do so as we are working on all the critical areas that are of great relevance today. Our research programme, as elaborated in the Director's report, covers a number of new areas that are growing in importance in India's current stage of development, e.g. global competitiveness of Indian agriculture, employment and skill development, challenges of urbanisation, and climate change. We seek to provide high quality research on issues of contemporary policy interest. We also focus on issues that will loom large in future, even if their importance is not adequately recognised today.

A major highlight of the year was the 6th K. B. Lall Memorial Lecture which was delivered by Dr. Raghuram Rajan, Governor, Reserve Bank of India, to a packed audience of senior policy makers, academics, and representatives of the corporate sector, civil society and the media. I am very happy to note that on this occasion, we were able to announce the launch of a three-year research programme on global competitiveness with financial support from Dr. Rajiv Lall and the IDFC Foundation. ICRIER has also received an endowment grant from Mr. Shardul Shroff to set up the Suresh and Bharti Shroff Chair on Urbanisation in memory of his parents.

ICRIER's new Green building in the Saket Institutional Area is nearing completion and we hope to have it ready in the course of the next few months. It will provide scope for ICRIER to accommodate its expanding footprint in research activity.

I compliment Dr. Rajat Kathuria, Director and Chief Executive, ICRIER who has expanded the scope and quantum of research at ICRIER and also successfully engaged high quality senior research faculty in spanning important new areas of policy significance. I have no doubt that research and policy advice would continue to thrive at ICRIER in the years to come.

Isher Judge Ahluwalia
Chairperson, ICRIER

Board of Governors

Chairperson

Dr. Isher Judge Ahluwalia
W-36, Greater Kailash-I
New Delhi-110 048

Elected Members

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Ms. Janaki Kathpalia
Former Additional Secretary
Ministry of Finance
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Non-Executive Chairman
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Mumbai-400 051

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Vice Chairman & Managing Director
Kotak Mahindra Bank Ltd.
Bakhtawar, 2nd Floor, 229, Nariman Point
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Mr. Anand G. Mahindra
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Mahindra & Mahindra Ltd.
Gateway Building, Apollo Bunder, Mumbai-400 001

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Former Chairman
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Mr. Malvinder Mohan Singh
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Mr. N. K. Singh
Former Member of Parliament (Rajya Sabha)
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Mr. Pramod Bhasin
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Mr. Nitin Desai
Honorary Professor, ICRIER & Chairman,
Institute of Economic Growth
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Dr. Rohan Murty
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Mr. Ashok Jha
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LSE Asia Research Centre
London, United Kingdom

Member-Secretary

Dr. Rajat Kathuria
Director & Chief Executive, ICRIER
Core 6-A, 4th Floor, India Habitat Centre,
Lodhi Road, New Delhi-110 003

Management Committees

Executive-cum-Finance Committee

Dr. Isher Judge Ahluwalia	:	**Chairperson**
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Ms. Janaki Kathpalia	:	Member
Mr. Tarun Das	:	Member
Dr. Rajat Kathuria	:	Member-Secretary

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Ms. Chanda Kochhar	:	Member
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Dr. Rajat Kathuria	:	Member-Secretary

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Mr. N. K. Singh	:	Member
Ms. Janaki Kathpalia	:	Member
Mr. Tarun Das	:	Member
Mr. Pramod Bhasin	:	Member
Dr. Rajat Kathuria	:	Member-Secretary

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5. Mr. K. L. Dalal
6. Mr. B. S. Das
7. Mr. Ashok V. Desai
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11. Mr. R. M. Honavar
12. Mr. S. V. S. Juneja
13. Mrs. Anna R. Malhotra
14. Dr. Suman K. Modwel
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16. Mr. N. C. B. Nath
17. Mr. P. C. Nayak
18. Dr. Deepak Nayyar
19. Dr. V. R. Panchamukhi
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22. Mr. Vinay Bharat Ram
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25. Mr. S. S. Rao
26. Dr. Manmohan Singh
27. Mr. R. V. Subrahmanian
28. Dr. M. S. Swaminathan
29. Mr. T. K. N. Unnithan
30. Dr. Charan D. Wadhva

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2. Dr. Isher Judge Ahluwalia
3. Mr. Mukesh D. Ambani
4. Mr. J. S. Baijal
5. Mr. Jagmohan Lal Bajaj
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8. Mr. Jamshyd Godrej
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20. Dr. Rajiv Kumar
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22. Dr. Deepak Lal
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25. Mr. Raghunandan D. Maluste
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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
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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

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Director's Report

Rajat Kathuria
Director & Chief Executive, ICRIER

Research activities at ICRIER continued to focus on areas of central importance for India's policy regime. The global competitiveness of Indian agriculture, challenges of urbanisation, jobs and skill development, energy and telecom, and climate change are some of the new thrust areas for research, while macro-economic management, financial regulation, trade negotiations and FTAs, and Asian economic integration with focus on South Asia remain our traditional areas of research.

India is on the cusp of transformational change but this will only happen if the right policies are followed and any policy push must be supported by data, analysis and strategic thinking. The policies we recommend must meet the challenge of creating 100 million productive jobs over the next decade in an economy experiencing unprecedented urbanisation, impact of climate change and technological changes, some of which may displace labour. We at ICRIER accept this formidable challenge.

ICRIER Ranked No. 1

In the 2015 ranking of the University of Pennsylvania's Go To Think Tank report that sampled almost 7,000 think tanks worldwide, ICRIER continued to be the highest ranked Indian think tank in terms of impact on public policy.

Our international ranking in the same category increased from 37 in 2014 to 31 in 2015. ICRIER was also Number 2 in international development and Number 3 in offering best new ideas among think tanks in India.

Our research on global competitiveness of Indian agriculture has expanded both in scope and depth and is led by Prof. Ashok Gulati, who holds the Infosys Chair on Agriculture. India's demand for food, feed and fibre is likely to exceed China's by 2030. In particular, as India's 400 million strong urban population is expected to expand to 600 million by 2030, food security will become an even bigger challenge. Agricultural growth beyond 4 percent is critical for inclusion, given that agriculture supports half our workforce.

Research at ICRIER focuses on the following key drivers of agricultural growth: functioning of agricultural markets, logistics, agricultural processing, and retailing. Bio-fortification is also important to tackle the gigantic problem of food and nutritional insecurity. Studying interstate productivity differentials and drawing lessons from successes in Punjab, Madhya Pradesh and Gujarat is a major research initiative supported by the Bill and Melinda Gates Foundation (BMGF). Mr. Siraj Hussain, former Secretary, Agriculture, and Mr. Pravesh Sharma, former Managing Director, Small Farmers' Agribusiness Consortium, Ministry of Agriculture, Government of India, have been very valuable additions to the research team.

As urbanisation gathers momentum, it is amply clear that Indian cities are in no shape to either provide a reasonable quality of life to their residents or to act as engines of growth. ICRIER has continued to work on the challenges and opportunities of urbanisation ranging from the woes of water and sanitation to unlocking land values for financing urban infrastructure and e-governance.

The programme of research and capacity building on urbanisation, funded by the Ministry of Urban Development, was led by Dr. Isher Judge Ahluwalia on an honorary basis. It produced a number of research studies and extensive interaction with state governments and urban local governments. The programme highlighted the importance of an integrated approach in dealing with urban challenges such as water, sewerage, solid waste management, public transport, municipal finance, governance and environment. A pioneering study by Mihir Shah and Himanshu Kulkarni on urban water provided a new framework for integrated water management in urban India.

In a study of urbanisation patterns across India, funded by DFID, Professor Meenu Tewari used satellite data from night time lights along with census, environmental and economic data to ascertain the patterns of urban expansion. The relationship between urban sprawl, land use planning, and transport connectivity was explored to analyse the cost of the sprawl model of urbanisation, and current policies and institutional environment that create incentives for the same. The case studies for four Indian cities – Bangalore, Indore, Pune and Surat – delve into the impact of this model of urban growth on basic urban services. For the first time in India, this collaborative research between ICRIER and World Resources Institute (WRI) documents both the macro and micro aspects of India's urbanisation challenge.

Climate change and its impact on the economy has gained traction in research at ICRIER and we are one of the country partners in a major new international initiative – The Global Commission on the Economy and Climate. The New Climate Economy (NCE), the flagship project of this initiative, aims to produce better and more comprehensive evidence on whether and how climate policy can be made compatible with strong economic performance. This year ICRIER published two reports: *De-carbonisation of Indian Railways* in collaboration with Climate Policy International (CPI), and *Patterns of India's Urbanisation* in partnership with World Resources Institute (WRI).

A study linking climate change with the competitiveness of Indian cities was conducted by Professor Meenu Tewari as part of our climate change research funded by the Rockefeller Foundation. The aim was to understand how and under what conditions a city's adaptation decisions contribute to its economic competitiveness. Spatial mapping of four cities – Pune, Surat, Kochi and Ludhiana – highlighted the overlays of ongoing urban development and climate risks such as flooding. A model is now being developed to assess the economic costs and benefits of climate action.

A paper, *Towards a Sustainable Energy Strategy for India*, by Montek Singh Ahluwalia, Nicholas Stern and Himanshu Gupta was presented in a seminar and has subsequently been published as a joint working paper of ICRIER, the London School of Economics, and the Grantham Institute.

The telecom sector has been one of the star performers in India's growth and telecom has acquired the status of a General Purpose Technology (GPT) forming the backbone of much of India's vaunted IT and BPO industry. With the second largest internet user base in the world and with internet services embedded in numerous government initiatives, the centrality of the internet to India's development is well accepted. However, there has been relatively little discussion on the magnitude of benefits and even less on the importance of internet openness for enabling and sustaining such gains. Building on previous work at ICRIER under my direct engagement on growth dividends of the mobile phone, a study at ICRIER estimated for the first time the direct and indirect economic value of an open Internet for India. Funded by DFID, the study widened the discourse on the multi-stakeholder model of internet governance towards enabling a free, open and secure internet.

The conundrum of net neutrality has become one of the most pressing issues of policy given the capability of the internet to spawn innovations that could be potentially disruptive for traditional businesses. I am currently leading a research project on net neutrality with actionable policy recommendations, based on extensive consultations and research. ICRIER also partnered with the telecom sector regulator TRAI in preparing recommendations for the Government of India for faster roll out of 2 MBps fibre connectivity to all 250,000 villages in India.

Jobs and skill development have been a weak point in India's rapidly growing economy for close to two decades. ICRIER is part of a major collaborative project on Jobs for Development, funded by the World Bank.

ICRIER is one of five global institutions participating in the Network of Jobs and Development (NJD) initiative of the World Bank. The project is being co-ordinated by Radhicka Kapoor in ICRIER.

A number of research studies were completed during the year on subjects such as understanding the role of labour regulations and that of openness to trade in creating jobs in the Indian manufacturing sector and the lessons that can be learnt from innovations in labour regulation around the world. Our research, while focusing on India, draws comparisons and lessons from the experience of several countries in job creation, including China, South Africa, Myanmar and Brazil. A study on the dynamics of technology and employment in the Indian manufacturing sector deserves special mention, since the phenomenon of disruptive technologies has become a major concern worldwide.

Skills, inequality, fragility, contractualisation of India's workforce and informality are other themes on which research work is being carried out at ICRIER. The rich studies prepared over a three-year period based on both secondary and primary data will be presented at a concluding conference in Washington DC in November 2016.

The RBI Chair at ICRIER, Professor Jaimini Bhagwati concluded two studies during the year – the first documents the overvaluation of India's market exchange rate compared to the Real Effective Exchange Rate (REER) Index and the second study reviewed existing legislation and financial sector regulatory practices in India. Prof. Bhagwati is also leading a study on whether and to what extent Asset Reconstruction Companies (ARC) can address the Indian banking sector's woes and what changes in legislation and court practices and other measures need to be taken by the government and the Reserve Bank of India.

A number of research studies were conducted in response to specific requirements of the different ministries and departments of the Government of India. The study *Institutional Framework for Collection of Statistics on Trade in Services*, led by Professor Arpita Mukherjee, examined the current process of collection of data on trade in services, its shortcomings and those of the corresponding regulatory framework, taking account of the experiences of other countries in data collection. A study to analyse the impact of the Scheme for Mega Food Parks was also conducted by Prof. Mukherjee for the Ministry of Food Processing Industries, as was an *Evaluation of India's SEZ Policy* for the Ministry of Commerce.

A report estimating the compliance cost of direct taxes in India was submitted to the Central Board of Direct Taxes (CBDT), Ministry of Finance. Two more studies – one focusing on the economic implications were India to apply for memberships of multilateral banks such as the European Bank for Reconstruction and Development (EBRD) and the Inter-American Development Bank (IADB), and the other examining India's experience with bilateral investment treaties (BIT) – were also completed for the Ministry of Finance.

Inefficient tax administration and complexity of tax laws have been a constant concern for Indian businesses. A research study on tax administration reforms funded by DFID was concluded and an edited book was published by Lexis Nexis. The study recommends non-intrusive technology based practical solutions that will help equip administrators to implement changes that may ultimately improve the business environment and increase tax revenue for the exchequer.

ICRIER's long standing emphasis on South Asian economic integration has continued to attract the attention of policy makers, academics and the media. Under the leadership of Professor Nisha Taneja, ICRIER has played a significant role in enhancing the bilateral interface and also helped improve mutual awareness and understanding among relevant stakeholders in the region. We intensified our work on trade normalisation between India and Pakistan with focus this year on the health sector. A research study examined trade possibilities between the two countries in key health services studying regulatory and market access barriers and suggested how the trade potential can be tapped. This was a collaborative effort with the Sustainable Development Policy Institute (SDPI) in Islamabad. ICRIER also conducted a study on *Sub-Regional Cooperation between India-Myanmar and India-Bangladesh* with the aim to enhance trade flows and investment. The report was released by Dr. Jitendra Singh, Union Minister of State for the North East Region.

As part of our research on social infrastructure, ICRIER is conducting a number of studies examining the efficiency of India's health delivery systems. The growing burden of chronic diseases means that already 21 percent (3.4 million) of global premature deaths due to non-communicable diseases (NCDs) occur in India. The 3-year project funded by PhRMA, an industry alliance of pharmaceutical firms in the USA, is investigating critical challenges in India's health sector with a view to better inform policy for the health sector.

ICRIER continues its efforts to enhance the knowledge content for policy makers through evidence based research as well as fostering dialogues between multiple stakeholders through conferences, public lectures, seminars and workshops. We also continue to collaborate with think tanks and research institutions in other countries.

ICRIER hosted the 7th Annual G20 Conference on *Challenges to Strong, Sustainable and Balanced Growth: Views from G20 Countries* in September 2015. The conference was inaugurated by Shri Suresh Prabhu, Union Minister for Railways and G-20 Sherpa at the time. In earlier years, the G-20 conferences have been inaugurated by the Ministers of Finance, Shri P. Chidambaram and Shri Pranab Mukherjee and have had participation from G-20 Sherpas, e.g., Montek Singh Ahluwalia and Suresh Prabhu.

ICRIER hosted the NBER-ICRIER-NCAER Neemrana Conference in December 2015, an annual event that brings together top level Indian policy makers, academics, opinion makers and captains of industry with leading researchers and policy makers from the USA. In a cooperative venture with the Centre for Policy Research (CPR), National Institute for Public Finance and Policy (NIPF&P), India Development Foundation (IDF) and National Council for Applied Economic Research (NCAER), ICRIER also hosted a discussion on the Union Budget 2016-17 in March 2016; this was the 10th year of this collaborative effort.

In 2001, as part of the 20th anniversary celebrations and to honour its founder Chairman, Dr. K. B. Lall, ICRIER instituted a lecture series in his name. This lecture has acquired a formidable reputation over the years in academic and policy circles. Dr. Raghuram Rajan, Governor, Reserve Bank of India delivered the 6th K.B. Lall Memorial Lecture on May 7, 2016 on the theme *India and Global Finance*. Dr. Rajan emphasised that in an environment of slow global recovery, countries acting unilaterally is not the best way forward. A coordinated approach would better serve the cause of global recovery.

On the occasion, ICRIER announced the setting up of the *Suresh and Bharati Chair on Urbanisation*, thanks to an endowment grant from the Suresh & Bharati Memorial Trust set up by Mr. Shardul S. Shroff in the memory of his parents. ICRIER also announced the launch of a 3-year research programme on global competitiveness in the memory of Dr. K. B. Lall.

Other important events included the conference on *Empowering Women for Sustainable Development* held in March 2016, conference on *Bilateral Dimensions of India-Japan Economic Relations* held in November 2015, and workshop on *India-Japan Partnership towards Meeting the Challenge of Infrastructure Development in India's Northeast* held in Nagaland in January 2016.

Since 2010, ICRIER and the Policy Research Institute (PRI), a think tank under the Ministry of Finance, Japan, have been jointly organising an annual workshop to facilitate discussions on India-Japan economic co-operation. The 6th Annual ICRIER-PRI workshop was held on March 25, 2016, at Tokyo to discuss economic engagement between India and Japan on issues ranging from macro economic trends in the two countries to the impact of mega FTAs. The workshop discussed India's efforts to improve its investment climate and the opportunities for Japanese investors.

The India-Korea Dialogue has been jointly organised by ICRIER and the Seoul Forum on International Relations (SFIA) since 1999 and is the only regular track two dialogue between the two countries. In recognition of the important role played by the dialogue in strengthening bilateral cooperation, in 2014, it was agreed to elevate the dialogue to track 1.5. The 14th India-Korea Dialogue was hosted by ICRIER on November 5-6, 2015, at New Delhi and its theme was *India-Korea Partnership: Realising the Potential.*

Conversations on Urbanisation was launched in 2014 by ICRIER and India Habitat Centre (IHC) to provide a forum for discussion and identifying the key

challenges and opportunities for Indian cities and towns. Dr. Isher Judge Ahluwalia initiated the conversation in the sessions. Eminent speakers included Sunita Narain, Naresh Trehan, Dinesh Mohan and Ashwin Gosain.

This year, a China-India Dialogue, a partnership between ICRIER, Tsinghua University and the New Climate Economy (NCE), will commence with the first dialogue in November-December 2016 in Delhi. The objective of this dialogue is to bring together key policy makers, business leaders, academics and technical experts from China and India in annual workshops around the theme of low-carbon economic growth. The medium-term aim is to include other countries similarly placed in their development cycle into the dialogue.

Our Green Building at Saket would be ready soon to accommodate the expansion we are going through. We are most indebted to ITC for lending their support pro bono in taking us through the steps in making a Green Building. The total estimated cost of this project is Rs. 18 crore and we have so far raised Rs. 14 crore from fourteen generous donors contributing Rs. 1 crore each. We hope to raise the remaining sum and thank all the existing and potential donors for their support.

Attracting and retaining good talent is challenging and we are fortunate to have an excellent team of researchers at all levels. 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. By all accounts, 2015-16 has been a 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. Macro Management, Financial Liberalisation and Regulation

1.1 Is the Indian Rupee Over-valued?

Project Leader: *Jaimini Bhagwati*
Research Team: *Abheek Barua, M. Shuheb Khan and Shilpi Sunil Kumar*
Commencement: January 2015
Completed: June 2015
Funded as part of RBI Chair (Total Rs. 400.00 lakh)

The objective of this study was to examine if the Indian rupee was fairly valued as of end March 2015. First, the movements of the trade weighted real effective exchange rate (REER) of the rupee over the last ten years were tracked. Next, the underpinnings of the Harrod-Balassa-Samuelson effect, which suggests taking changes in productivity levels into account in arriving at reliable estimates of exchange rates, and associated studies, were assessed. The study also discussed the varied approaches to behavioural equilibrium exchange rate (BEER) models and assessed whether greater accuracy is achieved by using BEER models as compared to the trade-weighted REERs using CPI differentials or point estimates incorporating total factor productivity. Based on a comparison of results obtained using several methodologies, the study concluded that the rupee as of end March 2015 (one US$ = Rs. 62.6) may be about 10 percent overvalued against the US dollar.

1.2 Financial Sector Legislative Reforms Commission (FSLRC) & Financial Sector Regulation in India

Project Leader: *Jaimini Bhagwati*
Research Team: *M. Shuheb Khan and Ramakrishna Reddy Bogathi*
Commencement: September 2015
Completed: May 2016
Funded as part of RBI Chair

The mandate of the Financial Sector Reforms Commission (FSLRC), set up in 2011 by the Ministry of Finance, was to study existing legislation and financial sector regulatory practices in India and to propose improvements. The FSLRC submitted its report in 2013 and four of its eight members recorded dissenting notes. This study examined the changes in regulation in four G7 countries, namely the USA, Germany, Japan and the UK, after the financial sector breakdown of 2008. In particular, the study reviewed (a) the leverage and adequacy of capital; (b) liquidity and solvency issues; (c) systemically important institutions; (d) Basel II or III for banks and European Union's Solvency II for insurance companies and (e) regulatory arbitrage. The paper also included a summary of the work of the Financial Stability Board (FSB) under the auspices of the G20 to improve regulatory and incentive structures and limit cross-border risks following the financial sector meltdown of 2008. The second section provided details of a representative sample of liquidity and solvency problems which have afflicted the Indian financial sector in the last three decades. Additionally, it examined the extent to which the FSLRC has suggested practical steps for Indian financial sector regulators to widen and deepen financial inclusion in India. The third section examined the principal FSLRC proposals. It also included an analysis of the dissenting notes and to what extent these comments qualify the recommendations made in the report. The study pointed out that two important aspects of effective regulation of the Indian financial sector that have not received adequate attention from the FSLRC are accounting and credit ratings.

1.3 Asset Reconstruction Companies and Indian Banking Sector Woes

Project Leader: *Jaimini Bhagwati*
Research Team: *M. Shuheb Khan and Ramakrishna Reddy Bogathi*
Commencement: June 2016
Expected Date of Completion: October 2016
Funded as part of RBI Chair

The Indian banking sector is currently going through a difficult phase. The proportion of stressed assets on bank balance sheets has grown substantially since 2011. Public sector banks (PSBs) have been affected the most since the bulk of long-term project lending came from them. At the end of 2010-11, gross non-performing assets (GNPAs) of PSBs and private sector banks stood at 1.8 percent and 2.3 percent respectively. Since then, there has been a sharp deterioration and GNPAs of PSBs have increased to 6.2 percent. Asset reconstruction companies (ARCs) have been set up and could help the recovery of PSBs. The objective of this study was to assess to what extent ARCs could address the Indian banking sector's woes, and what changes in legislation and court practices and other measures need to be taken by the government and the Reserve Bank of India.

1.4 Cost-Benefit Analysis of India joining Multilateral Development Banks

Project Leader: *Jaimini Bhagwati*
Research Team: *Rajeev Anantaram, M. Shuheb Khan and Ramakrishna Reddy Bogathi*
Commencement: November 2015
Completed: February 2016
Funded by: Ministry of Finance

This report focused on the economic implications for India were it to apply for membership of multilateral development banks such as the European Bank for Reconstruction and Development (EBRD) and the Inter-American Development Bank (IADB). The methodology employed in the study included a thorough review of the annual reports of each bank, and secondary literature on the banks' activities. Additionally, interviews were conducted with Indian firms, operating within the remit and/or those seeking to expand their global footprint to countries included in the banks' areas of operation. This process helped identify several potential benefits that could accrue to India, by way of access to information on upcoming projects that are typically denied to non-members and potential assistance that Indian firms may receive from these MDBs as first-time project-implementers in countries in the banks' remit.

1.5 Indian Tax Administration Reforms

Project Leader: *Rajiva Ranjan Singh*
Research Team: *Anandita Bagchi and Stuti Manchanda; Mukesh Butani, Sanjay Kumar, K. R. Sekar and Harish Kumar (External Consultants)*
Commencement: May 2014
Completed: June 2016
Funded by: British High Commission, (Rs. 149.03 lakh)

The basic approach at present of various tax administrations across the globe is to reduce the tax gap by bringing about a shift from the '*command and control*' model to the '*voluntary compliance*' model. Voluntary compliance by taxpayers depends on the availability of information bringing about certainty regarding taxes to be paid, certainty in determining without any ambiguity the amount of taxes payable and the convenience to pay such tax with minimal compliance burden. In order to achieve this, studies are carried out by these

administrations to understand taxpayer behaviour towards compliance and categorise them on the basis of their compliance behaviour. Such categorisation enables the tax administration to deliberate and formulate policies in order to ensure compliance by the citizens at large. In India also, there is need for concrete and customised solutions for tax administration reforms.

In the initial stages of the project, ICRIER invited a team of six senior officers from the Central Board of Direct Taxes and the Central Board of Excise and Customs to be part of a week-long study trip to Her Majesty's Revenue and Customs (HMRC) in the United Kingdom to interact with various levels of HMRC officers as well as tax practitioners. The team had useful interactions in the areas of use of technology in widening and deepening the tax base, tax data analysis, and the working of large business units. The Central Board of Direct Taxes has taken a decision to take forward the learnings and recommendations from the visit of the study team for implementation.

The second and major part of the project covered research in the following areas of tax administration reforms–taxpayer information services, widening the taxpayer base, risk assessment and deepening of tax base, tax data analysis, transfer pricing documentation and comparability adjustments, recovery of taxes, and alternative dispute resolution. The project report has suggested non-intrusive, technology-based practical solutions in these areas that will help equip administrators to implement changes that may ultimately improve the business environment and increase tax revenue for the exchequer. All the research papers forming part of the project have been brought out as an edited volume titled '*Challenges of Indian Tax Administration*'.

1.6 Barriers to Compliance and Compliance Cost of Direct Taxes in India

Project Leader: *Rajat Kathuria*
Research Team: *Mansi Kedia and Neetika Kaushal*
Commencement: November 2012
Completed: September 2015
Funded by: Directorate of Income Tax, Ministry of Finance, Government of India, (Rs. 120.90 lakh)

The criticality of a well-structured tax administration and responsive tax policies has been widely discussed in public finance literature. Complex statutes and tax procedures have an adverse effect on tax compliance and often result in low tax revenues. With frequent changes in tax laws and complicated provisions, the cost of compliance increases. This study identified barriers to compliance and estimated the cost of compliance in the case of direct taxes in India. The primary data analysis was based on a survey of 6,417 individuals and 506 enterprises across 16 cities in India. Two stakeholder meetings and several focused group discussions involving taxpayers, tax professionals, tax officers and other stakeholders contributed to the understanding of challenges related to compliance in India. The data analysis offered estimates of compliance cost across income and occupational categories of taxpayers as well as across tax filing preferences.

The learnings from best practices in the mature tax jurisdictions of the UK and Australia were synthesised to draw lessons for improving tax compliance for direct taxes in India. The study strongly recommended the adoption of a comprehensive compliance strategy that includes a well-designed communication programme to address the trust deficit between the tax administration and taxpayers in India.

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: *Shweta Saini, Smriti Verma and Ranjana Roy*
Commencement: October 2014
Expected Date of Completion: December 2017
Funded as part of Infosys Chair, (Total Rs. 300.00 lakh)

Growth in Indian agriculture is critical for meeting the rising demand for food, feed stock and fibre for the large and growing Indian population that is likely to exceed that of China by 2030. With rapidly increasing urbanisation (the existing urban population of 400 million is expected to expand to 600 million by 2030), food security is a major challenge. Agricultural growth is also critical to accelerate the rate of poverty reduction. If 'growth with inclusiveness' in India has to have any meaning, agricultural growth must accelerate to beyond four percent per annum, as agriculture engages the largest share of the work force.

At the same time, there is also opportunity to build food value-chains, linking farms in rural areas to urban centres of demand. However, in a globalised world, these value chains need to be efficient and competitive, besides being consistent with the trading rules under WTO.

Given this critical importance of agriculture to the Indian economy, the major objectives under the project are to map the nature of agricultural growth since the 1990s; identify the key drivers of growth; provide policy recommendations to boost growth in the sector; study the functioning of agricultural markets, logistics, agro-processing industry, and retailing; provide policy recommendations to make Indian value chains globally competitive and inclusive to mainstream India's small holders as well as processors and retailers; study the National Food Security Act (NFSA) and the involved operational and systemic challenges; and, explore what solutions new technologies like IT through UID, or bio-technology through bio-fortification, can offer to tackle the gigantic problem of food and nutritional insecurity in India.

The research also focuses on various facets of agricultural trade with a view to make Indian agriculture a globally competitive sector, and help India in agricultural trade negotiations.

2.1.1 *From Plate to Plough*

Ashok Gulati, Smriti Verma and Kavery Ganguly
Ongoing

The Indian agricultural system has been facing steady and persistent structural transformation in the level and pattern of demand for the past two decades. In this context, there is urgent need to realign agricultural policy with emerging demand patterns. "From Plate to Plough" emphasises this idea of having in place a more demand-driven strategy as against the supply-led policy currently in place as the former is more efficient and results in more equitable outcomes.

High and robust economic growth in India has resulted in higher incomes, improved living standards and changing lifestyles with demand gradually moving away from cereals toward high-value commodities such as fruits, vegetables, eggs, milk, fish, meat, etc. Consequently, over time, the production basket has become more diversified in the past two decades or so. However, the extent of food processing remains low for most

high-value commodities and traditional sectors continue to dominate. Large food losses result from the absence of infrastructural and transport facilities and the low levels of processing.

With organised retail gradually taking-off, the challenge for India now is to innovate on the organised retail model in a way that can mainstream kirana stores and vendors as part of the chain, possibly through a franchise model. This will truly be competitive, inclusive, sustainable in terms of finances and the environment, and scalable for a country as large as India. Moreover, since approximately 62.2 percent of the Indian population comprises non-vegetarians (and this number is likely to rise as incomes rise), agricultural policy must be designed to cater to changing demand structures so that the sector can develop and support the growing population with food and livelihood opportunities in the farm and non-farm sectors.

This study aims to provide qualitative and empirical analysis to support these arguments. Various agro-business ventures in India are being tested on the competitiveness, inclusiveness, sustainability and scalability (CISS) index and it appears that the way forward lies in the 4 I of policy leadership – institutions, investments, incentives and innovation in the agricultural sector. The research and analysis will be published as a book titled '*From Plate to Plough*'.

2.1.2 *Missing Calories: Is NSSO Data Underestimating Consumption Figures?*

Ashok Gulati, Ranjana Roy and Prabhu Pingali
Ongoing

India has received widespread praise for its overall economic growth of around 7.12 percent in the period 2000-01 to 2013-14, which was considerably higher than the 5.84 percent growth in the decade 1990-91 to 1999-2000. Coincidently, the same growth period witnessed a steady decline in calorie and protein intake of Indian consumers, particularly since 1993. As per NSSO survey results, the per capita per day calorie and protein intake declined from 2133 kcal to 2087 kcal and from 62.3 gram to 56.3 gram, respectively between 1993-94 and 2011-12. This situation of rising income growth coexisting with falling calorie intake indicates a need for deeper data analysis and research.

This study aims to solve this puzzle by re-estimating calorie consumption of Indians (earlier estimated through NSSO data) following a supply side approach, where the calorie equivalents are multiplied with food supply figures. The new estimates show an increase in calorie intake of Indians over time. Using estimates of gaps between supply and demand of food, the study finds that the NSSO consumption numbers are underreporting the reality.

2.2 Supporting Indian Farms the Smart Way: Rationalising Subsidies and Investments for Faster, Inclusive and Sustainable Growth

Project Leader: *Ashok Gulati*
Research Team: *Anwarul Hoda, N. Chandrasekhara Rao, Pritha Banerjee and Prerna Terway*
Commencement: August 2014
Completed: April 2016
Funded by: Syngenta Foundation, (Rs. 100.00 lakh)

Across the globe, most OECD countries as well as emerging economies support agriculture either to ensure food security and/or to enhance the income level of their farmers. India is no exception. It subsidises inputs like fertiliser, power, irrigation and credit, etc., while the minimum support price (MSP) policy is used to ensure remunerative prices for farmers. However, there are large inefficiencies in the manner in which current support is

provided to farmers through input and output prices. This project attempted to determine how subsidies in Indian agriculture could be made more efficient and cost effective, which in turn will ensure food security and sustainable development. The main focus was on ways to rationalise input subsidy levels and make them more efficient and farmer-friendly.

First, this study aimed to estimate the magnitude of public resources going towards agriculture. These include agricultural input subsidies like fertiliser, power, irrigation, credit and insurance and investment 'in and for' agriculture, like expenditures on canals, roads, education and agricultural R&D. Secondly, the study estimated the marginal returns from subsidies and investments on rural poverty and agricultural growth.

Two papers in the project have been completed and three more are nearing completion. A policy workshop was conducted in January 2015 to present the findings of the studies on fertiliser subsidy and credit subsidy. A knowledge dissemination seminar was also organised on April 19, 2016, to discuss the present situation of major farm input sectors and estimates of marginal returns from investment and subsidies in Indian agriculture.

2.2.1 *Rationalising Fertiliser Subsidy in India: Key Issues and Policy Options*

Ashok Gulati and Pritha Banerjee

Completed

This study questioned the financial sustainability of rising fertiliser subsidy in the annual national budget. It pointed out the problems arising from low prices of urea and lack of investment flows to the domestic fertiliser sector, which has led to a rise in imports. The study made three major recommendations: (i) Switching to direct cash transfers to farmers on a per hectare basis; (ii) Issuing soil health cards and setting up more soil testing labs; and (iii) Setting up urea production facilities in the Gulf countries (where price of gas, the main feedstock for urea production, is considerably lower than in India) along with long-term import arrangements.

2.2.2 *Credit Policy for Agriculture in India-An Evaluation*

Anwarul Hoda and Prerna Terway

Completed

This study undertook an evaluation of measures taken to expand institutional credit to the agricultural sector in India's rural areas. It attempted to answer the question–Does the agenda of expansion of institutional credit to agriculture in India remain unfinished? The findings in the paper are inconclusive on account of contradictions in evidence. While, on the one hand, the 2013 AIDIS survey found that non-institutional lenders account for 36 percent of the total outstanding loan, on the other, according to National Accounts Statistics, the short-term credit from institutional sources in 2012-13 covered 100 percent of the input cost in agriculture in that year.

The study analysed the costs and benefits of subsidies for agricultural credit and of generalised debt waivers. It attributed the impressive rise in agricultural credit to such measures as the opening of rural branches, and the introduction of the priority sector lending policy and kisan credit cards rather than to credit subsidies. At the same time, it pointed out that the sharp rise in the share of short-term credit as a proportion of input costs indicated the possibility of diversion of subsidised credit for non-agricultural purposes. The study, therefore, makes a strong case for a serious review of agricultural credit subsidies. It also argues against generalised debt waivers for farmers in future. Such waivers create expectations of similar waivers in future and disincentivise farmers from repaying loans. At the same time, anticipating adverse borrower behaviour, lenders tend to reduce the size of lending operations. The net result is contraction of credit to farmers.

2.3 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 Coordinator: *Shweta Saini*

Research Team: *Anwarul Hoda, Siraj Hussain, Pravesh Sharma, Ranjana Roy, Pallavi Rajkhowa, Aastha Malhotra and Reena Kumari*

Commencement: April 2015

Expected Date of Completion: March 2018

Funded by: Bill and Melinda Gates Foundation (BMGF), (Rs. 402.00 lakh)

The project is undertaking a comparative study of the agricultural development experience in a few selected states in India to examine the sources and drivers of agricultural growth in the country, employing both qualitative and quantitative methods. Econometric analysis will be used to identify the factors that play the most important role in agricultural growth. Based on the analysis of the drivers of growth in the successful states, policies will be suggested for states that have been less successful in achieving agricultural growth. The focus of the project will be on agricultural growth and its diversification, and ways in which these will impact poverty and malnutrition, especially in rural areas.

2.3.1 *Studying Agricultural Growth: Sources and Drivers for Bihar, Odisha, Uttar Pradesh, Gujarat, Madhya Pradesh and Punjab*

Anwarul Hoda, Ashok Gulati, Siraj Hussain, Pravesh Sharma, Ranjana Roy, Pallavi Rajkhowa and Reena Kumari

Ongoing

Based on historical agricultural performances, the project has identified six states for study. These states are: Punjab, Gujarat, Madhya Pradesh, which have witnessed high historical agricultural growth rates and Uttar Pradesh, Bihar and Odisha, which have registered average growth rates (and have a large mass of poverty and malnutrition). Separate teams have been assigned to undertake work on each of the six states.

The research for each state follows three steps: using qualitative and quantitative (econometric) analysis, the sources and drivers of historical agricultural growth of each state are determined; policies behind the growth sources and drivers are studied in detail and finally, relevant sector-specific policy level lessons are drawn from successful states to improve the state's future agricultural performance. The second phase of this work will involve determining the feasibility – economic, environmental and financial – of the identified best practices for possible emulation.

2.3.2 *Agriculture, Poverty and Malnutrition in India*

Ashok Gulati and Ranjana Roy

Ongoing

Despite the overall high growth rate of the Indian economy, the agriculture sector, which employs approximately half the workforce in the country, has been underperforming. India is also home to the largest number of undernourished and poor people in the world. This study aims to test the hypothesis that agricultural growth, poverty and malnutrition are interlinked. Econometric analysis finds that agriculture growth is critical to reduce poverty and malnutrition. The results further reveal that, besides agriculture, non-farm employment opportunities, infrastructure facilities, literacy, sanitation, access to health facilities, child care and feeding practices are other important factors influencing poverty and malnutrition.

2.4 India: Agricultural Distortions Study

Project Leader: *Ashok Gulati*
Research Team: *Shweta Saini*
Commencement: April 2015
Expected Date of Completion: August 2016
Funded by: The World Bank, (Rs. 25.00 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.

2.4.1 *Price Distortions in Indian Agriculture: Nature, Degree and Policy Implications*

Shweta Saini and Ashok Gulati
Nearing Completion

This study focuses on estimating price distortions in the case of selected Indian agricultural products. It covers fifteen agricultural commodities in ten major Indian states, trading 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.

The preliminary results of this study were presented at the OECD, Paris, France in June 2015 as well as at the International Conference on Agriculture Economics in Milan, Italy, in August 2015.

2.5 A Comparative Study of High Performing States in India to Understand Best Practices in Agriculture Extension

Project Leader: *Ashok Gulati*
Research Team: *Pravesh Sharma (External Consultant), Shweta Saini and Rohin Nautiyal*
Commencement: October 2015
Expected Date of Completion: July 2017
Funded by: Bill and Melinda Gates Foundation (BMGF), (Rs.142.00 lakh)

India's agricultural extension services have evolved with changes in the agriculture sector. From an earlier focus on increasing yields via technology transfers and adoption, systems have embraced a more decentralised, participatory and demand-driven approach. However, the effectiveness of investments, technology and access to markets in delivering value to small and marginal Indian farmers is impaired by several constraints and challenges. This study will undertake a qualitative and quantitative analysis of India's agricultural extension systems, particularly in the six identified states of Gujarat, Madhya Pradesh, Punjab, Uttar Pradesh, Bihar and Odisha. The focus will be on identifying efficient, effective and sustainable agricultural extension systems for emulation in states to foster higher agricultural growth. The project will identify implementable policy-level interventions based on robust analysis.

2.5.1 *Role of Extension in Agricultural Growth: A Review of the Indian Landscape (Gujarat, Madhya Pradesh, Punjab, Uttar Pradesh, Bihar and Odisha) and some Selected International Experience*

Pravesh Sharma, Shweta Saini, Rohin Nautiyal and Ashok Gulati

Ongoing

The focus of this paper is on the role of agricultural extension in driving growth in the agricultural sector. The paper identifies the major players, models of delivery, performance and challenges. In particular, it takes a detailed look at the role of public and private sector agencies in delivering extension services to farmers. The role of voluntary and civil society groups, farmers' organisations and others in providing extension services will also be surveyed. In addition to the macro picture, the study will delve into the performance of extension services in the focus states of Gujarat, Punjab, Uttar Pradesh, Madhya Pradesh, Bihar and Odisha. Further, the study intends to track major trends and models of agricultural extension services delivery in China, the United States, Europe, Australia and Japan. Finally, the paper will list challenges and issues facing extension services in India and seek to offer some policy options for reform.

2.5.2 *Role of Extension in Agricultural Growth: An Empirical and Econometric Analysis in Selected States (Gujarat, Madhya Pradesh, Punjab, Uttar Pradesh, Bihar and Odisha)*

Ashok Gulati and Rohin Nautiyal

Ongoing

The study will empirically establish the contribution of expenditure on agricultural extension to agricultural GDP. This work supplements the earlier work on drivers of agricultural growth in six selected states. An econometric analysis will be carried out to see the relative importance of agricultural extension in influencing agricultural GDP in these six states. It is expected that this analysis will help in prioritising policies within the agricultural sector.

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

Project Leader: *Ashok Gulati*

Research Team: *Anwarul Hoda, Shweta Saini and Sameedh Sharma*

Commencement: May 2015

Expected Date of Completion: April 2017

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

India has the largest number of poor and malnourished people in the world and high price volatility in food items in general, and in wheat and rice in particular. This adversely affects the access of the poor to food. Price shocks can come through turmoil in the global markets (as it 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 focus of research will be on four areas – food price volatility and food market reforms; food and labour market linkages; labour market volatility and income shocks; public and social insurance schemes and role of ICT for efficient and fair transfers and on inter-linkages between Indian and Chinese food policies.

2.6.1 *Critical Review of Direct Cash Transfers and Similar Practices*

Shweta Saini, Sameedh Sharma and Anwarul Hoda

Ongoing

Cash transfers have emerged as a popular policy option for nations to ensure food security, with noteworthy impact seen in developing countries through programmes like Oportunidades in Mexico and Bolsa Familia

in Brazil. Since the late 1940s, India has been providing subsidised food under the public distribution system (PDS). The system has been criticised because of massive grain leakages and poor targeting of the needy. The 2013 National Food Security Act (NFSA) aimed to make the PDS transparent, efficient and effective. Interestingly, there has simultaneously been a growing shift in favour of direct benefit transfer (DBT) in food, i.e., substituting the physical grain distribution system with unconditional cash transfer (UCT) directly into the bank accounts of identified beneficiaries. The decision was influenced by the positive results of various pilot surveys undertaken by the central and various state governments and NGOs. This study examines the existing relevant international and national programmes/policies/pilots, highlights their peculiarities and draws lessons in terms of their efficiency, effectiveness and scalability. The objective is to create a feasible action plan for a gradual shift away from the PDS towards DBT for food in India.

2.6.2 *Analysing Indian food Inflation and Labour Market Linkages: 1990-2015*

Shweta Saini and Ashok Gulati

Ongoing

The study analyses the linkage between wages of rural agricultural labourers and food inflation for India. Both time series and panel data techniques have been used to understand the linkage. The analysis is done on the monthly data series from July 1998 to June 2015 for Granger causality, and yearly data from 1993-94 to 2014-15 for the panel data. The Granger causality results showed food inflation to be granger causing agricultural wage inflation in the studied period. In terms of real agricultural wage growth rates, despite observed high levels of inflation in the economy during the studied period, the real wages of Indian agricultural labourers grew at an average annual rate of 8.4 percent since 2010-11. A panel data, fixed effects model, exercise was undertaken to identify growth drivers of agricultural wages. For the 20 states for which trends were analysed from 1993-94 to 2014-15, real agricultural wages grew mainly on account of two reasons: growth in labour productivity in agriculture and in labour competing sectors like manufacturing and construction. While the former meant higher output per worker and thus higher labour demand leading to higher wages, the latter increased farm labourers' bargaining power, which improved with the possibility of inter-sectoral migration.

2.7 Agriculture: Sustainability, Productivity and Profitability

Project Leader: *Ashok Gulati*
Research Team: *Yamini Gupt, Samraj Sahay and Rohin Nautiyal*
Commencement: April 2016
Expected Date of Completion: March 2019
Funded by: Monsanto Holdings Private Ltd., (Rs. 300.00 lakh)

This project will conduct research in agricultural policies and adjacent disciplines to provide insights on measures that can make agriculture in India sustainable, productive and profitable for farmers. The objective is to provide policy suggestions to industry, stakeholders in agriculture and the government. Innovations in policies and technologies to promote sustainable agriculture such as precision farming will be studied in detail and the focus will be on three case studies – Punjab (rice cultivation), Maharashtra (sugarcane cultivation) and Tamil Nadu (cultivation of bananas).

2.8 Agricultural Markets in India

Project Leader: *Ashok Gulati*
Commencement: April 2016
Expected Date of Completion: March 2018
Funded by: National Commodity and Derivatives Exchange, (Rs. 100.00 lakh)

The project will involve research in agricultural commodities and provide recommendations to boost the expansion of commodities markets in India for the benefit of farmers and provide policy related opinions to government and Industry, and to improve investor education, awareness and participation in commodities markets. The study will also indentify the characteristics of commodities that need to be brought under future contracts to help SEBI adopt a robust system of developing commodity markets.

The research focus will be on making agriculture marketing function more efficiently and helping farmers to get the best possible price. It will cover agricultural commodities such as pulses, grains, oilseeds, and other agricultural commodities.

2.9 NABARD Centre for Research in Agri-Economics

Project Leader: *Ashok Gulati*
Research Team: *Anwarul Hoda, Bharat R. Sharma, Shweta Saini, Indro Ray, Smriti Verma, Stuti Manchanda and Nithya Vishwanath Gowdru*
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 research in three areas:

2.9.1 *Issues related to Land Use in Agriculture*

The study will delve deeply into 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 seek to assess the status of soil health, especially in the light of India's fertiliser use policies.

2.9.2 *Issues related to Water Use in Agriculture*

The study will focus on three key themes – water productivity, timely completion of surface irrigation projects, and checking groundwater depletion. Under this study, the team proposes to calculate the water productivity of selected crops in various states in India. Alongside, a comparison of selected state/centrally financed irrigation projects with those financed under RIDF and monitored by NABARD will be undertaken, particularly with regard to time and cost over-runs. Further, the team will study the deteriorating condition of groundwater and analyse the reasons for this in detail. Possible best practices for sustainable use will be suggested.

2.9.3 *Small Holders in High Value Agriculture*

The three sectors that will be studied are dairy, horticulture and pulses/poultry. For the study on dairy, the focus will be on covering all existing operational models in India, viz., the multinational, government/co-operative and domestic private sectors. The focus will be on understanding the value-chain in dairy, the patterns of financing processing and trading of milk and milk products and their impact on competitiveness, sustainability and scalability. The second study on the horticulture sector will cover vegetables (onions and potatoes) and/or fruits (bananas and mangoes). The third study is in the area of pulses. Alternatively, the poultry sector, which consists of contract farming by small farmers, may be considered.

2.10 Review of Agricultural Policies in India

Project Leader: *Ashok Gulati*
Project Team: *Anwarul Hoda, Shweta Saini and Prerna Terway*
Commencement: May 2016
Expected Date of Completion: June 2017
Funded by: Organisation for Economic Cooperation and Development (OECD), (Rs. 98.33 lakh)

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

2.11 Evaluation of the Impact of the Scheme of Mega Food Parks

Project Leader: *Arpita Mukherjee*
Research Team: *Tanu M. Goyal, Debolina Mukherjee, Purva Singh; Dipankar De (External Consultant)*
Commencement: December 2014
Completed: April 2015
Funded by: Ministry of Food Processing Industries, Government of India, (Rs. 24.95 lakh)

This study evaluated the mega food park (MFP) scheme of the Ministry of Food Processing Industries. This grant-based scheme aims to set up infrastructure for food processing to reduce wastage and benefit farmers. The study covered an analysis of global best practices in setting up food parks. It examined how the guidelines for the MFP scheme have evolved over time and its implications, presented a comparative analysis of the scheme with similar sector-specific grant-based schemes of other central government departments, examined the role of state governments and how the MFP scheme can be dovetailed with state government schemes, and assessed the perception of state governments, banks, SPVs (special purpose vehicles) and other stakeholders about the scheme. It also examined the governance and management structure of MFPs and the socio-economic impact of the MFP scheme on the catchment area.

The study was based on analysis of secondary data, a primary survey and field visits to mega food parks. The final report was presented before the Minister and the study recommendations are being implemented by the Ministry of Food Processing Industries.

2.12 India's Phytonutrient Report: A Snapshot of Fruits and Vegetables Consumption, Availability and Implications for Phytonutrient Intakes

Project Leader: *Arpita Mukherjee*
Research Team: *Souvik Dutta, Tanu M. Goyal, Avantika Kapoor and Suvi Agrawal*
Commencement: May 2015
Completed: December 2015
Funded by: Amway Opportunity Foundation, (Rs. 50.00 lakh)

A pioneering study by the World Health Organisation (WHO) on diet, nutrition and prevention of chronic diseases has recommended that a daily intake of at least 400 grams of fruits and vegetables helps prevent diet-related chronic diseases and micronutrient deficiencies. It is scientifically established that fruits and vegetables are essential sources of phytonutrients, which promote a range of health benefits.

India is one of the largest producers of fruits and vegetables in the world. It is also one of the largest consumer markets, with food and grocery having the largest share in the consumption basket. However, a number of studies show that Indian consumers do not consume the WHO recommended quantity of fruits and vegetables. This report, based on secondary information analysis and a survey of 1001 consumers across different states in India, tried to understand the production and availability of fruits and vegetables, consumption patterns, extent of shortfall in consumption, reasons for shortfall, and the implications of such shortfall for consumer health and well-being. It also highlighted policy issues related to food safety and standards, use of pesticides, organic products, food supply chain, foreign investment in retail, food pricing, and food supplements and nutraceuticals.

The report has been published and presented to the Food Safety and Standards Authority of India. Some of the key issues raised by the report, such as the likelihood of nutrition deficiencies among students, need for regulations and policy guidelines for nutraceuticals and organic produce, have been taken forward by policymakers for future research and discussions.

3. Challenges and Opportunities of Urbanisation

India's transition to a predominantly urban economy in the next 40-50 years will present numerous challenges for urban planners, city managers and urban local governments. These challenges relate to basic conditions of water and sanitation and quality of air, on the one hand, and worsening urban congestion, need for land use and transport planning, public transport, energy policy and shelter for millions of new and existing urban residents, on the other. The role of metropolitan and regional planning and action is also becoming increasingly important in India's current stage of development.

The Government of India has a major strategic role to play in steering the urban transition. Empowering urban local bodies (ULBs) by financial devolution and developing their ability to raise financial resources, together with building their capacity to plan and manage their cities, is critical. Strengthening institutions of service delivery through reform at the local government level is equally important and state governments have a major role to play in creating an enabling environment in which this becomes possible.

Initiatives on urbanisation at ICRIER include: (i) a research programme and a capacity building programme in India titled '*Preparing for the Urban Challenges of the 21st Century*', funded by the Ministry of Urban Development; (ii) a research study, '*Urban Water Systems in India*' by Mihir Shah, funded by Global Green Growth Institute; and (iii) the HUDCO Chair programme launched in 2012.

ICRIER has set up the *Suresh and Bharati Shroff Chair on Urbanisation* at ICRIER, with an endowment grant from Suresh & Bharti Shroff Memorial Trust, to undertake research and shape the discourse on urbanisation in India with this latest initiative.

3.1 Preparing for the Urban Challenges of the 21st Century

Project Leader: *Isher Judge Ahluwalia (Honorary)*

Research Team: *P. K. Mohanty, M. Ramachandran, V. K. Phatak, Anand Sahasranaman, Simanti Bandyopadhyay, Deepak Santhanakrishnan, Vaidehi Tandel, Sahil Gandhi, Sabyasachi Tripathi, Kanak Tiwari, Tanushree Bhan, Neharika Rajagopalan, Sirus Joseph Libeiro, Sri Siddhartha Ayyagari, Manpreet Kaur Juneja, Vrinda Gupta and Utkarsh Patel*

Commencement: December 2012

Completed: June 2016

Funded by: Ministry of Urban Development, Government of India, (Rs. 265.00 lakh)

Research under this project was focused on (i) water, sewerage, waste water treatment, and solid waste management; (ii) unlocking urban land value; (iii) municipal finance; (iv) governance and administrative reforms; (v) planning land use and transit-oriented development; (vi) sustainable project management and implementation; and (vii) e-governance. The current year saw the conclusion of the research programme. Closely associated with the research programme under this project was the "Capacity Building and Knowledge Dissemination Programme on Urbanisation in India", which was concluded in March 2015. More details are available at http://icrier.org/Urbanisation/. The 13 research papers produced under the programme are listed below with a brief outline of each study and a preliminary report was also prepared on '*Solid Waste Management in India*'.

3.1.1 *Sustainable Delivery of Water in Indian Cities*

Isher Judge Ahluwalia

Completed

Water scarcity in India has come about not only from lack of water but from the way in which it is sourced, distributed and managed. For urban India, rising demand for water because of rapid urbanisation and industrial development has been associated with inadequate investments in the water sector and massive inefficiencies in the distribution systems. An additional challenge arises from the neglect of waste water treatment. Because of high population density and concentration in urban areas, contamination of waste water happens much faster and deteriorating water quality is a major concern.

This study documents the dismal state of water delivery in Indian cities and towns. It highlights the importance of simultaneous emphasis on renovation of the water distribution network and waste water treatment, and also draws attention to the need to augment the basic sources of water supply by protecting catchment areas and aquifer-based groundwater management. The latter, in turn, requires not only legislative and regulatory reforms but also the capacity to enforce the new laws.

The study spells out the investment requirements and financing mechanisms to address the enormous challenge of delivering potable water for urban India. The inter-relationship between governance and finance comes through strongly in the analysis. Given the paucity of funds with governments, a revenue model is essential if private finance is to come either through the capital market or PPP. The empowerment of urban local governments and the role of state governments in providing an enabling environment for planned urbanisation are shown to be extremely important factors in ensuring the delivery of safe water in Indian cities and towns, while National Missions can provide strategic leadership and guide the process of reform of urban planning, finance and governance, including that of the legislative and regulatory framework.

3.1.2 *Capacity Building for Improving Urban Governance*

P. K. Mohanty

Completed

Capacity constraints constitute a serious bottleneck to the efficient and effective delivery of services in urban areas. This paper discusses approaches to improve capacity for good governance in cities and towns in India. It takes a broad view of capacity building in the urban sector to include institutional, organisational and human resource capacities.

It suggests measures for institutional capacity building, organisational capacity building, appropriate public service delivery mechanisms and a significant need for creation of human resource capacity in municipalities. While emphasising the need for professionalisation of municipalities with qualified manpower, the study suggests that development of municipal cadres needs to be linked to the nature of services and manner of financing and

delivering the services to promote efficiency and accountability rather than creating permanent staff based on bureaucratic norms. The study also suggests that municipal cadre development must be accompanied by steps to politically empower municipalities as the third tier of government, with robust mechanisms of public accountability.

3.1.3 *Role of Centre, State and Local Governments in the Context of Good Governance*

M. Ramachandran
Completed

States have not enthusiastically responded to the requirement to strengthen the third level of governance as envisaged by the 74th Constitutional Amendment. The subject is in the domain of the state governments. The central government has taken a number of initiatives to help guide the states on how and why they should take this up as a priority.

The Central Finance Commissions have been making recommendations, within the Constitutional mandate, to help augment the resources available to local bodies. There is also the question of the extent to which local bodies themselves are keen to reorient themselves to assume a more responsive role at least with regard to functions in their domain. New urban programmes like the 100 Smart Cities Mission and Swachh Bharat Mission further emphasise the importance of local level accountability.

3.1.4 *Capacity Building with Special Focus on Urban Local Bodies*

M. Ramachandran
Completed

India's urban local bodies, on the one hand, are not empowered enough to efficiently undertake the tasks assigned to them and on the other, lack capacity to perform the role assigned to them. A number of expert committees have repeatedly highlighted the need for having a proper capacity building regime. Some states have taken some initiatives to have a revised municipal cadre structure. The flagship programmes to rejuvenate India's urban sector have focused on the agenda of ULB capacity building, although in a limited manner. Any further central funding programmes should insist on states going in for revised municipal cadres, thereby providing for specialised staff in tune with today's urban governance requirements.

3.1.5 *Planning for Urban Development in India*

Isher Judge Ahluwalia
Completed

This study presents a brief overview of the present approach to urban planning in India and highlights the importance of an integrated approach to the planning of transportation and land use. It presents the conundrum of high population density and low FSI (floor space index) in Indian cities and calls for a new approach to urban planning, which brings socio-economic factors and spatial factors together, and integrates urban design with urban planning. The challenges of inclusion of low-income households in urban planning in the light of the political economy of land acquisition in India are also examined.

3.1.6 *Metropolitan Governance in India*

Vaidehi Tandel
Completed

Metropolitan regions in India are gaining increasing importance in the economic geography of the country as both people and industries move to the peripheries of mega cities. However, lack of proper planning for regional

development and the absence of any co-ordinating mechanism at the metropolitan level has resulted in the haphazard development of these regions. This study assesses the institutional mechanisms available for planning and infrastructure delivery at the metropolitan level. It spells out how the absence of co-ordination for transport planning, lack of dovetailing of land use plans, and distortions in the land market and the real estate market pose serious challenges for the process of structural transformation that the Indian economy is going through. The study proposes a way forward for the system of metropolitan governance to address these challenges.

3.1.7 *Making Cities Creditworthy*

Anand Sahasranaman and Vishnu Prasad

Completed

The literature on making cities creditworthy to access debt markets points to three sets of reforms that can address the issue: (i) a set of fundamental reforms that need to be implemented across cities in the country such as computerised double entry accounting standards, improving efficiency in the collection of taxes, especially property tax, and solving the problem of weak staff capacity; (ii) a set of legal and constitutional reforms that provide, for instance, adequate financial autonomy along with functional devolution provided by the 74th CAA; and (iii) a national legal policy on how local governments can access debt markets and a bankruptcy framework for ULBs. While the path to making cities creditworthy is clearly laid out, there is insufficient understanding of how policy can nudge and incentivise cities to tread this path. This study presents some international experience as well as the current state of affairs in selected Indian cities to frame a set of policy options to improve the credit worthiness of Indian cities.

3.1.8 *Unlocking Land Value for Financing Urban Development in India*

Isher Judge Ahluwalia and P. K. Mohanty

Completed

This study highlights the importance of unlocking land value for financing urban infrastructure development. Considering the large financing requirements of urban infrastructure and the strained finances of urban local bodies as well as state governments, instruments such as tax increment financing, betterment levies, development charges and special assessments are examined for their potential in unlocking urban land value in India's urban infrastructure development. The study presents some innovative models of assembling land in some Indian cities and some international examples.

3.1.9 *Land Based Financing in Metropolitan Cities in India: the Case of Hyderabad and Mumbai*

V. K. Phatak and Sahil Gandhi

Completed

One of the major challenges in addressing infrastructure bottlenecks in major cities is the shortage of finance. This study focuses on land-based financing in two Indian metropolitan cities – Hyderabad and Mumbai. The study examines collections from land-based financing tools by the principal local body and the development authority in the two metropolitan cities, and their contributions to the revenues of the implementing bodies. It discusses legal issues related to implementation, and proposes some policy recommendations.

3.1.10 *Property Taxation: A Comparison of Delhi and Bengaluru*

Simanti Bandyopadhyay

Completed

Property tax is a major source of revenue for ULBs. Adequate coverage, a proper methodology for assessment of tax, and changing valuation of properties in the face of rising prices are some of the major factors

that affect the ability of ULBs to realise the potential revenue from property tax. This study attempts to identify the factors responsible for the differences in performance of Delhi and Bengaluru. In Delhi, a transition from rental valuation to unit area based valuation has not been successful in bringing about the desired revenue increase; Bengaluru has achieved greater success. This is so even though there are similarities in the approach to reform and both cities have used geographical information systems (GIS) and IT. The interaction between policy and administrative reforms to support the improvement in outcomes emerges very clearly from this study.

3.1.11 *Using GIS for Greater Efficiency in Operations and Better Delivery of Services by ULBs in India*

Tanushree Bhan
Completed

This paper explores the use of GIS technology to improve the system of service delivery and bring about transparency and accountability in the functioning of ULBs. A number of good practices have been deconstructed to identify the role of GIS and the enabling factors that led to a smooth transition from a manual system to IT-enabled administrative arrangements for operations as well as service delivery in some Indian cities.

3.1.12 *E-Procurement: Experience from Indian Cities*

Sirus Joseph Libeiro
Completed

The use of information and communication technology (ICT) for transparency, accountability, and efficiency in the delivery of public services was one of the mandatory reforms for ULBs under Jawaharlal Nehru National Urban Renewal Mission (JNNURM). The national e-governance plan aimed to put in place mechanisms that would facilitate the use of technology to provide more effective services to citizens. Accordingly, a number of urban local bodies have instituted e-governance projects with the use of ICT to strengthen governance. This paper focuses on the issue of electronic procurement (e-procurement) and presents evidence from urban local bodies that have introduced digital technologies for awarding contracts for public works. It highlights the factors (transparency in the e-tendering process, ease of access, design of the process etc.) that led to the success of these initiatives as well as the hindrances faced.

3.1.13 *Approaches to Sustainable Management: Case Studies of Two Public Transport Projects*

Deepak Santhanakrishnan
Completed

This paper presents a sustainability framework for mass transit system projects drawing from the case studies of Ahmedabad and Indore Bus Rapid Transit System projects. Based on a comparison of the performance of the two projects in achieving sustainability outcomes, the paper draws policy implications for designing a sustainable mass rapid transit system.

3.1.14 *Solid Waste Management in India: A Preliminary Report*

Sahil Gandhi
Completed

Solid waste management in India not only has to adapt to the increasing scale of the problem but also address the challenge of its changing composition. Urban local bodies in India are not equipped to cope with these complex challenges. This report provides an overview of the state of municipal solid waste management in India and explores financially and environmentally sustainable solutions for solid waste management and resource recovery from waste in the country.

3.2 Urban Water Systems in India: A Way Forward

Project Leader: *Mihir Shah*
Research Team: *Sri Siddhartha Ayyagari*
Commencement: July 2014
Completed: February 2015
Funded by: Global Green Growth Institute (GGGI), (Rs. 18.26 lakh)

The Indian urban space has usually been considered in an undifferentiated manner, ignoring the specificities deriving from different stages of urban development, the sources of water, as also the diverse nature of aquifers catering to urban settlements in different parts of the country. The first priority for cities when planning water supply is to place emphasis on reviving local water bodies and groundwater recharge, so that water can be sourced as close as possible. Decentralised treatment facilities and a variety of technologies to treat sewage locally can help cut costs of treatment as well as reduce unnecessary hauling of sewage. The study lays out the challenges associated with scaling up for 24x7 water supply and a broad methodological framework to assess system level costs for water supply and distribution in Indore and Nagpur cities. The analysis presented in the study should help serve as the basic analytical framework for planning and implementing an integrated water management system for different cities and towns in India.

3.3 The HUDCO Chair Programme

Project Leader: *Meenu Tewari*
Research Team: *Zeba Aziz*
Commencement: March 2012
Expected Date of Completion: March 2018
Funded by: Housing and Urban Development Corporation Ltd. (HUDCO), (Rs. 60.00 lakh over three years)

ICRIER's HUDCO Chair Programme is aimed at conducting research and undertaking capacity building activities on urban issues in India. The programme has three main components: (i) a seminar series on urbanisation and the competitiveness of cities; (ii) research on a subset of urban issues; and (iii) thematic capacity building workshops on selected themes based on the research conducted under the programme.

A seminar by Ravi Bansal, J.B. Fuqua Professor of Finance, Fuqua School of Business, Duke University, was hosted on the topic '*Climate Change and Growth Risks*' on May 16, 2016. Emphasising the effects of climate change on the macro economy, Dr. Bansal illustrated his model to quantify social carbon costs and accordingly frame optimal climate change policies. In this model, the potential impact of climate change on the macro economy was captured using a temperature-augmented long-run risks (LRR-T) model that jointly models the path of temperature, consumption, and global-warming induced disasters. Dr. Bansal explained how an analysis using forward-looking equity valuation reveals the significant adverse effect of temperature rise on wealth. Further, the model captures the abatement costs and proposes an optimal abatement policy. The discussions at this seminar deliberated on the finer aspects of the model and its utility from a social planning perspective.

The seminar titled '*Infrastructure and Urbanisation in India – Opportunities for the EU*' was organised by ICRIER in collaboration with the Global Relations Forum (GRF) and Friedrich-Ebert-Stiftung (FES), India. It focused on the potential for India-EU partnership in infrastructure development, particularly urban infrastructure development, in India. The key speaker was Tomasz Kozlowski, Ambassador of the EU to India. Other speakers included Frank Samol, Director, IGEP-UID Program GIZ; Barjor Mehta, Lead Urban Specialist, World Bank; Arpita Mukherjee, Professor, ICRIER; and Gauri Khandekar, Deputy Director, GRF.

The participants noted the strong pursuance of urban development in India in recent times and highlighted the potential for significantly enhancing India-EU bilateral co-operation in this area. It was widely agreed that the India-EU urbanisation partnership would be a long-term investment and could effectively contribute to enhancing the perception of the EU as a strategic partner in New Delhi. It would also allow the EU to confirm its commitment to promoting sustainable development in India

3.4 Benchmarking Study of HUDCO

Project Leader: *Indro Ray*
Research Team: *Smita Miglani and Sandeep Paul*
Commencement: May 2016
Completed: July 2016
Funded by: Housing and Urban Development Corporation Limited (HUDCO), (Rs. 10.00 lakh)

The objective of this HUDCO benchmarking study was to identify national and international benchmarks in housing and urban infrastructure sector and recommend appropriate benchmarks for inclusion in the 2016-17 HUDCO's MoU with the Ministry of Housing & Urban Poverty Alleviation, Government of India, to improve the productivity, profitability, operational efficiency, and future growth prospects of HUDCO.

Starting with an analysis of India's current housing and urban infrastructure financing scenario, the study identified the key players in the market after an extensive review of these sectors. The selection of the main competitors for HUDCO was done to represent not only the key players but also the diversity among them. In total, eleven companies including two international financing institutions (one each from South Africa and Thailand) were selected. After review of the literature on key performance indicators for development finance institutions, and financial documents of all the selected companies, ten financial benchmarks were selected to measure and compare HUDCO's performance with its peers. These benchmarks captured five aspects of financial performance, namely size and growth, profitability, liquidity, portfolio quality, and output efficiency. Data was collected for the last five years to compute the benchmarks and analysed.

The results indicate that HUDCO is not on par with the top players in the market such as HDFC when it comes to loan book size, profit growth, and portfolio quality (high percentage of non-performing assets). But its performance for efficient use of assets to raise revenue, self-sufficiency in covering its operational costs, amount of debt it holds per unit of equity, and net profit per employee is better than for most other companies. The comparative analysis of HUDCO with its international peers also highlighted that public or semi-public institutions with a social mandate tend to carry the burden of some bad loans in their books.

4. Climate Change and Sustainable Development

4.1 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
Completed: July 2016
Funded by: Rockefeller Foundation, (Rs. 185.00 lakh)

This project focused on two pressing challenges of the 21st 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 policy driven 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 with a focus on understanding the adaptation mechanisms of its two 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 4 to 9 percent 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 percent relative to a no-warming counterfactual.

4.2 An Institutional Exploration of Urban Competiveness and Climate Adaptation through Two Sectoral Lenses–Water Sector

Project Leader: *Meenu Tewari*
Research Team: *Saon Ray, Indro Ray, Amrita Goldar and Zeba Aziz*
Commencement: January 2015
Expected Date of Completion: December 2016
Funded by: Rockefeller Foundation, (Rs.150.00 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 this: How do 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 non-action), and (ii) generate methodological insights about how to carry out such research in data-scarce environments.

In 2015, the project crafted 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. On similar lines, the inland waterways in the Kochi region were studied to understand how reviving waterways as a complement to roads, rail and other transit options could serve as a sustainable transportation option, an agent of climate change adaptation, and as an important source of economic development and sustained livelihoods in the region.

Under the second objective, a study was conducted in 2015 to understand the relationship between different indicators of economic competitiveness and urban resiliency to climate change (with specific focus on 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 in nature, 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.

4.3 An Institutional Exploration of Urban Competiveness and Climate Adaptation through Two Sectoral Lenses-Industries

Project Leader: *Meenu Tewari*
Research Team: *Saon Ray, Indro Ray, Amrita Goldar and Zeba Aziz*
Commencement: July 2015
Expected Date of Completion: June 2017
Funded by: Rockefeller Foundation (Phase II)

Following up the work on water and the economic effects of climate adaptation in cities, the next phase of the project undertakes an extensive study on industrial productivity in the context of climate risk (flooding and temperature rise) and economic competitiveness. This work will also adopt a mixed-methods approach to answer questions of adaptation by firms in urban areas that are affected by climate pressures. Through field interviews and surveys, the mechanisms of adaptation, and the economic cost and benefit of this adaptation will be analysed. Various nuances such as firm size, different industrial sectors, geographical and urban contextual location (highland, flood prone, periphery, SEZ, industrial

cluster, informal clusters) will also be incorporated in this study. In the end, the effects of these attributes on urban competitiveness will be evaluated.

4.4 Water, Waste Water and Solid Waste Management

Project Leader: *Isher Judge Ahluwalia and Meenu Tewari*
Research Team: *Utkarsh Patel and Vrinda Gupta*
Commencement: July 2015
Expected Date of Completion: June 2017
Funded by: Rockefeller Foundation (Phase II)

As part of the Phase-II work under the Rockefeller Foundation project, in-depth research will be conducted to examine the link between water, waste-water, solid waste management and urban competitiveness. One of the objectives of this part of the work is to establish and emphasise the connectivity between water supply and wastewater in city regions, with a focus on conservation, recycling, and reuse. Cases where this connection is acknowledged and incorporated in city development plans will also be studied in order to understand whether such measures add to a city's competitiveness and the ways in which they do so. As an extension of this linkage, innovative solutions to tackle sanitation and solid waste management will also be explored. The objective of this latter part of the study is to analyse the influence of such solutions on the competitiveness and climate resilience of cities. This will be carried out by drawing lessons from various case studies. The results will be pulled together into a policy-oriented paper on best practices based on case studies in the sanitation and solid waste management sector. It will also include an assessment of the mechanisms of converting waste to energy. This phase of the project, including submission of the deliverables, will be completed by June 2017.

4.5 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
Completed: July 2016
Funded by: World Resources Institute, Washington DC, (Rs. 114.00 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 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 new development experiences in 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, which 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.

4.5.1 *Business as Usual Costs of Urbanisation*

Meenu Tewari, Indro Ray, Aarsi Sagar, Zeba Aziz, Sandeep Paul and Anil Markandya
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 points out 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 plant, 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 water service in the surveyed cities. Finally, the study summed the costs under different categories to calculate 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 final report is forthcoming.

4.5.2 *De-carbonising the Indian Rail Industry*

Rajat Kathuria, Saon Ray, Kuntala Bandyopadhyay and T. S. Ramakrishnan
Completed

About twenty five percent of worldwide CO_2 emissions are attributed to transport. The carbon intensity of travel depends not only on technical issues such as characteristics of vehicles and the fuels they use, but also the choices made by people as to how they travel and the means by which they do so. Although cars and trucks account for the bulk of carbon emissions from transport, the railways too play a huge role in this regard. India has the lowest rate of energy consumption per tonne-km for goods by rail; however, with increasing demand driven by rapid growth in population and economic development, along with the electrification plans of the Indian Railways, this is expected to increase significantly in the coming years.

Energy consumption by the Indian Railways in 2030-31 will depend on the energy efficiency measures instituted. It is envisaged that 80 percent of rail freight and 60 percent of passenger traffic will run on electric energy by 2031-32. Moreover, since 71 percent of electricity generation in India uses coal, the increasing electrification of the railways has to consider the life cycle assessment for different fuel types. The Indian Railways has already considered the importance of increasing the share of low-carbon renewable energy sources such as solar and wind in the total energy mix. The internal target is to install 1,000 MW of solar power and 150 MW of wind power by 2020. It is also considering a long-term target of 10,000 MW of renewable energy by 2030.

At a practical level, the decision to move to a low carbon energy system in India, as elsewhere, faces the following questions. Are there enough low carbon energy options to meet all of the growing demand for

energy of the Indian Railways? Are low carbon energy options cheap enough to meet the energy needs of the railways without increasing energy costs?; Can these low carbon energy options be physically, financially, and operationally integrated into the railways' energy system without causing business disruption?

In the first phase, the research team has scoped the feasibility of 100 percent de-carbonisation for the Indian Railways, and identified attractive pathways under different scenarios. The objective was to examine the way in which Indian Railways can achieve the target of decarbonisation by estimating the passenger and freight demand up to 2030-31, identifying the potential gap in passenger and freight demand-supply and converting passenger and freight demand into energy demand. In phase two, an in-depth analysis of preferred options will be undertaken to develop a business-model/financing-mechanism that would require minimum investment by the Indian Railways. The third phase will be directed towards the implementation of the option developed in phase two in the Indian Railways.

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

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

Project Leader: *Rajat Kathuria*
Research Team: *Mansi Kedia and Parnil Urdhwareshe*
Commencement: January 2015
Expected Date of Completion: August 2016
Funded by: Cellular Operators Association of India, (Rs. 20.70 lakh)

The Indian telecom industry has been increasingly reporting high levels of indebtedness, record high spectrum costs, onerous levies and taxes and the burden of disruptive competition. At the same time, there are several instances of recovery and return to profitability, driven by sharp increases in data usage, technological innovation and increased operational efficiencies. Given these variations, this project seeks to assess the telecom sector's financial health, particularly with regard to its ability to bear regulatory and investment burdens, across several standard dimensions in the context of its contribution to overall economic growth.

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 status of the sector. Parameters for analysis include real revenue growth, earnings before interest, tax, depreciation, and amortisation (EBITDA) and profit after tax (PAT). The assessment of profitability performance, operating results and leverage helps determine the level of financial distress 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 costs faced by firms.

The first draft of the study used data for four financial years from 2010-11 to 2013-14. This is now being updated with data for two more years – 2014-15 and 2015-16. The results of this analysis, along with findings from a stakeholder consultation, will be used to frame recommendations for policy action that could serve as an input to improve the financial health of the telecom sector.

5.2 Pilot Studies on Trade in Telecommunications, Logistics, Audiovisual and Professional Services

Project Leader: *Arpita Mukherjee*
Research Team: *Tanu M. Goyal, Bhavook Bhardwaj, Ramneet Goswami, Deeparghya Mukherjee, Rajkumar Shahi and Pallab Ghosh*
Commencement: June 2014
Completed: June 2015
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: (i) suggest a suitable mechanism for regular collection of country-wise, sector-wise and mode-wise services trade data; (ii) suggest an appropriate classification to be adopted for data collection based on international norms; (iii) examine the methodologies and institutional framework adopted by some developed and developing countries for compilation of services trade data to analyse how these can be adopted in India; (iv) conduct an online primary survey to check the validity of the data collection procedure; and (v) design a business directory for data collection and a framework for online and offline survey data collection and reporting.

The study report has been published and the recommendations are being implemented by the government.

5.3 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: September 2016
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 with balancing the interests of the numerous stakeholders involved. This project attempts to better inform policy through the organisation of round-table conferences and panel discussions, bringing together members of civil society, government, industry and academia for focused discussions 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 organised, inputs from which will be combined with secondary data based research and distilled into a report with actionable policy recommendations or dissemination.

5.4 Quantifying the Economic Value of an Open Internet for India

Project Leader: *Rajat Kathuria*
Project Team: *Mansi Kedia, Sirus Libeiro, Parnil Urdhwareshe and Vatsala Shreeti*
Commencement: April 2015
Completed: March 2016
Funded by: British High Commission, (Rs. 25.60 lakh)

With the second largest internet user base in the world and with internet services embedded in numerous government initiatives, the centrality of the internet to India's development is well accepted. However, there has been relatively little discussion on the importance of internet openness for enabling and sustaining such gains.

This project developed the first framework for a clearer understanding of the economic value of an open internet for India. It also assessed the role of a multi-stakeholder model of internet governance in enabling a free, open and secure internet. The analysis also mapped stakeholder perspectives on the importance of openness to the development of India's internet economy and explored the relationship between openness and governance models through comparisons with a relatively 'closed' internet. The study further estimated the aggregate expenditure on accessing the internet in India and attempted to measure the spill over benefits generated by internet access.

The research findings were disseminated at a seminar held in March 2016 and the final report was released in July 2016.

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

Project Leader: *Rajat Kathuria*
Research Team: *Mansi Kedia and Parnil Urdhwareshe*
Commencement: April 2014
Expected Date of Completion: Ongoing
Funded by: ICRIER

The story of the extraordinary growth of the telecom sector in India, the controversies on the way and overall impact have been the subject of constant media, public and academic attention for nearly a decade. At the centre of this story is the mobile phone with nearly 915 million subscribers (as of June 2014) that has been the fulcrum on which telecom has moved India. However, any promise that the sector may hold cannot exist in the absence of an enabling environment – there is no simple solution for telecom to revisit prosperity, especially given the change in landscape and the entry of disruptive technology.

In March 2014, ICRIER organised an *International Conference on Telecommunications* to influence India's telecom sector policy discourse towards a more constructive and forward-looking path. The conference served as the genesis for this flagship report on *The Story of Indian Telecom: Volatility, Opprobrium, Impact and Promise*.

The report addresses some of the key issues at the heart of the Indian telecom sector – the current state of institutions, spectrum, competition and interconnection, as well as upcoming subjects of importance such as internet governance, network neutrality and the advent of over-the-top services. The report will bring together findings from stakeholder interactions and primary and secondary research to provide a holistic overview of the current state of Indian telecom. The flagship report will provide a wealth of data, rigorous statistical analysis and views of sector experts to ultimately suggest policy options to unlock telecom's vast unexploited potential in India.

5.6 Health Policy Initiative

Project Leader: *Ali Mehdi*

Research Team: *Vasudha Wattal, Rahul Mongia, Pallavi Joshi, Divya Chaudhry, Priyanka Tomar, Deepmala Pokhriyal and Aashna Arora; Seema Rao,Udaya Mishra, Irudaya Rajan and William Joe (External Consultants)*

Commencement: February 2014

Expected Date of Completion: January 2017

Funded by: Pharmaceutical Research and Manufacturers of America (PhRMA), Washington DC, (Rs. 523.70 lakh)

Lack of effective regulation is probably the biggest challenge facing India's health care sector today. Efficiency and equity deficits in this sector are poised to become even more pronounced with the growing burden of chronic diseases in the country. In 2012, 21 percent (3.4 million) of global premature deaths happened due to non communicable diseases (NCDs) in India, the highest in the world. The burden of premature NCD deaths is disproportionately borne by the country's working-age population. The criticality of working-age population compared to dependent population for economic growth at the national, state and household levels cannot be overemphasised. It is estimated that an annual two percent reduction in deaths due to NCDs between 2005 and 2015 would have led to substantial gains in the country's labour supply and saved India 15 billion dollars. India's average loss of income due to NCDs has been estimated at 23 billion dollars a year (constant 1998 international dollars), which was 0.4 percent of GDP in 2005 and 1.3 percent in 2015.

ICRIER's Health Policy Initiative aims to delve into some of these critical challenges in India's health sector and develop actionable policy recommendations for health sector reforms based on best practices from around the world. At present, two research programmes have been taken up under the Initiative – *Research Programme on Drug Regulatory Reforms in India* and *Research Programme on Tackling Chronic Diseases in India*. More information is available at www.icrier-health.org .

5.6.1 *Research Programme on Drug Regulatory Reforms in India*

Almost half of health-related expenses incurred by households in India are on medicines. However, consumers lack the technical expertise to ascertain the safety, quality or efficacy of these medicines. Hence, there is critical need to regulate this sector. While policymakers have quite successfully promoted India's health care industry, in particular the pharmaceutical sector, not enough attention has been paid to strengthening the drug regulatory framework and processes. The recent exercise by the Central Drug Standard Control Organisation (CDSCO) to revisit India's Drugs and Cosmetics Act, 1940 and the Drugs and Cosmetics Rules, 1945, is, therefore, a step in the right direction.

This research programme seeks to address some of the key policy issues including how the standards of drug regulation in the country can be strengthened, while leveraging the potential of the pharmaceutical industry to address India's evolving disease burden as well as continue to contribute to overall economic growth.

5.6.1.1 *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 recent report of the (late) Ranjit Roy Chaudhary Committee in 2013. Nevertheless, the regulatory structure continues to be plagued with several structural challenges, including issues related to regulatory harmonisation between the centre and the states, access to regulatory resources and transparency, etc., which have undermined the general effectiveness of India's regulatory system. This study evaluated the administrative structure and functions of drug regulatory authorities at both the central and state levels along comparative perspectives on similar challenges from across the globe. Through legal and policy analysis, supported by stakeholder interactions, the study provides a systematic analysis of current challenges along with actionable policy recommendations, and has suggested possible means for their implementation.

5.6.1.2 *Drug Quality and Safety Issues in India*

Maulik Chokshi, Rahul Mongia and Vasudha Wattal
Completed

Today, 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 is contingent upon both the regulatory milieu in the country of manufacture and the export destination of the pharmaceutical product. The focus of this study was upon the domestic pharmaceutical market in India, where policy makers often face a trade-off between what has been 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 specification 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 the perspectives of several stakeholders, attempted to bring clarity on issues related to the poor quality of medicines and suggested institutional reforms in the Indian regulatory regime, looking at good and bad practices followed both domestically and internationally.

5.6.1.3 *Harmonisation of Drug Registration Procedures: An Impact Assessment for India*

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

Variations in national regulatory frameworks pose challenges for global pharmaceutical trade. This has provided an impetus to international co-operation and harmonisation of drug regulatory standards through initiatives at the regional and international levels. One such example is the adoption of the Common Technical Document (CTD) within the framework of the International Conference on Harmonization of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH), through which harmonised electronic submission of marketing authorisation applications in several countries has become possible. Other harmonisation initiatives such as ASEAN Pharmaceutical Product Working Group (ASEAN PPWG) seek to standardise the process of generic drug registration within the participating region through the use of a slightly modified CTD.

Existing literature on harmonisation has largely focused on its scientific and technical dimensions, while policy research around the issue, particularly from the perspective of developing countries, has been quite limited. India is a major player in the global pharmaceutical trade, but is not yet involved in any ongoing harmonisation initiative. In this context, the objective of this study is to analyse the implications of ongoing global and regional harmonisation initiatives for India's pharmaceutical trade and suggest policy responses that India could consider with regards to these initiatives, particularly drug registration procedures.

5.6.1.4 *Challenges and Prospects of Clinical Trials in India: A Regulatory Perspective*

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

Clinical trials (CTs) are critical for the drug development process as they help establish the safety and efficacy of new drugs. India has had favourable conditions for conducting clinical research and drug development – a large and diverse patient pool (trial subjects), qualified scientists (investigators), medical institutions (sites), etc. However, in recent years, several controversies have led to a decrease in clinical trials in India. Only 19 CTs were approved in 2013, a drop of roughly 93 percent from 2012 (262 trials), and a fraction of the 500 CTs that were approved in 2010.

One significant factor in this regard has been the gaps in the regulatory framework. The government has attempted to plug the regulatory vacuum through expert committee reports such as the Ranjit Roy Chaudhary Committee. Nevertheless, there is still a long way to go. For example, the latest amendment to the Drugs and Cosmetics Act, 1940, is not only pending, it has several clauses which are vague or contradict existing rules under Schedule Y of the Drugs and Cosmetic Rules, 1945. This study will focus on three key aspects of CTs – ethical, procedural, and the uncertainty embodied in current regulations – and accordingly suggest actionable policy recommendations based on extensive desk research and interactions with various stakeholders in India and selected countries, which have had encouraging policy frameworks and outcomes vis-à-vis CTs.

5.6.2 *Research Programme on Tackling Chronic Diseases in India*

The problem of chronic diseases is more severe in low and middle income countries (LMICs) in comparison to the high income countries. About 74 percent of chronic disease related deaths occur in LMICs and most of these deaths are premature (under 70 years), placing an enormous burden of chronic diseases-related morbidity, productivity and economic loss on these countries. In India, in 2012, 59 percent of premature deaths occurred due to chronic diseases as compared to 27 and 15 percent due to acute diseases and injuries respectively. The objective of this research programme is to highlight issues in tackling chronic diseases and suggest policy reforms at both the national and state levels.

5.6.2.1 *Prevention of Chronic Diseases: Reorienting 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 percent of all deaths are premature. Notably, three times more premature deaths happen in the 30-69 years 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 make a health system transition that gives equal importance to adult mortality. This study analysed some of the major challenges in terms of governance, manpower and financing that such a transition would face and suggested a number of actionable policy measures. For this study, field research was undertaken in four Indian states – Uttar Pradesh, Rajasthan, Kerala and Tamil Nadu (two health-backward and two health-advanced) – and four countries – Japan, Canada, United States and Sri Lanka (where there is varying probability of premature mortality due to non-communicable diseases). It involved interviews with almost two hundred stakeholders from among policy makers, industry, international organisations, civil society and the academia.

5.6.2.2 *Surveillance of Chronic Diseases: Challenges and Strategies for India*

Udaya Mishra, Irudaya Rajan, William Joe and Ali Mehdi

Completed

This study described the status, challenges and scope for strengthening surveillance of chronic disease risk factors, morbidities and mortality in India. Drawing upon the surveillance experience of four selected States of India, namely Uttar Pradesh, Rajasthan, Kerala and Tamil Nadu, it attempted to understand the key requirements in relation to financing, infrastructure, human resources and governance. It noted that the public health system is grappling with resource constraints but there is room for more efforts to undertake systematic population based chronic disease surveillance in India. Although there are no immediate policy goals to ensure population-based screening, opportunistic screening for selected chronic diseases is an important strategy under the National Programme for Prevention and Control of Diabetes, Cardiovascular diseases and Stroke (NPCDCS). However, surveillance activities under this programme are performing sub-optimally due to funding constraints,

inadequate operational guidelines and shortage of clinical, technical and managerial staff. Further, the paper suggested that besides financing, there is need to develop institutional mechanisms for engagement of adequate human resources for surveillance and disease management. The engagement of AYUSH and community health workers (ASHAs or others) was identified as a reasonable option but this would require a sound incentive mechanism to ensure good coverage and programme outreach. Furthermore, local support, both social and political, is critical to create a conducive environment to contact beneficiaries and for information recording. In this endeavour, the private sector was identified as a potential partner but this public private partnership (PPP) would need an enabling environment.

5.7 Injection Practices and Safety and Healthcare Waste Management in India

Project Leader: *Ali Mehdi*
Research Team: *Joyita Chowdhury, Arunima Wanchoo and Deepmala Pokhriyal*
Commencement: April 2016
Expected Date of Completion: September 2016
Funded by: World Health Organisation (WHO), Country Office for India, (Rs. 15.88 lakh)

The ongoing discussion on universal health coverage (UHC), which focuses on increasing access to quality health care services at affordable cost, has highlighted issues relating to infection prevention and control, and patient safety in India. In particular, injection safety is an important component of patient safety and the quality of healthcare. The available information on injection safety in India indicates need for greater attention to this issue. This study will analyse the current status and policy framework for injection practices and safety and healthcare waste management in India. The endeavour is to identify the challenges and develop policy recommendations through evidence based research and help policy makers in planning the way forward.

6. Promoting Entrepreneurship and Skill Development

6.1 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, Prateek Kukreja; Homagni Choudhury (External Consultant)*
Commencement: January 2014
Expected Date of Completion: December 2016
Funded by: The World Bank, Washington DC, (Rs. 126.00 lakh per year)

ICRIER is one of five global institutions participating in the Network of Jobs and Development (NJD) initiative of the World Bank. The initiative aims to develop a vibrant and engaging community of experts on 'jobs' and seeks 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 are 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

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

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

Anwarul Hoda and Durgesh Kumar Rai

Completed

The factors responsible for the lacklustre performance of India's manufacturing 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.

6.1.2 *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 the protection aspects of social security. 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 the 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 the welfare of society but also from the perspective of the efficiency of the work force in any activity. The analysis revealed serious shortcomings in the social security legislation and programmes in India insofar as they apply to the unorganised workers. The paper concluded with recommendations on the alternative approaches to redress the deficiencies.

6.1.3 *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 examines the factors holding back the growth of output and employment in this sector. The paper found that there are 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 have 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 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.

6.1.4 *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?

6.1.5 *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 examines 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.

6.1.6 *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 and Homagni Choudhury
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.

6.1.7 *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 analysed the impact of trade on jobs in the Indian manufacturing sector. It found that the direct impact of trade on manufacturing jobs has been positive. However, 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 recommended removal of supply side constraints to gain from international trade.

6.1.8 *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 the 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 discussed India's demographic dynamics and argued 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. The 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.

6.1.9 *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. Contrary to prevailing perception, 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.

6.1.10 *Technology, Jobs & Inequality: Evidence from India's Manufacturing Sector*

Radhicka Kapoor & P. P. Krishnapriya

Completed

With easier access to foreign technology and imported capital goods, firms in India's organised manufacturing sector 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 inequality. 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 percent to 17.4 percent of gross value added (GVA) between 2000-2001 and 2011-12, while the share of wages to workers in GVA declined from 22.2 percent to 14.3 percent. 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 percent to 35.8 percent while that of unskilled labour (production workers) fell from 57.6 percent to 48.8 percent of the total wage bill. However, it is not just the growth of capital intensity but another important, though 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 complimentarity – 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.

6.1.11 *Fragility, Economy and Jobs: A Case Study of Telangana/Andhra Pradesh*

Sanjay Pulipaka and Sri Siddhartha Ayyagari

Completed

There is a close relationship between fragility and underdevelopment. According to World Bank estimates, "half of the world's poor are expected to live in countries affected by fragility, conflict and violence (FCV) by 2030." Therefore, addressing fragility becomes critical to usher in faster development and this requires that all activities – economic, political and security – should be geared to reduce conflict and violence. Compared to its neighbours, India has to a great extent addressed armed insurgencies effectively. However, there are geographic pockets in Northeast and Central India that can be called fragile because of armed conflict. In the 1980s and 1990s, Telangana/Andhra Pradesh experienced fragility because of Naxalite violence. The state government was successful in addressing fragility through a judicious mix of development and counter-insurgency operations. This paper identified the lessons that may be drawn from the experience of Telangana/Andhra Pradesh's response to armed conflict.

6.1.12 *The Challenge of Job Creation in Fragile Situations: A Case Study of Kashmir, India*

Ali Mehdi, Divya Chaudhry and Priyanka Tomar

Ongoing

Job creation and skill development are central concerns for governments around the world. While there is substantial literature on the constraints and potential solutions to job creation and skill development in 'normal' situations, these issues have remained under-researched in the context of fragile situations, despite their greater significance for the latter. In a first attempt of this kind, this paper looks at three countries in South Asia – India, Afghanistan, and Sri Lanka – as well as two states within India – Kashmir and Telangana – in order to understand specific as well as common challenges and solutions to job creation and skill development. Apart from policy analysis, the methodology consists of interactions with policymakers, academia, industry, job-seekers, civil society, media and others to gain insights into these issues as well as stakeholder perspectives and aspirations with regard to them.

6.1.13 *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

Ongoing

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 will be 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 will be 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 will attempt 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.

6.1.14 *Evolution of Task Content of Jobs in India*

Pankaj Vashisht

Ongoing

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 of the labour market and an increase in wage disparities. India is not isolated from these concerns. Against this backdrop, this study will examine the technology induced structural change in India and its implications for labour. Specifically, it will examine the evolution of the task content of jobs in the Indian economy since the early 1980s when India opened up for foreign technology and trade. The study will also spell out regulatory and other policy reforms needed to enhance the labour market benefits of technological change.

6.1.15 *Labour Regulations on Wages and Manufacturing in India*

Anwarul Hoda and Durgesh Kumar Rai

Ongoing

This study proposes to examine labour laws related to wages in India, focusing on the scope of the laws, parameters to determine wages, implementation, etc., in the context of major statutes such as the Payment of

Wages Act, 1936, the Minimum Wages Act, 1948, and the Payment of Bonus Act, 1965. The research team aims to analyse existing wage related legislations in the country and evaluate their role in influencing wages and the environment for investment in the manufacturing sector. They will also examine wage related regulations in some other emerging economies and draw lessons for India.

6.1.16 *The Dilemma of Informality*

Radhicka Kapoor & P. P. Krishnapriya
Ongoing

Despite impressive economic growth over the past 20 years, the vast majority of Indian workers continue to toil in informal employment. Out of the 472 million workers in 2011-12, about 392 million were estimated to be working in the unorganised or informal sector defined to comprise all privately-owned unincorporated enterprises employing less than 10 workers. Even the organised sector, which comprises 80 million workers, had 46 million workers in the informal category of employment. Hence, informal workers accounted for about 92 percent of the total workers. Moreover, the decline in informality has been rather sluggish over the past two decades and India needs to confront the reality that informality is increasingly the norm, not the exception. In this backdrop, this paper attempts to examine how the working conditions and productivity of informal workers can be improved in order to create an enabling environment for firms in the informal sector to flourish and transition from informality to formality.

6.1.17 *Jobs, Fragility and Political Transition: Lessons from Myanmar and Nepal*

Sanjay Pulipaka
Ongoing

In recent years, both Myanmar and Nepal have undergone significant political changes. In Myanmar, the National League Democracy led by Aung San Suu Kyi registered an emphatic electoral victory in 2015. For the first time since the military coup of 1962, a civilian without a military background was elected to the topmost leadership position. However, the political situation continues to be fragile. Nepal, too, has been experiencing sustained political turbulence. In September 2015, the country adopted a new constitution. However, this generated widespread protests in some parts of the country as the new constitution was perceived as discriminatory towards the Terai plains. In this context, this study will examine the interface between jobs, fragility and political transition taking Nepal and Myanmar as case studies to examine policies designed to promote employment opportunities in various sectors and their impact on domestic politics.

6.2 The Contractualisation of India's Workforce: Explanations and Implications

Project Co-ordinators: *Radhicka Kapoor*
Research Team: *P. P. Krishnapriya*
Commencement: November 2015
Expected Date of Completion: August 2016
Funded by: International Growth Centre, (Rs. 7.50 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 percent 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 is two-fold. The first is to examine what factors other than labour regulations have driven contractualisation in organised manufacturing. Secondly, the aim is 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 period 2000-01 to 2011-12, the research team will examine the relationship between workers' wages, productivity and the extent of contractualisation in a firm. This analysis will be supplemented with a descriptive case study of workers in the industrial belts in the peripheral areas of Delhi. Through these interviews, the study team will try to identify differences in the type of contract, nature of work, education and wages of various types of workers.

6.3 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
Expected Date of Completion: September 2016
Funded by: Fiscal Responsibility and Budget Management (FRBM) Review Committee, Ministry of Finance

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 its 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 percent, 430.5 million workers (about 92 percent 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.

6.4 ICRIER-Mint State Investment Attractiveness Index

Project Leader: *Radhicka Kapoor*
Research Team: *P. P. Krishnapriya, Richa Sekhani, Raavi Aggarwal and Ashulipi Singhal*
Commencement: May 2016
Expected Date of Completion: Ongoing
Funded by: Mint, HT Media

India is widely projected to grow at a rate of 7.5 percent 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 in an attempt to attract a greater share of these investment inflows into the country. However, lack of adequate information at the state level makes it difficult for the 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 pillars (or 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 scorecards for investors, the ranking intends to draw the attention of policy makers towards 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 accordingly draw lessons from these.

7. Asian Economic Integration with Focus on South Asia

7.1 Sub-Regional Co-operation between India, Myanmar and Bangladesh

Project Leader: *Nisha Taneja*
Research Team: *Deb Kusum Das and Deepika Wadhwa*
Commencement: June 2014
Completed: March 2016
Funded by: The Department for International Development (DFID), (Rs. 95.00 lakh)

The main objective of this project was to analyse the scope for sub-regional co-operation between India, Myanmar and Bangladesh through trade, connectivity and investment. The contiguous region spanning India's Northeast region with Bangladesh and Myanmar, if opened up to greater trade and investment and improved connectivity, can induce economic growth and improve the livelihoods of millions of people. In this context, the research studies completed were under the following broad themes: (i) political economy underlying regional economic co-operation between India's Northeast region, Myanmar and Bangladesh

(ii) trends and patterns of trade and investment between India-Bangladesh and India-Myanmar; (iii) trade policies and transport policies at India-Bangladesh and India-Myanmar land borders; and (iv) connectivity in the sub-region for seamless transportation at lower trade costs.

The project's research studies were carried out in collaboration with think tanks in the North-east, Bangladesh and Myanmar. The project partners included the Center for Economy, Environment and Society (CEES), Myanmar Development and Resource Institute (MDRI), Yangon University, Myanmar Institute for Strategic and International Studies (MISIS) in Myanmar and South Asian Network on Economic Modelling (SANEM) in Bangladesh.

The findings and policy recommendations of the project were presented at a dissemination conference held in March 2016, which included participants from the collaborating institutions, business, academia and senior level policy makers from India.

7.2 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
Expected 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 seeks to assess trade possibilities between India and Pakistan in the key health services sector, examine regulatory and market access barriers and suggest how the trade potential can be tapped. The sector has been selected as it has a large social and humanitarian appeal and potential to enhance people-to-people contact. The project has been undertaken jointly with the Sustainable Development Policy Institute (SDPI) in Islamabad. The research is based on secondary information and data as well as a primary survey that is being 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 have been disseminated at a conference organised in New Delhi in July 2016. The final report is forthcoming. More details are available at http://indiapakistantrade.org/

7.3 East Asia Research Programme

Project Leader: *Sanjay Pulipaka*
Research Team: *Saranya Sircar*
Commencement: September 2015
Completion: March 2016
Funded by: Embassy of Japan, (Rs. 34.70 lakh)

The objective of this programme was to create a forum for young scholars to reflect on political and security issues in the East Asian Region. The research and discussion themes included the regional balance of power, regional security architecture, multiple frameworks of engagement (bilateral/trilateral/quadrilateral), territorial/maritime disputes and non-traditional security issues. The programme organised three panel

discussions, an international conference and published the report East Asian Security: Changing Contours. The programme also undertook a study tour of Japan in March 2016 that aimed to advance participating scholars' understanding of the bilateral relationship between India and Japan and reflect on the broad political/economic issues that impact the larger East Asian region. The team had the opportunity to interact with and present the above mentioned report to members of several research institutions including Tokyo University of Science, Keio University, National Institute for Defense Studies (NIDS), Japan Institute of International Affairs (JIIA) and Kyoto University. The scholars also met with senior officials in the concerned ministries of the Government of Japan.

8. Multilateral Trade Negotiations and FTAs

8.1 Capacity Building Initiative for Trade Development in India

Project Leaders of the Consortium: *Nora Plaisier (Ecorys Nederlands 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, (Rs. 108.00 lakh)

This initiative aims to enhance trade related capacity building in India in order to meet the country's development objectives. The project has various components including research, training of policymakers and industry, workshops and field visits. The first study under this project titled 'SPS Barriers to India's Agriculture Export: Learning from the EU experiences in SPS and Food Safety Standards' has been commissioned. The objective of the study is to identify the sanitary and phytosanitary (SPS) barriers faced by Indian exporters in EU markets with respect to agriculture and processed produce focusing on selected products that include mangoes, grapes, basmati rice, peanut and peanut products, mushroom, green peas, green beans, dairy products, eggplant, etc. The SPS barriers consist of specific concerns that affect the health and safety of consumers and include issues such as the presence of excessive chemicals, pesticides, synthetic colour, microbes, etc., which have arisen in the EU in the past decade and have adversely impacted India's exports of these products. The study aims to make policy recommendations to remove these barriers through domestic reforms and greater collaboration with the EU.

8.2 Assessing the Indian Experience with Bilateral Investment Treaties: Emergent Issues for Future Strategies

Project Leader: *Rajat Kathuria*

Research Team: *Jaivir Singh, Parnil Urdhwareshe and Vatsala Shreeti*

Commencement: January 2016

Expected Date of Completion: August 2016

Funded by: Ministry of Finance, Government of India, (Rs. 24.00 lakh)

India has signed a number of bilateral investment treaties (BITs, also called bilateral investment protection agreements) that aim to protect the interests of foreign investors against the threat of expropriation by host countries. While the signatories to BITs are the governments of the two nations, individual private investors are empowered to initiate international arbitration proceedings against the host country.

While some of these international arbitral awards have been in favour of the host country government, there are numerous instances where host countries have had to pay large compensation to private foreign investors. India has a number of BITs with both developed as well as developing nations, and has been subjected to two instances of adverse international arbitration rulings; it also faces a number of ongoing arbitrations. The magnitude of the impact of these treaties should thus not be measured only in terms of the compensation paid out by governments, but also by looking at the nature of the regulatory regime put in place by successive arbitral awards.

This study follows the legal arguments that form the basis of arbitral awards as well as treaty stipulations to understand the nature of the binding constraints that are manifest. Turning to the institutional questions regarding decision making, it applies qualitative interview-based methods with government officials (bureaucrats, diplomats and politicians), supplemented by documents such as the *Travaux préparatoires* (official record of negotiations) associated with certain key treaties. Finally, the study also revisits the research on evidence of a relationship between BIT signing and inward FDI. Overall, the study employs multiple and interdisciplinary methods, including social science analysis of international law, supplemented by material drawn from archival material as well as gathering qualitative information. The expected output will include an analysis of how BIT arbitration can have additional non-immediate outcomes (in the form of impact on domestic regulation), alongside the processes and constraints under which such treaties are shaped. Policy recommendations drawn from this include the identification of aspects of BITs that have historically proven stable and those that have not, as well as whether BIT formulation and negotiation ought to vary given the balance of capital investments between parties.

8.3 WTO and Trade Policy

Project Leader: *Anwarul Hoda*
Research Team: *Nisha Taneja and Durgesh K Rai*
Commencement: August 2009
Expected Date of Completion: Ongoing

The World Trade Organisation (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.

Several new issues have emerged for India from recent developments in trade policy. First, it needs to be analysed if it would be in India's interest to take the initiative to join the Trans Pacific Partnership (TPP). Secondly, should India be open to the idea of new plurilateral agreements being negotiated within the WTO framework? The study team is actively engaged in examining the implications for India's trade and other economic interests if India were to join the TPP. The study will cover the main critical issues arising from the TPP Agreement such as IPRs, investment, labour, environment, state owned enterprises and dispute settlement. It will also seek to assess the TPP Agreement from the angles of trade and investment flows. In this context, the study will look at the provisions on customs, rules of origin, TBT, SPS and the textiles sector.

8.4 ASEAN Economic Community and Its Impact on Asia-Pacific Supply Chains and India-Taiwan Economic Relations

Project Leader: *Anwarul Hoda*

Research Team: *Rajeev Anantaram and Vatsala Shreeti*

Commencement: June 2015

Completion: December 2015

Funded by: Taipei Economic and Cultural Center (TECC), Taiwan (Rs.19.90 lakh)

The ASEAN Economic Community (AEC) is expected to create a common market of 600 million people and substantially boost trade and environment flows in the region. It will also have an impact on the economic and commercial relations between the ASEAN countries, on the one hand, and their existing trade and investment partners in Asia on the other. The emergence of ASEAN as a large integrated economy will also impinge on trade and investment flows among other Asian countries and customs territories and will affect the operation of supply chains in these countries. In this context, this study analysed the implementation of the AEC and assessed its impact on supply chains in the Asia Pacific region, with particular reference to trade and investment relations between India and Taiwan. The findings were presented in Taipei in January 2016.

SEMINARS

Tackling Chronic Diseases in India

May 23, 2016

As part of its research programme on *Tackling Chronic Diseases in India*, ICRIER's Health Policy Initiative organised an international seminar on May 23, 2016, at New Delhi. The speakers in the inaugural session included Henk Bekedam, WHO Representative to India; R. Siyambalagoda, Additional Secretary (Medical Services), Ministry of Health, Nutrition and Indigenous Medicine, Government of Sri Lanka; Samir Sodha, Resident Advisor, India Epidemic Intelligence Service Programme, Center for Disease Control and Prevention (CDC), India Office; Nitin Goel, Managing Director (South Asia), IMS Health and Aman Gupta, Country Representative (India), Partnership to Fight Chronic Disease (PFCD).

The findings of two research papers, '*Prevention of Chronic Diseases: Reorienting Primary Health Systems in India*' and '*Surveillance of Chronic Diseases: Challenges and Strategies for India*', were presented by Ali Mehdi, Senior Consultant, ICRIER and Udaya Mishra, Associate Professor, CDS, Trivandrum respectively.

Supporting Indian Farms the Smart Way: Rationalising Subsidies and Investments for Faster, Inclusive and Sustainable Growth

April 19, 2016

As part of the project, '*Supporting Indian Farms the Smart Way: Rationalising Subsidies and Investments for Faster, Inclusive and Sustainable Growth*', ICRIER organised a seminar on April 19, 2015, to present the preliminary findings of the study. The study attempted to determine how subsidies in Indian agriculture can be made more efficient and cost effective, and ensure food security and sustainable development. The presentation by the project team led by Ashok Gulati, highlighted ways to rationalise input subsidy levels and make them more efficient and farmer-friendly. The session was chaired by J. K. Mohapatra, former Secretary, Department of Fertilisers and the two lead discussants were T. K. Arun, Editor, The Economic Times and Sunil Jain, Managing Editor, The Financial Express. This was followed by the ICRIER team presenting an economic model comparing the relative impact of subsidies and investment on poverty alleviation and agricultural growth. This session was chaired by Marco Ferroni, Executive Director, Syngenta Foundation for Sustainable Agriculture, and the two discussants were Sudha Narayanan, Associate Professor, IGIDR, and Anup K. Pujari, Former Secretary, Ministry of Micro, Small and Medium Enterprises.

Quantifying the Value of an Open Internet for India

March 11, 2016

L to R: Rajat Kathuria and Ajay Kumar at the seminar on *Quantifying the value of an open Internet for India*

To disseminate the preliminary findings of a forthcoming report by ICRIER on the economic benefits of the Internet, a seminar on the theme '*Quantifying the Value of an Open Internet for India*' was organised on March 11, 2016. In his opening remarks, Rajat Kathuria, Director & CE, ICRIER, talked about the concept of an open internet, the effect of governance (multi-stakeholder and multi-lateral) on this openness and the importance of spillovers (indirect effects) on the value of an open internet. In his keynote speech, Ajay Kumar, Additional Secretary, Department of Electronics and IT, discussed the lack of local language content and support as a possible key constraint on openness and internet adoption in India, and the importance of "permissionless innovation" in driving growth and research without the institutional constraints that exist in other research and information-heavy sectors.

ICRIER scholars Parnil Urdhwareshe and Vatsala Shreeti presented the methodology employed by the research team for quantifying the value of an open internet in the country. They pointed out that the definition of openness varies with the context and nature of an economic activity. The preliminary findings of the report suggest that openness of internet could have a growing positive impact on various sectors including telecom, IT, e-commerce, Internet of Things, etc., and consequently, the national income. The social value that the internet enables (in terms of increased democratic participation, etc.) also contributes to the value of the internet and must be incorporated in the frameworks that will be used to analyse the impact of the internet in the future. The discussion at the seminar focused on the potential benefits of a multi-stakeholder system of governance for India, highlighting the need for relations between the government and stakeholders domestically to evolve into a spirit of collaboration between the two.

BP Energy Outlook 2035

March 09, 2016

L to R: Rajat Kathuria, Spencer Dale, Gaurav Bhatiani and Saon Ray at the seminar on *BP Energy Outlook 2035*

A presentation on '*BP Energy Outlook 2035*' was made by Spencer Dale, Chief Economist, BP Group, at a seminar organised by ICRIER on March 9, 2016. Forecasting trends for the global economy until 2035, the presentation suggested that global economic growth and rising living standards would drive up demand for energy by 25-35 percent in the next twenty years. In this context, the changing fuel mix, the contribution of different economies, sectors and other factors driving trends in the forecast period were discussed. Much of these trends will be evident in the developing economies, particularly India and China.

The lead discussants on the panel were Gaurav Bhatiani, CEO, Infrastructure Leasing & Financial Services Limited (IL&FS) and Saon Ray, Senior Fellow, ICRIER. Mr. Bhatiani spoke on trends in the demand for and supply of electricity in India. He also commented on the changing fuel mix and the consequences of an expanding manufacturing sector

in India for energy demand. Dr. Saon Ray spoke on the possibilities of limiting global warming to below two degree celsius in the forecast period and the related challenges for India. The seminar discussions also touched on the scope for adopting new technologies and alternative sources of energy to ensure clean and cost-efficient energy supplies for India. Issues such as energy pricing, accessibility, climate change and various risks for firms around the world in the light of the forecast were also discussed, particularly in the context of policy changes needed to achieve COP21 targets in a time bound manner.

The Union Budget 2016-17: Reforms and Development Perspectives

March 05, 2016

L to R: Rajat Kathuria, Pratap Bhanu Mehta, Rathin Roy, Ashok K. Bhattacharya, Shekhar Shah and S. K. Shanthi at the seminar on *The Union Budget 2016-17: Reforms and Development Perspectives*

For the tenth consecutive year, ICRIER joined four other economic policy think tanks – Centre for Policy Research (CPR), Indian Development Foundation (IDF), National Council of Applied Economic Research (NCAER), and National Institute of Public Finance and Policy (NIPFP) – to organise a seminar on the union budget on March 5, 2016.

The heads of the five institutions presented their assessment of the Union budget 2016-17. The seminar was moderated by Ashok K. Bhattacharya, Editor, Business Standard; the panellists included Rajat Kathuria, Director & CE, ICRIER, Pratap Bhanu Mehta, President, CPR, S. K. Shanthi, Director, IDF, Shekhar Shah, Director General, NCAER and Rathin Roy, Director, NIPFP.

Towards a Sustainable Energy Strategy for India

February 01, 2016

In partnership with India Observatory at the London School of Economics, a seminar titled '*Towards a Sustainable Energy Strategy for India*' was hosted by ICRIER on February 1, 2016. The focus of discussions was a joint paper with the same title written by Nicholas Stern, Chairman, Grantham Research Institute on Climate Change and the Environment and Head, India Observatory, LSE, Montek Singh Ahluwalia, former Deputy Chairman Planning Commission and Himanshu Gupta, Scholar, Stanford University.

The paper presents India's energy trajectory from 2012 to 2047 with a view to highlighting the implications for energy security (import dependence) and the trajectory of carbon emissions (sustainability). The projections are based on the latest IESS V.2 calculator, recently released by NITI Aayog and examine two scenarios: a business as usual (BAU)

scenario and a low carbon (lc) scenario. According to the authors, the low carbon strategy, which emerges from the boldest possible energy saving efforts built into the NITI Aayog calculator, is clearly desirable from both the energy security perspective and the sustainability perspective. The issue is the costs and manner of implementing the shift? The authors in their presentation emphasised that a large number of sector specific and economy wide policy decisions are needed if the changes envisaged in the low carbon strategy are to be achieved.

L to R: Rajat Kathuria, Ajay Mathur, Arvind Subramanian Hon'ble Union Minister Suresh Prabhu, Hon'ble former Prime Minister Manmohan Singh, Nicholas Stern, Montek Singh Ahluwalia, Himanshu Gupta and Isher Judge Ahluwalia at the seminar on *Towards a Sustainable Energy Strategy for India*

In his special address at the seminar, Shri Suresh Prabhu, Union Minister for Railways, acknowledged the key role of railways in the low carbon pathway and reiterated the commitment of Indian railways in this regard. Other notable speakers at the seminar were Arvind Subramanian, Chief Economic Advisor, Government of India and Ajay Mathur, Director General, Bureau of Energy Efficiency.

Inequality: Trends Worldwide and in India

January 22, 2016

The seminar 'Ine*quality: Trends Worldwide and in India*' was jointly organised by ICRIER and The United Nations University World Institute for Development Economics Research (UNU-WIDER) on January 22, 2016, at New Delhi. The latest version of UNU-WIDER's World Income Inequality Database (WIID 3.3) was launched on this occasion. This was followed by a presentation of two studies based on this database. The first study '*Redistribution in the World: Causes and Consequences*', presented by Jukka Pirttila, Research Fellow, UNU-WIDER, concluded that redistributive efforts are strongly linked with economic development and that world redistribution has a minor impact on world income inequality. The second study, '*Global Inequality: Trends and Issues*', presented by Finn Tarp, Director, UNU-WIDER emphasised that global inequality had declined over the past three decades; however, there was substantial heterogeneity in inequality trends across regions.

The second part of the seminar dealt with Indian experiences of inequality and launched the Indian part of an ongoing UNU-WIDER research project, '*Inequality in the Giants*'. The research on '*Inequality in India: Trends and Issues*', by Himanshu, Faculty, Centre for Economic Studies and Planning, JNU and Rinku Murgai, Lead Economist, World Bank (New Delhi), combines and harmonises data from a number of complementary sources to generate a comprehensive picture of income distribution in the country. By supplementing consumption data with data from national accounts and

L to R: Shankar Acharya, Rinku Murgai, Finn Trap, Jukka Pirttila and Himanshu at the seminar on *Inequality: Trends Worldwide and in India*

other data sources, this study gives an overview of trends in inequality. In the discussion, the importance of implementing policy initiatives to reduce inequality was highlighted. Participants also focussed on the debate on growth versus inequality, the acceptable level of inequality, the role of the state and the triple challenges of inclusion, sustainability and gender issues in combating inequality.

IMF's Fall 2015 World Economic Outlook: Adjusting to Lower Commodity Prices

November 20, 2015

A seminar on IMF's Fall 2015 '*World Economic Outlook: Adjusting to Lower Commodity Prices*' was organised by ICRIER on November 20, 2015, in New Delhi. Presented by Gian Maria Milesi-Ferretti, Deputy Director, Research Department, International Monetary Fund (IMF), the seminar noted that six years after the world economy emerged from its broadest and deepest post-war recession, a return to robust and synchronised global expansion remains elusive. Dr. Ferretti pointed out that in countries outside the advanced economies, the sources of slower growth were diverse, ranging from commodity price declines to overhangs from past rapid credit growth and political turmoil.

It was suggested that emerging market and developing economies needed to be ready for monetary policy normalisation by the United States. Advanced economies must continue to deal with legacies of crises where they persist. At the same time, monetary accommodation should continue where output gaps are negative, supplemented by fiscal measures where fiscal space permits. In particular, the presentation made a compelling case for infrastructure investment at a time of very low, long-term real interest rates. It was also recommended that emerging and developing economies should strengthen their financial systems and macro prudential frameworks, putting systems in place for broad asset price shifts and evaluate trade-offs before easing monetary policy.

Assessing the Value of an Open Internet for India

November 20, 2015

A seminar was organised by ICRIER with key stakeholders in India's Internet economy on November 20, 2015. Participants from government, industry and academia join the seminar. The objective was to consult with informed stakeholders on how to define or characterise an open internet. ICRIER presented its initial estimate of the value generated by the internet economy. This was followed by a discussion on various models of internet governance and their influence on the value of

India's internet economy. There was a consensus that various stakeholders of the internet economy are differently suited to take the lead on issues of governance. Even as certain issues require strong participation by governmental agencies, such as cyber security and dispute resolution, those of privacy and freedom of speech must include decision makers from civil society and industry. Hence, a context specific, multi-stakeholder structure of governance is likely to generate the most value. The need to balance the rights of connected users (to a reasonably unrestricted Internet) with future users currently offline was emphasised.

Drug Regulatory Reforms in India

September 25, 2015

Upon completion of the first year of its research programme on '*Drug Regulatory Reforms in India*', ICRIER organised a dissemination seminar on September 25, 2015, at New Delhi. The inaugural session was addressed by distinguished speakers including G. N. Singh, Drugs Controller General of India, and Professor Ranjit Roy Chaudhury, who spoke on issues of critical importance in this sector such as the regulation of clinical trials, the anomaly of having two ministries, the quality of drugs and issues related to centre-state relations. The session concluded with a keynote address by Kathleen Holloway, Regional Advisor in Essential Drugs and Other Medicines at WHO/SEARO.

L to R: Kathleen Holloway, Ranjit Roy Chaudhury, G. N. Singh and Shankar Acharya at the seminar on *Drug Regulatory Reforms in India*

The presentation and discussion session was chaired by Aditya Bhattacharjea, Professor and Head, Department of Economics, Delhi School of Economics. The speakers included Hemant Koshia, Commissioner, FDA Gujarat, Ravi Prakash Gupta, Controller, FDA Chattisgarh, Susan Winckler, Managing Partner, Leavitt Partners, Washington DC, Richard Kingham, Partner, Covington and Burling, Washington DC and D. G. Shah, Secretary General, Indian Pharmaceutical Alliance, Mumbai. The research papers '*Administrative Structure and Functions of Drug Regulatory Authorities in India*' and '*Drug Quality and Safety Issues in India*', were presented by Nupur Chowdhury and Maulik Chokshi respectively.

Price and Income Elasticity of Indian Exports: Role of Structural Rigidities

April 24, 2015

Volodymyr Tulin, Economist, International Monetary Fund, presented the findings of his paper, co-authored with Mehdi Raissi, on '*Price and Income Elasticity of Indian Exports: Role of Structural Rigidities*', at a seminar organised by ICRIER on April 24, 2015. Analysing the growth of India's merchandise exports, Dr. Tulin illustrated that exports have

decelerated significantly since 2011. Explaining the methodology of the paper, he stated that the traditional Panel ARDL (Auto-Regressive Distributed Lag) approach was used in the paper on disaggregated export volume data for 45 Indian industries over the period 1990–2013, as well as industry-specific international relative prices.

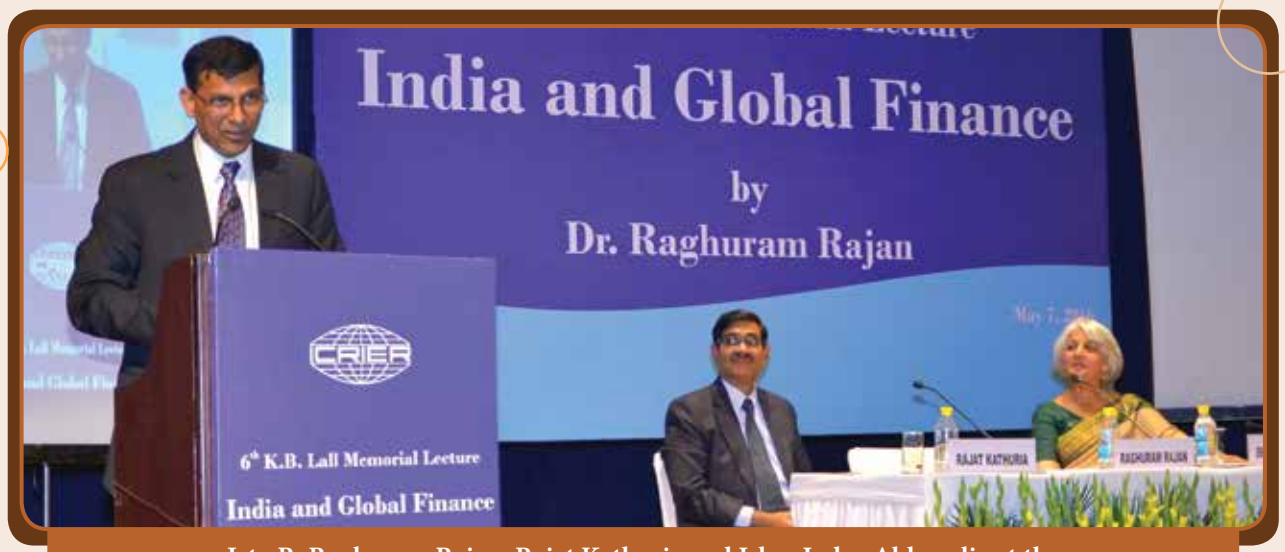
According to Dr. Tulin, while Indian exports respond positively to international relative price fluctuations in the short-run and export price competitiveness in the long-run, binding supply-side constraints dampen price responsiveness in the short-term. The presentation ended with a discussion on the key finding of the paper, which was that exchange rate flexibility is an important shock absorber in responding to external demand shocks as well as policies to alleviate supply-side bottlenecks in the economy.

LECTURES

6th K. B. Lall Memorial Lecture

May 07, 2016

This year ICRIER had the privilege of having Raghuram Rajan, Governor, Reserve Bank of India deliver the 6th K. B. Lall Memorial Lecture on May 7, 2016. Dr. Rajan began with a brief summary of the rationale for the downward revisions



L to R: Raghuram Rajan, Rajat Kathuria and Isher Judge Ahluwalia at the 6th *K. B. Lall Memorial Lecture*

in global growth forecasts. Slow recovery is part of the deleveraging process as countries emerge from debt-fuelled spending, he said, while outlining four specific reasons for the sluggishness. These are (1) aging populations (2) slowing productivity, i.e. a decrease in "real" innovation due to a measurement problem that failed to recognise growth embedded in the improved quality of goods and services, and a monetisation problem where previously transacted services were becoming free; (3) the "Zombie" problem of unhealthy firms surviving post-crisis due to cheap and easy capital; and (4) the tendency of new production methods based on intellectual property and network effects to enable oligopolies.

Dr. Rajan noted that across the multitude of explanations, a key feature was the shifting of crises from industrial to emerging markets. Thus, global co-ordination is necessary to tackle the slow recovery and it requires a deeper understanding of the phenomenon. A "grab bag" of reforms with countries acting unilaterally is not the most effective means of tackling the slow recovery, he emphasised. A co-ordinated approach would serve the cause much more effectively.

K.B. Lall Memorial Lecture Over the Years

Dr. Raghuram Rajan, Governor, Reserve Bank of India, delivered the 6th K.B. Lall Memorial Lecture on May 7, 2016.

In 2001, as part of the 20th anniversary celebrations and to honour its founder Chairman, Dr. K.B. Lall, ICRIER instituted a lecture series in his name. This lecture has acquired a formidable reputation over the years in academic and policy circles.

The first lecture in August 2001 was delivered by Mervyn King, Deputy Governor of the Bank of England, in the presence of Dr. K.B. Lall. The subsequent K.B. Lall Memorial Lectures were delivered by Lawrence H. Summers, former US Treasury Secretary; Andrew Sheng, Tun Ismail Ali Chair at the Faculty of Economics, University of Malaya; David Vines, Professor of Economics and Fellow, Balliol College, Oxford; and Nobel Laureate Michael Spence in November 2013.

According to Dr. Rajan, bank regulation needs thought and analysis since banks' relative success at boosting asset prices had been frustrated by their simultaneous reluctance to act as "market makers". At the same time, he pointed out, not enough was known about regulating the shadow financial system that had attracted both activity and human capital away from traditional banks. In addition to this, he lamented the reduction in banks' ability to take on risk particularly with regard to the small and medium enterprises. Foreign banks had significantly reduced expansion activities in emerging markets.

On the occasion of the 6th K. B. Lall Memorial Lecture, ICRIER received an endowment of Rs. 4 crore from the Suresh & Bharati Memorial Trust set up by Mr. Shardul S. Shroff in the memory of his parents, to set up the Suresh and Bharati Chair on Urbanisation at ICRIER.

ICRIER also announced the launch of a 3-year, Rs. 1.5 crore Research Programme on Global Competitiveness in the memory of Dr. K. B. Lall. The funding will be shared equally by IDFC Foundation and Dr. Rajiv Lall in his personal capacity.

Dr. Rajan also enquired whether unconventional monetary policy had now become part of the problem instead of the solution it was after the crisis. Emphasising the role of sentiments and expectations in the impact of monetary policy, he argued that aggressive monetary policy could raise serious concerns over asset mispricing and result in greater savings instead of additional spending. It could even depreciate exchange rates, given the reduced tendency towards spend. He cautioned against dependence on "helicopter drop" strategies within industrial countries. It is not clear how expectations would shape in response to such "drops" and, therefore, as long as industrial countries refused to acknowledge the limitations explicitly, emerging markets would need to prepare for such possibilities he said.

Finally, Dr. Rajan discussed possible "rules of the game" for the global arena, including measuring the spill over effects of national monetary policies to determine whether their net global impact is indeed positive over a given time period. He suggested that central banks need to acknowledge international spill over effects as part of their mandate. Research and dialogue that could feed into international policy formulation, therefore, is extremely important. With regard to India Dr. Rajan commended the government's efforts around fiscal consolidation, inflation control and the consequential currency stability. The drive towards both macroeconomic and microeconomic reform should continue, he added, while stressing the importance of good policy as the first line of defence against an uncertain global economy. The proof of that message lay in India's relative stability despite two successive droughts and a weak global economy.

Audience at the 6th *K. B. Lall Memorial Lecture*

Issues in Pakistan's Economy

June 28, 2016

S. Akbar Zaidi, political economist from Pakistan and Visiting Professor at Columbia University, gave a talk on *Issues in Pakistan's Economy* at ICRIER on June 28, 2016. With Pakistan experiencing a GDP growth rate of about 4.5 percent in 2014-15, the highest in recent years, Zaidi seemed hopeful about the sustainability of the ruling government. According to him, lately a balance between the civilian government and military had become apparent and this has been reflected in a softened approach towards India. With regard to Pakistan's obligations towards the IMF, he noted that the country has undertaken 18 programmes under the international organisation but only one has been completed till date. In his opinion, given the fact that less than 1 percent of the population pays taxes and the tax to GDP ratio is less than 10 percent, the IMF programmes have indeed been a stabilising factor. However, the tightly managed macro-economic framework, attributable to Pakistan's dependence on the IMF, has been a major impediment to the long-term growth prospects of the Pakistan economy.

Pathways to Trade Liberalisation

June 01, 2016

L to R: Harinder Sidhu, Anwarul Hoda and Rajat Kathuria at the talk on *Pathways to Trade Liberalisation*

ICRIER organised a talk by Harinder Sidhu, High Commissioner of Australia to India, on '*Pathways to Trade Liberalisation*' on June 1, 2016. The session was chaired by Anwarul Hoda, professor, ICRIER. Reflecting on Australia's experiences of economic and trade reform and its engagement in a range of trade agreements, including negotiations for a bilateral Comprehensive Economic Co-operation Agreement with India and the Regional Comprehensive Economic Partnership (RCEP), Ms. Sidhu highlighted the role bilateral, regional and multilateral trade agreements can play in achieving trade reform and contributing to national economic development in the world today. According to her, trade agreements, especially the Regional Comprehensive Economic Partnership (RCEP) and Trans-Pacific Partnership (TPP), will play a crucial role in the global economy in coming years and highlighted the gains that might accrue to Australia, India, and the world at the large by adhering to these agreements.

Ms. Sidhu emphasised the potential for India-Australia trading relations, which have developed significantly in recent years. Trade and investment between Australia and India now spans a wide range of industries, products and services from mineral and energy commodities, to sophisticated manufactured goods; from large-scale business services and skills training, to niche products in many different sectors. However, there is also a lot of untapped potential and in this context, she welcomed the Government of India's ongoing reform programme including tax reforms, introduction of the bankruptcy law and measures to cut down on red tape to improve the working of the economy.

How much Finance is too much? Lessons from Emerging Markets

March 09, 2016

At a talk organised by ICRIER, Ratna Sahay, Deputy Director, Monetary and Capital Markets Department, IMF, made a presentation on '*How much Finance is too much? Lessons from Emerging Markets*' on March 9, 2016. Dr. Sahay analysed the lessons from the 2008 crisis and attempted to answer some pertinent questions such as whether private credit is a good measure of financial development and whether the pace of financial development matters to growth and stability. She presented the index constructed by the IMF to explore the relationship between financial development and long-term growth and financial stability. The index was constructed using depth, access and efficiency of financial institutions and financial markets.

L to R: Jaimini Bhagwati and Ratna Sahay at the seminar on *How Much Finance is Too Much? Lessons from Emerging Markets*

The index showed that the effect of financial development on economic growth is bell shaped. Similarly, financial development supports capital accumulation and total factor productivity (TFP) growth up to a stage after which TFP declines owing to decreasing returns. There is also a trade-off between stability and growth as financial development happens; i.e., at higher levels of financial development, risks are high compared to the benefits. There is no "one-size-fits-all" approach to financial development. In the case of India, Dr. Sahay pointed out that the entry of foreign banks is not necessary for growth but good governance and competition in the financial sector are required.

Regional Security and Japan's Foreign Policy

October 27, 2015

The East Asia Research Programme at ICRIER organised a lecture by Yukio Okamoto, Former Special Advisor to the Prime Minister of Japan on October 27, 2015. Mr. Okamoto presented a comprehensive analysis of Japan's foreign policy and security arrangements in the Asia-Pacific region. Discussing the maritime conflicts in the South China and East China Seas, he stressed the need for robust alliances between like-minded countries in the region. In this context, he highlighted the importance of India-Japan co-operation, and of "robust India" being an anchor in East Asia.

The State of US Rebalance to Asia

September 11, 2015

At the talk on '*The State of the US Rebalance to Asia*' organised by ICRIER on September 11, 2015, Kathleen H. Hicks, Director, International Security Program, Center for Strategic and International Studies (CSIS), highlighted the

diplomatic, military and economic components of the US policy towards Asia-Pacific. Dr. Hicks noted that the US has committed 60 percent of its defence assets to the Asia-Pacific region. She highlighted various drivers of the US rebalance, such as the changing balance of power in the region, and challenges like budgetary constraints and the inward-looking public discourse in the United States. Conceptual distinctions between 'pivot' and 'rebalance' were highlighted during the conversation. Other participants also emphasised the growing convergence between the US and India in the Asia-Pacific, and the divergences to the West in the Af-Pak region. Questions were raised on the sustainability of such dichotomous policies in the long-run.

Diet Quality, Child Health, and Food Policies in Developing Countries

July 30, 2015

The talk on '*Diet Quality, Child Health, and Food Policies in Developing Countries*' was delivered by Alok Bhargava, Professor, School of Public Policy, University of Maryland on July 30, 2015, at ICRIER. Dr. Bhargava explained the role of diet quality reflected in the intake of nutrients such as protein, calcium, and iron for children's physical growth and on their cognitive development. Dr. Bhargava's research is based on empirical evidence from several countries such as Bangladesh, India, Kenya, the Philippines, and Tanzania. He emphasised that environmental factors as well as the absorption of nutrients for children's physical growth and morbidity have not been adequately integrated into the policy framework. According to him, there is need to focus on long-term versus short-term considerations in the policy framework, guided by specific hypotheses. While the popular randomised control trial settings are useful in identifying appropriate interventions for population groups, the degree to which they can be integrated in long-term policies is an important issue.

CONFERENCES

Enhancing Trade in Health Sector between India and Pakistan

July 27, 2016

The conference on '*Enhancing Trade in Health Sector between India and Pakistan*' was organised on July 27, 2016 at New Delhi. The conference was part of a research project that ICRIER is presently undertaking with the objective of identifying the key reform measures needed to facilitate trade in the health services between India and Pakistan. The research partner for this is the Sustainable Development Policy Institute (SDPI), Islamabad. The findings of the study were presented at the conference by Nisha Taneja, Professor, ICRIER and Shehryar Khan, Research Fellow, SDPI. Making special remarks at the conference, Arun Kumar Panda, Additional Secretary, Department of Health and Family Welfare, Government of India, highlighted the importance of India as a medical tourism hub and the initiatives being taken by the government in this regard. The guest remarks in the inaugural session were made by B. K. Rao, Chairman, ASSOCHAM Council on Healthcare and Hospitals and Syed Yawar Ali, Co-Chair, India-Pakistan Joint Business Forum.

L to R: Shehryar Khan, B. K. Rao, Rajat Kathuria, Arun Kumar Panda, Syed Yawar Ali and Nisha Taneja at the conference on *Enhancing Trade in Health Sector between India and Pakistan*

Speakers in the first session *Bilateral Trade in Health Sector: Current Scenario* included Rashid Latif, owner of Hameed Latif Hospital, Lahore, Neelam Mohan, Director, Department of Pediatric Gastroenterology, Hepatology & Liver Transplantation, Medanta, Hassaan Bashir, CEO, Ali Medical Center, Islamabad, Raj Raina, General Manager, Marketing, Apollo Hospitals Group, Sami Ullah Khan Durrani, CEO, Tread Pharmaceuticals Pakistan Limited, Shehla Javed Akram, President, Women's Chamber of Commerce and Industry, Islamabad and Rabia Manzoor, Research Associate, SDPI. The discussion highlighted the fact that even though India has a comparative advantage in manufacturing and trade of pharmaceuticals and Pakistan has a highly competitive medical equipment sector, the two countries have not been able to exploit their trade potential to the full due to presence of trade rigidities. Participants also noted the challenges associated with logistics and visas that are faced by patients from Pakistan.

The second session, *Way Forward for Enhancing Trade in Health Sector between India and Pakistan*, was moderated by Nisha Taneja, Professor, ICRIER and the speakers included Bhupinder Singh Bhalla, Joint Secretary, Ministry of Commerce, Anil Ganeriwala, Joint Secretary, Ministry of AYUSH, Javed Akram, Vice Chancellor, Shaheed Zulfiqar Ali Bhutto Medical University, Umang Chaturvedi, Group President Corporate Affairs, Fortis, Ravi Wig, Former President, PHD Chamber of Commerce and Industry, Umer Bhatti, Ministry of Commerce, Pakistan, and Mubarak Zeb Khan, Business Lead, DAWN Daily. The highly interactive discussion emphasised that given the humanitarian and social focus of the health sector, there is great need to delink this sector from the political normalisation process between the two countries. This sector has the potential to build confidence for more comprehensive bilateral talks.

Sub Regional Co-operation between India, Myanmar and Bangladesh

March 30, 2016

The international conference on '*Sub-regional Co-operation between India, Myanmar and Bangladesh*' hosted by ICRIER at New Delhi focussed on the efforts to strengthen economic ties between India and the neighbouring states of Myanmar and Bangladesh. The research was conducted by the ICRIER team in collaboration with the Myanmar Development Research Institute-Centre for Economic and Social Development, Center for Economy, Environment and Society in Myanmar and South Asian Network on Economic Modelling (SANEM) in Bangladesh. The findings were presented at this conference.

L to R: Nisha Taneja, Hon'ble Union Minister of State Jitendra Singh and Rajat Kathuria at the conference on *Sub-regional Co-operation between India, Myanmar and Bangladesh*

The keynote address was delivered by Jitendra Singh, Union Minister of State (Independent Charge) Ministry of Development of the North Eastern Region. Dr. Singh observed that the border trade between the north-east and countries like Myanmar and Bangladesh has tremendous significance as well as potential. The four north-eastern states of Arunachal Pradesh, Nagaland, Manipur and Tripura share a common border with Myanmar and Bangladesh, and serve as a gateway of connectivity and trade in the sub-region, he added. For our "Act East" policy with countries across the eastern border to be effective, it is important to effectively act in the areas close to the border so that products and items produced in the north-eastern states can be used for trade with countries across the eastern border. He appreciated the policy recommendations presented to him by ICRIER and said that these would be seriously considered by the ministry, which would also take them up with the other concerned ministries.

In his address, Arvind Mehta, Additional Secretary, Ministry of Commerce and Industry, spoke about inadequate infrastructure being the major impediment to trade facilitation. However, he was optimistic about future prospects in the context of the Bangladesh-Bhutan-India-Nepal (BBIN) co-operation and Bangladesh-China-India-Myanmar Economic Co-operation (BCIM-EC) initiatives.

Empowering Women for Sustainable Development

March 14, 2016

The conference on '*Empowering Women for Sustainable Development*' was organised by TalentNomics along with ICRIER on March 14, 2016, at New Delhi. The conference brought together business leaders, policy makers, academicians, and researchers from India and other countries, working to support women's leadership advancement to discuss three key

questions: (1) What roles can governments play to drive change? (2) What innovative strategies can business leaders, leading academics, think tank heads, media and journalists adopt to change the status quo of gender balance at leadership levels in the next foreseeable future? (3) What should women do differently to create a compulsive story for change?

L to R: Ipsita Kathuria, Isher Judge Ahluwalia, Mamphela Ramphele and Hon'ble Minister of State Dharmendra Pradhan at the conference on *Empowering Women for Sustainable Development*

In her welcome address, Isher Judge Ahluwalia, Chairperson, ICRIER, emphasised the importance of involving men in bridging the gender gap in order to attain a balance in work and life. She observed that organisations should recognise the fact that women need flexibility at various stages in life, something diligently practiced in ICRIER, as this can contribute to greater workforce participation by women. The inaugural address was delivered by Shri Dharmendra Pradhan, Union Minister of State for Petroleum and Natural Gas, who emphasised the importance of providing equal opportunities for women. In her key note address, Mamphela Ramphele, a well known South African apartheid activist, and a former Managing Director, World Bank, focussed on the need to create an ecosystem conducive to transformation and one that is inclusive in nature. By drawing inspiration from the struggle against racial discrimination in Africa, she talked of building bridges of transformation with increasing participation of women in workforce and leadership roles to create a new narrative of equality.

The inaugural session was followed by five technical sessions which discussed topics such as women empowerment and economic growth. These were the following: What can government and policy makers do?; Gender Balance in Leadership: Impactful Actions Needed to Change Status Quo; Creating a Sustainable Global Supply of Women Leaders across Sectors and a Collaborative Eco System for Change; Encouraging and Influencing Young Minds to Dream; and Role of Media in Breaking Stereotypes.

Notable speakers at the conference included Saurabh Srivastava, founder and former Chairman, NASSCOM; Anita George, Senior Director (Energy and Extractive Industry), World Bank; Kalpana Kochhar, Deputy Director, ADB, New Delhi; Archana Garodia Gupta, President FICCI Ladies Organisation (FLO); Asma Shirazi, well known TV journalist from Pakistan, Anne Boring, Postdoctoral Researcher, OFCE, Sciences Po-Paris; Neeti Bannerjee, founder and CEO, TalentNomics Inc.; and Radhicka Kapoor, Fellow, ICRIER.

Jobs for Development: Creating Jobs in South Asia

December 03-04, 2015

The 2nd International Conference on '*Jobs for Development: Creating Jobs in South Asia*' organised by ICRIER, in collaboration with the World Bank on December 3-4, 2015, at New Delhi aimed to address questions relating to jobs and development in general, to analyse the role played by labour regulations, urbanisation, informality, demography, etc., and the way forward.

The conference deliberations were structured around the following sub themes: (1) Informality and Jobs; (2) Demography and Jobs; (3) Urbanisation and Jobs; (4) Labour Regulations and Jobs; (5) Fragile Situations and Jobs. Eminent scholars, including Professor Adrian Wood (Oxford University), Professor Robin Burgess (London School of Economics), Professor Kunal Sen (University of Manchester), Professor Albert Park (Hong Kong Institute of Technology) and Ms. Sandrine Cazes (OECD, Paris) delivered plenary talks on these themes.

The conference began with an address by Arvind Subramanian, Chief Economic Advisor, Government of India, in which he emphasised the need to take a fresh look at labour markets in South Asia and to create incentives so that industries could grow bigger. This was followed by a special address by Partha Pratim Mitra, Principal Labour and Employment Advisor, Ministry of Labour and Employment. Dr. Mitra highlighted the recent initiatives aimed at creating gainful employment in India taken by the Ministry of Labour and Employment.

L to R: Isher Judge Ahluwalia, Arvind Subramanian and Partha Pratim Mitra at the International Conference on *Jobs for Development: Creating Jobs in South Asia*

A panel of well known scholars including Anwarul Hoda, Professor, ICRIER, Rana Hasan, Director, Development Economics and Indicators Division, ADB, Rashid Amjad, Professor, Lahore School of Economics, Ajit Ghose, Professor, Institute of Human Development, New Delhi, Robin Burgess, Professor, London School of Economics, and others discussed key issues in a panel discussion titled 'Challenges of Job Creation in South Asia'.

The working sessions had presentations by prominent South Asian scholars including Indralal De Silva (University of Colombo, Sri Lanka), Nishara Fernando (University of Colombo, Sri Lanka), Rashid Memon (Lahore University of Management Sciences, Pakistan), Chona Echavez (Afghanistan Research and Evaluation Unit, Afghanistan), Selim Raihan (University of Dhaka, Bangladesh), Sandip Sarkar (Institute of Human Development, India), Dipak Bahadur Adhikari, (Tribhuvan University, Nepal) and Pankaj Vashisht (ICRIER, India).

The conference concluded with a valedictory address delivered by Professor Adrian Wood, Professor of International Development, Oxford University.

Asia-Pacific: 70 Years after the War

November 23-24, 2015

A two-day International Conference on '*Asia-Pacific: 70 Years after the War*' was organised on November 23-24, 2015, at New Delhi by the East Asia Research Programme at ICRIER. The notable speakers at the inaugural session included Krishnan Srinivasan, former Foreign Secretary of India, Hemant Krishan Singh, former Ambassador of India to Japan and Srikanth Kondapalli, Professor, Jawaharlal Nehru University.

The first session on *Regional Architecture* focussed on China's approach to Asia-Pacific regionalism. The session on *Maritime Security* Issues discussed the power shift to the Indo-Pacific and was chaired by well known strategic affairs expert Commodore C. Uday Bhaskar. The session on *Proliferation of Nuclear Weapons, Missiles and Risk Reduction Strategies* was chaired by Brigadier Arun Sahgal (Retd.). The session on *Frameworks of Engagement* was chaired by Brigadier Gurmeet Kanwal (Retd.). In the session on *Political Transitions*, presentations were made on political transitions in Thailand, Myanmar and Korea.

L to R: Hemant Krishan Singh, Srikanth Kondapalli Sanjay Pulipaka and Krishnan Srinivasan at the conference on *Asia-Pacific: 70 Years after the War*

This was followed by a special address by Tsutomu Kikuchi, Professor, Aoyama Gakuin University, Tokyo, on the prospects and challenges of building a regional architecture in the Indo-Pacific zone. The session on *Human Rights: Constructs and Experiences*, chaired by Professor Leïla Choukroune, *Director for Social Sciences and Humanities, New Delhi*, featured a vigorous discussion on Asian values, refugees, technology and human rights in the Asia-Pacific. The final session of the conference on *Nation Building and Ethnic Conflicts* focused on ethnic conflicts in China, India, Myanmar, Laos, Thailand, the Philippines and Indonesia.

India-Japan Economic Relations: Bilateral Dimensions

November 17, 2015

The conference on '*India-Japan Economic Relations: Bilateral Dimensions*' was organised by the Strategic Studies Programme, ICRIER, in partnership with the Embassy of Japan in New Delhi. It was set against the backdrop of decisions taken at the India-Japan bilateral summit in September 2014 to accelerate inclusive development in India, particularly by transforming the infrastructure and manufacturing sectors, and to significantly enhance Japan's private and public investment in India over a five-year period. Discussions at the conference were structured around the themes of Japan's role in "Make in India"; building India's infrastructure and connectivity; the role of IT services; and financing India's growth.

In his keynote address at the conference, Shri Suresh Prabhu, Union Minister of Railways, emphasised that Japan could play a significant role in capacity building in India. He also stressed the potential for financing infrastructure in India through Japanese pension funds. The Japanese Ambassador to India, Takeshi Yagi, talked about the strengthening of bilateral economic relations in recent years.

Conference speakers included prominent public and private sector personalities and senior representatives of key Japanese institutions like JICA, JBIC and JETRO. Some of the notable speakers were R. C. Bhargava, Chairman,

L to R: Hon'ble Union Minister Suresh Prabhu, Hemant Krishan Singh and Takeshi Yagi at the conference on *India-Japan Economic Relations: Bilateral Dimensions*

Maruti Suzuki, Katsuo Matsumoto, Deputy Director General, JICA South Asia Division, Naoyuki Yoshino, Dean, ADBI, and Hemant Krishan Singh, Professor, ICRIER.

7th Annual G20 Conference on Challenges to Strong, Sustainable and Balanced Growth: Views from G20 Countries

September 14-15, 2015

ICRIER has been organising an annual G20 conference since 2009, bringing together eminent researchers, academicians and policymakers from across the globe to reflect on issues relevant to G20 nations in the lead up to the G20 annual summit meeting. The focus at the 2015 conference, held on September 14 and 15, 2015, was on the three I's of the Turkish Presidency: inclusiveness, implementation and investment.

The conference commenced with an inaugural speech by Shri Suresh Prabhu, Union Minister of Railways and India's G20 Sherpa. The Hon'ble Minister spoke at length about the significance of global integration in creating benefits for all countries of the world while pointing out the various challenges it poses. This was followed by an address by Shaktikant Das, Secretary, Department of Economic Affairs, Ministry of Finance, Government of India. Mr. Das emphasised India's preparedness for the expected Fed rate hike and expressed hope that India's growth rate during 2015-16 would exceed 7.5 percent. In a special address at the conference, Naoyuki Yoshino, Dean, Asian Development Bank Institute (ADBI), spoke about sustainable growth and infrastructure finance. At another special dinner talk, P. J. Nayak, who recently headed a government committee on banking reforms, spoke of the Government of India's approach to the banking sector and the compensation structures in public sector and private sector banks.

The working session on '*Synchronising Global Monetary Policy: How can G20 Help*' included discussions on the challenges for developing countries in adjusting to the monetary policies of developed economies. The session on '*Competitive Devaluations: The New Global Norm*' focused on the dangers of using exchange rate as a long-term tool to boost competitiveness, particularly for emerging markets like India. The session on '*Financing Challenge of Small and Medium Enterprises (SMEs) and Enhancing their Participation in Global Value Chains*' addressed the importance of enhancing participation by SMEs in global value chains and the challenges in doing so. In the session '*Post-Crisis International Financial Regulation: Where Have We Reached*', the panellists discussed if reforms in regulatory structure have strengthened the banking sector's ability to absorb potential shocks arising from financial and economic stress. The session '*Scaling up Private Investments in Clean Energy Infrastructure*', discussed the policies and structures needed to catalyse the de-carbonisation of the global economy, shifting investments to low-carbon, climate-resilient energy infrastructure, and scaling up to support energy security.

L to R: Hon'ble Union Minister Suresh Prabhu, Rajat Kathuria, Shaktikanta Das and Naoyuki Yoshino at the 7th *Annual G20 Conference on Challenges to Strong, Sustainable and Balanced Growth*

The session '*Implementation challenges in Base Erosion and Profit Shifting (BEPS) Action Plan*', discussed the various stages and various facets of the BEPS project action plan launched by the Organisation for Economic Co-operation and Development (OECD). In the ADBI Special Session *Urbanisation, Income Inequality and Health Inequity*', Guanghua Wan, Director of Research, ADBI presented his latest research on urbanisation and income inequality in the case of China.

India-US Security Relations

September 10, 2015

This India-US Track 1.5 Conference was organised by the Strategic Studies Programme at ICRIER in collaboration with the International Security Chair and the India Chair at CSIS, Washington, D.C. The conference brought together prominent strategic experts and government representatives from both India and the United States to deliberate on India-US global and regional security co-operation; defence co-operation and trade; homeland security and counter-terrorism co-operation, and co-operation in securing the global commons. The conference was addressed by S. Jaishankar, Foreign Secretary, and Arvind Gupta, Deputy National Security Adviser. The participants from the United States included senior representatives from the Department of Defence, the National Security Council and the National Intelligence Council.

Net Neutrality

August 25, 2015

As part of its project, '*An Inquiry into the Future of Net Neutrality in India*', ICRIER in June 2015 initiated a roundtable conference series that regularly brings together experts for open and insightful discussions to help policy-makers understand the implications of net neutrality regulations. The roundtable conference on Net Neutrality in August 2015 was divided into two technical sessions – *Techno-economics of Net Neutrality and Regulatory and Institutional Barriers to Implementation*.

The first session hosted experts on the "hardware" aspects of the internet and its infrastructure. Participants included representatives from the Department of Telecom, IIT Bombay, Qualcomm, and Rediff. The technical discussions examined the policy of net neutrality through the lenses of internet architecture, congestion, spectrum, content delivery networks and network management practices. Representatives from AT&T, Idea, Medianama, Facebook, Centre for Internet and Society, Centre for Communications Governance and others participated in the second session. These discussions focused on regulatory and institutional requirements, beginning with an exploration of the practicality and future implications of the Department of Telecom's report on net neutrality. They explored the ramifications of such regulation on cross-subsidisation, infrastructural investment and capacity, consumer protection, and finally, the institutional capacity required to implement such regulation.

Strategies for Sustainable Development: Climate Action, Financial Reform

August 03, 2015

L to R: Naina Lal Kidwai, Rajat Kathuria, A. Didar Singh and Rita Roy Choudhury at the conference on *Strategies for Sustainable Development: Climate Action, Financial Reform*

The conference on '*Strategies for Sustainable Development: Climate Action, Financial Reform*' was jointly organised by ICRIER and FICCI on August 3, 2015, at New Delhi. The India Report of The Global Commission on the Economy and Climate and its flagship project The New Climate Economy titled, '*India: Pathways to Sustaining Rapid Development in a New Climate Economy*' was launched at this conference. In his video message Shri Prakash Javadekar, Union Minister for Environment, Forest and Climate Change, highlighted the various measures and programmes of climate change mitigation and adaptation that have been initiated by the government.

The first session on '*Strategic Framework for Cities: Linking Economic Performance and Climate Performance*' was chaired by Jagan Shah, Director, National Institute of Urban Affairs. The speakers – Nitin Pandit, Managing Director, WRI India, Saon Ray, Senior Fellow, ICRIER, Pradeep Kapoor, General Manager, Siemens India and Satish Kumar, Senior Advisor, Schneider Electric India Pvt. Ltd. – discussed the emergent urban development pathways and the opportunities available in Indian urban policy making to support climate resilient and economically dynamic smarter cities.

The session on '*Low Carbon Strategies for India in Agriculture and Forestry*' was chaired by Anwarul Hoda, Professor ICRIER. The speakers – Ashok Vishandass, Chairman, Commission for Agricultural Costs and Prices and H. P. Singh, Director, Jain Irrigation System Ltd. – discussed the scope for policy reforms to strengthen the economic performance and resilience of Indian agriculture while also helping to reduce its GHG emissions.

The last session on '*Sustainable Financing*' focused on the necessity of creating a sustainable financial system for India to mobilise capital towards a green and inclusive economy. It was chaired by Naina Lal Kidwai, President, FICCI, and the panellists were Nick Robins, Co-Director, UNEP, Ardeshir Contractor, MD & CEO, Kiran Energy Solar Power Private Limited, Pashupathy Gopalan, President, Sun Edison Asia Pacific and Girish Shrimali, Director, Climate Policy Initiative, India.

An Inquiry into the Future of Net Neutrality in India

June 15, 2015

The first of three planned conferences on the subject '*An Inquiry into the Future of Net Neutrality*' in industry and academia participated in a free-flowing conversation. The discussions were led by Baijayant Panda, Member of Parliament,

Lok Sabha, who pointed out that the "flat" internet operates very differently from the "hierarchical and proprietary" traditional phone network. This was followed by an intense discussion on the components of net neutrality, the level at which the definition applies, and the relationship between "zero-rating" arrangements and net neutrality. Congestion was identified as a key factor with discussions focusing on the sources of congestion, traffic management and the implications of spectrum shortage for India's primarily wireless internet access. The importance of strong institutions operating under clear rules taking account of India's specific conditions was highlighted. Participants noted that a variety of regulatory constraints need to be addressed if net neutrality is to be implemented fully.

L to R: Rajat Kathuria, Hemant Kanakia and Baijayant Panda at the conference on *An Inquiry into the Future of Net Neutrality in India*

WORKSHOPS

Studying Drivers of Agricultural Growth in Selected Indian States with Focus on Role of Agricultural Extension Systems

June 17, 2016

The workshop on '*Studying Drivers of Agriculture Growth in Selected Indian States with Focus on Role of Agricultural Extension Systems in India*' was organised by ICRIER in collaboration with the Bill & Melinda Gates Foundation on June 17, 2016 at New Delhi. The first session focussed on a qualitative and a quantitative analysis of agricultural growth performance of six selected states – Gujarat, Madhya Pradesh, Punjab, Uttar Pradesh, Bihar and Orissa.

The main presentation was made by Ashok Gulati, Infosys Chair Professor for Agriculture, ICRIER. According to Dr. Gulati, the study focuses on the relationship between agriculture growth, poverty and malnutrition. The study results reveal that besides agriculture, other important factors influencing poverty and malnutrition are employment opportunities provided by other sectors, infrastructure, literacy, sanitation, access to health facilities, child care and feeding practices. The lead discussants in this session were Amit Mohan Prasad, former Principal Secretary, Government of Uttar Pradesh, and Bhallamudi Sridhar, Faculty Member, Bankers Institute of Rural Development. They suggested that it would be useful to include other factors such as health care expenditure, and population stabilisation in the analysis.

The second session focussed on agricultural extension systems in India and abroad. The main presentation was made by Pravesh Sharma, former Managing Director, Small Farmer's Agri-business Consortium (SFAC) & Visiting Senior Fellow, ICRIER, on the *Role of Extension in Agricultural Growth in India*. Analysing the performance of extension services in the focus states, he listed the challenges and issues faced by extension services in India and what policy reforms could be recommended to upgrade the existing extension system. The lead discussants in this session were Rasheed Sulaiman, Director, Centre for Research on Innovation and Science Policy, and Jasbir Singh Bains, Director, Agriculture, Government of Punjab. They emphasised the need to include livestock and fisheries sectors in extension studies.

Drug Regulatory Reforms in India

March 01, 2016

Speakers at the brainstorming workshop on *Drug Regulatory Reforms in India*

A brainstorming workshop on '*Drug Regulatory Reforms in India*' was organised by ICRIER's Health Policy Initiative on March 1, 2016. The objective was to gather views of a select group of eminent experts and stakeholders to guide the projects' research papers in the year 2016. The research team is working on two papers – '*Harmonisation of Drug Registration Procedures: An Impact Assessment for India*', and '*Clinical Trials: Prospects and Challenges in India*'. Notable participants at the session included Leena Menghaney, Regional Head, MSF; Y. K. Gupta, Professor and Head, AIIMS; B. E. Bierer, Professor, Harvard University; Bejon Misra, Founder, Consumer Online Foundation and D. G. Shah, Secretary General, Indian Pharmaceutical Alliance.

Trade in Health Services in South Asia: Opportunities and Challenges

February 19, 2016

As part of the project *India-Pakistan Track II Initiative: Improving Trade in Health Services, a stakeholders*' consultation workshop on '*Trade in Health Services in South Asia: Opportunities and Challenges*' was organised by ICRIER on February 19, 2016 in collaboration with ASSOCHAM at New Delhi. The objective of this consultative workshop was to share the initial findings of the study with stakeholders and get their feedback to improve the research design and successfully complete the study. Presentations focused on the current status of trade in health services, impediments to trade, and strategies to be pursued for enhancing trade in medical value travel, pharmaceuticals and medical equipment between the two countries. The key stakeholders present at the consultation included representatives from the department of commerce, services export promotion council, ministry of external affairs, representatives from hospitals and the pharmaceutical industry.

Differential Pricing and Zero Rating in India

February 05, 2016

As part of ICRIER's research under the project *An Inquiry into the Future of Net Neutrality in India*, a workshop on '*Differential Pricing and Zero Rating in India*' was organised in association with the Centre for Internet and Society, Bangalore, on February 5, 2016. The objective was to contribute to the public discourse during the Telecom Regulatory Authority of India's period of public consultation on regulating differential pricing. The panellists in the workshop were Mike Godwin, Director of Innovation & General Counsel, R Street Institute, Rohit Prasad, Professor, Management Development Institute, and Rajat Kathuria, Director & CE, ICRIER.

The discussion focused on the potential for and the risks of allowing differential pricing in the internet market and its implications for efficiency, public good and competition. It was followed by an open conversation with the audience on the impact of India's mobile-only status on internet pricing and regulation, as well as the current legal framework under which such regulations would be enforced.

India-Japan Partnership towards Meeting the Challenge of Infrastructure Development in India's Northeast

January 19-20, 2016

The workshop '*India-Japan Partnership towards Meeting the Challenge of Infrastructure Development in India's Northeast*' was organised on January 19-20, 2016 at Dimapur, Nagaland, by ICRIER with the support of the Economic Research Institute for ASEAN and East Asia (ERIA), Toshiba International Foundation (TIFO) and India Foundation. The objective was to foster meaningful policy oriented discussions between experts from India and Japan in an area of bilateral co-operation that is relatively new but to which both governments attach a great deal of importance.

The inaugural address was delivered by the Hon'ble Chief Minister of Nagaland T. R. Zeliang. He pointed out that for Japan, known more in the northeast for its role during the Second World War, there is now a real opportunity to

create a new image and memorial for itself in this region through active involvement in infrastructural development. He hoped that with the successful implementation of infrastructural projects in this region as part of the India-Japan strategic partnership, Japan will no more be associated with war, but with peace and development in the minds of the new generation of this region. Other notable speakers included Akio Isomata, Minister Economic, Embassy of Japan in India; Ram Muivah, Secretary, North Eastern Council; Naoyuki Yoshino, Dean, Asian Development Bank Institute; S. L. Meena, Joint Secretary, Ministry of Development of North Eastern Region; Akio Okamura, Director South Asia, Japan International Co-operation Agency; and Y. Nakayama, Member, Japan Plus, Ministry of Commerce.

L to R: Rajat Kathuria, T. R. Zeliang and Akio Isomata at the workshop on *India-Japan Partnership towards Meeting the Challenge of Infrastructure Development in India's Northeast*

Participants agreed that India-Japan cooperation in the northeast had immense potential in terms of creating necessary infrastructure. However, in order to maximise the benefits of Japan's assistance the emphasis should be on 'quality infrastructure', utilising technical skills and technological expertise from Japan. It was also acknowledged that infrastructure development is not sufficient to achieve effective economic growth. In tandem, there has to be a long-term economic development plan focusing on 'value creation'. Besides, the planning process must be participatory and inclusive, and must involve multilayered consultations among all stakeholders – the central government, the state governments, the private sector and the wider community.

Importance of Strong Drug Regulatory Systems

November 03, 2015

As part of ICRIER's Health Policy Initiative, an inaugural roundtable discussion was conducted on the '*Importance of Strong Drug Regulatory Systems in India*' on November 3, 2015, in New Delhi. The discussions were structured around two themes – clinical trials and new drug approvals, and harmonisation of certification standards.

The inaugural address was delivered by S. Sara Reddy, Joint Drugs Controller, Central Drugs Standard Control Organisation, India, and a special address by Kenneth C Frazier, Chairman and CEO, Merck. Other notable speakers included Hemant Koshia, Commissioner, Food and Drugs Control Administration, Gujarat, Kiran Mazumdar Shaw, Chairman and MD, Biocon, Ratna Devi, CEO, Dakshama Health & Indian Alliance of Patient Groups; Samir Brahmachari, Chief Mentor, Open Source Drug Discovery, and Y. K. Gupta, Professor & Head, Department of Pharmacology, AIIMS. The panellists highlighted several ways and means through which drug regulatory agencies can achieve safety, quality and efficacy in the regulatory framework. A great deal of emphasis was placed by the participants on the need for strong compliance and harmonisation of global good practices, which can be made India centric. Further, the scope to support clinical trials was discussed and the need to prioritise safety in conducting clinical trials in India was underlined.

Panellists at the roundtable discussion on *Importance of Strong Drug Regulatory Systems*

Regionalism in the Asia-Pacific

October 08, 2015

A workshop under ICRIER's East Asia Research Programme was organised on the theme '*Regionalism in the Asia-Pacific*' on October 08, 2015. The discussion began with Masazumi Wakatabe, Professor, School of Political Science and Economics, Waseda University, reflecting on the economic relations among China, India and Japan. Mie Oba, Professor, Tokyo University of Science, focused on Japan's emerging security role in the Asia-Pacific. Prof. Oba noted that regionalism goes hand-in-hand with balance of power. Monika Chansoria, Senior Fellow, Centre for Land Warfare Studies, highlighted China's approach to regionalism in the Asia-Pacific and Sridhar Ramaswamy, Senior Correspondent, India Writes, discussed India-ASEAN relations. Young scholars Darshana M. Baruah (Observer Research Foundation) and Prerna Gandhi (University of Delhi) made presentations on maritime security co-operation and the Trans-Pacific Partnership respectively.

Changing Balance of Power in the Asia-Pacific

September 28, 2015

The East Asia Research Programme at ICRIER organised a workshop on '*Changing Balance of Power in the Asia-Pacific*' on September 28, 2015. The panel discussion at the workshop was chaired by Sanjaya Baru, Director for Geo-economics and Strategy, International Institute for Strategic Studies and the panellists included Katsuyuki Yakushiji, Professor, Tokyo University, Pankaj Jha, Director (Research), Indian Council of World Affairs, Rajesh Rajagopalan, Professor, Jawaharlal Nehru University, Jagannath Panda, Research Fellow, Institute for Defence Studies and Analyses and Amrita Jash, doctoral candidate at Jawaharlal Nehru University.

Highlighting the economic rise of China as a challenge, Dr. Baru stressed the importance of a strong India-Japan defence relationship to maintain the balance of power in the region. Prof. Katsuyuki spoke on the possibilities of an alliance between the United States, Japan, and India. Other major issues that were discussed were responses from South-East Asia on the changing balance of power in the Asia-Pacific; US Rebalance to Asia-Pacific; India's Act East Policy and the rise of China. There was also a panel discussion on "alliances", "balance" and "temporary alignments" in the Asia-Pacific.

Drug Regulatory Reforms in India

May 01, 2015

ICRIER's Health Policy Initiative organised a consultative workshop on May 1, 2015, under its research programme on '*Drug Regulatory Reforms in India*', at New Delhi. The discussion focused on the first drafts of the two papers under the project – '*Administrative Structure and Functions of Drug Regulatory Authorities in India*' and '*Drug Quality and Safety Issues in India*'. These papers have been prepared following several months of extensive desk and field research, mapping responses of over a hundred stakeholders across India and select international institutions.

L to R: Kathleen Holloway, Rajat Kathuria and Shailendra Kumar at the workshop on *Drug Regulatory Reforms in India*

The inaugural address at the event was delivered by Shailendra Kumar, Director (Drugs), Ministry of Health and Family Welfare. This was followed by a keynote address by Kathleen Holloway, Regional Advisor in Essential Drugs and Other Medicines at WHO/SEARO. The two discussion rounds were chaired by Madhur Gupta, Technical Officer (Pharmaceuticals), WHO India Country Office, and Aditya Bhattacharjea, Professor and Head of Department of Economics, Delhi School of Economics, respectively.

Tackling Chronic Diseases in India

April 24, 2015

ICRIER's Health Policy Initiative organised a consultative workshop on April 24, 2015, under its research programme on '*Tackling Chronic Diseases in India*', at New Delhi. The objective of the workshop was to develop a comprehensive field research strategy to target prevention, management, treatment and surveillance of chronic diseases.

The inaugural address was delivered by David Bloom, Clarence James Gamble Professor of Economics and Demography, Department of Global Health and Population, Harvard School of Public Health. Other distinguished speakers included Anindya Chatterjee, Regional Director Asia, International Development Research Centre (IDRC), L. Swasticharan, Chief Medical Officer, Ministry of Health and Family Welfare, New Delhi; Atreyi Ganguli, National Professional Officer, World Health Organisation, India; Mohamed Ali, Assistant Professor of Global Health and Epidemiology, Rollins School of Public Health, Emory University, Georgia, USA; Priyavrat Bhati, Programme Director – Sustainable Industrialisation, Centre For Science And Environment; Anjali Chikersal, Senior Fellow, Centre For Policy Research; Ken Thorpe, Chairman, Partnership to Fight Chronic Disease, Atlanta; Bobby John, President, Global Health Advocates, New Delhi; and Shirshendu Mukherjee, Senior Strategic Advisor, Wellcome Trust, New Delhi.

Low Carbon Pathways for Growth in India

April 10, 2015

The workshop on *'Low Carbon Pathways for Growth in India'* was organised by ICRIER on April 10, 2015. The keynote address was delivered by David King, Foreign Secretary's Special Representative for Climate Change, UK. Speaking on the theme *'Accelerating the Transition to a Low Carbon Economy',* Sir David King noted that energy intensive growth is expected to come from both India and China and hence, what course these economies take would determine the possibility of achieving desired outcomes. Sir King also highlighted the lessons from Europe in deploying solar power in the form of micro grids and the role feeder tariffs could play. In his remarks, Kirit S. Parikh, Chairman, Integrated Research and Action for Development (IRADe), New Delhi, stressed that if India is to follow a low carbon economic growth pathway, then IPR based extractive costs should not be imposed on India and the relevant technologies should be readily available. The lack of such technologies would severely impact the learning curve and hinder a move towards low carbon pathways. He cautioned that the argument that "green growth is costless" is misstated and a "dream" is being sold to India.

In the technical session that followed, Vaibhav Chaturvedi, Research Fellow, Council on Energy, Environment and Water, and Himanshu Gupta, Project Leader, India Energy Security Scenarios (IESS), 2047, NITI Aayog, made a presentation on *'Cost of Inaction on Mitigating Climate Change: A preliminary Analysis for India'*. The lead discussants at this session were Partha Sen, former Professor, Delhi School of Economics, Radhika Khosla, Fellow, Centre for Policy Research, and Shreekant Gupta, Associate Professor, Delhi School of Economics.

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*

Getting Serious about Reducing, Managing and Disposing Solid Waste in our Cities

May 25, 2016

The conversation on '*Getting Serious about Reducing, Managing & Disposing Solid Waste in Our Cities*' was initiated on May 25, 2016 by Sharad P. Kale, Associate Director and Senior Professor, Biosciences Group, Bhabha Atomic Research Centre, Mumbai and recipient of the Padma Shri Award by the Government of India in 2013.

Dr. Kale kicked off the discussion by focusing on the 'garbage menace' that has created huge problems for urban local bodies in the country. The difficulties in handling large quantities of solid waste generated on a daily basis are compounded by the lack of segregation and by not adopting decentralised methods of waste recovery.

Dr. Kale has developed the NISARGRUNA biogas technology for solid biodegradable waste resource management. This is a combination of aerobic and anaerobic processes for faster and better degradation of biodegradable waste, resulting in methane enriched biogas and organic manure generation. This technology deals with the volume of solid waste in a decentralised manner so that the waste reaching dumping yards can be minimised. There are about 200 such plants installed at various locations in the country and several municipal corporations have come forward to install these plants.

Air Pollution in Delhi NCR – Be the Change

February 02, 2016

The conversation on '*Air Pollution in Delhi NCR*' was initiated by Jai Dhar Gupta, an environmentalist and entrepreneur. Highlighting the worsening quality of air in Delhi, Mr. Gupta pointed out that there were only seven days in the past two years when recorded pollution levels in Delhi were within the WHO's 'safe' limit. One of the most dangerous air pollutants is particulate matter (PM10 & PM2.5) released from vehicular emissions, waste burning and smoke. Since the human body cannot filter this while breathing, this has a direct impact on health, productivity and performance. A related serious issue is of indoor pollution, caused by emissions and particles released in homes via oil fumes from cooking, dust from sweeping, scents, paints or construction material that can make indoor air five to ten times worse than outside air.

There was extensive discussion on the effectiveness of the odd-even car policy, impact of population and congestion in the city, usefulness of air purifiers and masks, changes required in transport and physical infrastructure, and promotion of CNG as the fuel preferred over petrol/diesel. The need for the government to prioritise environmental pollution as a serious concern and take urgent remedial measures emerged clearly from the discussion. Mr Gupta emphasised the importance of social media and legal petitions in putting much needed pressure on the government to take up the issue on a priority basis and take measures to correct the situation. At the same time, he urged individual action to reduce carbon footprint and stressed that the individual is the first point in bringing about the change.

Chennai Floods: Lessons for Urban Governance

January 18, 2016

The conversation on '*Chennai Floods: Lessons for Urban Governance*' was initiated by Vikram Kapur, Principal Secretary/ Commissioner, Corporation of Chennai, on January 18, 2016. In December 2015, Chennai experienced its wettest spell since 1918 and the situation was compounded by the fact that rains lashed the city within an exceptionally short period. However, prompt co-ordinated action by the local and state government, with help from the private sector and non-governmental organisations and volunteers, minimised casualties to almost nil. After the floods, basic services such as water, sanitation, power, public transport and emergency services were restored on a priority basis. Massive street disinfection and medical camps helped prevent an epidemic outbreak.

The discussion that followed focussed on the lessons that can be learnt from the Chennai experience and how to plan and be prepared in advance. Some of the suggestions made were the following: (i) crucial local services departments like disaster, water management, fire should be brought under the ambit of the local body for effective response; (ii) city planning should put environmental considerations at centre-stage and deploy sophisticated systems to predict and convey the intensity of disaster; (iii) social media platforms such as Facebook and Twitter should be used for faster communication; (iv) response, and experience of handling such disasters must be documented and used for future planning.

Restoring Municipal Finances

September 07, 2015

The conversation on '*Restoring Municipal Finances*' was initiated by Isher Judge Ahluwalia, Chairperson, ICRIER, on September 7, 2015. Dr. Ahluwalia noted that cities have become engines of growth in India as the urban share in GDP is rising, yet they lack financial autonomy, and are neither empowered to mobilise financial resources nor to plan and spend. In 1992, the 74th Amendment Act transferred public service delivery functions to urban local bodies but did not provide them with guaranteed transfer of funds needed to deliver these functions. State finance commissions have been appointed to recommend funds devolution but there has been little progress on the ground. The Government of India nudged state and urban local governments to implement financial and administrative reforms through the Jawaharlal Nehru National Urban Renewal Mission. This was successful only in a few cases where states were willing to provide an enabling environment to local bodies.

During the discussion, it emerged that cities can unlock their land value by building infrastructure and assets and recoup part of the land appreciation value. The state governments should provide for automatic and guaranteed transfer of part of the goods and services tax (GST) to local governments. Moreover, levying user charges to cover at least the operation and maintenance costs of service delivery is crucial. The importance of good governance emerged as a critical factor both for improving service delivery and for attracting private finance under public private partnerships. Decentralisation will provide for local accountability but citizens must be empowered to hold service providers accountable.

Engaging in Urban Food Safety

July 14, 2015

The conversation on '*Engaging in Urban Food Safety*' was led by Subhrankar Mukherjee, COO & Secretary of the Club of Rome, India, on July 14, 2015. Dr. Mukherjee emphasised that large scale food production has become a business neglecting health. He recommended urban agriculture – growing food in cities for self-reliance – to address the twin challenges of food scarcity and food quality. He suggested the techniques of 'guerilla gardening', i.e., gardening in vacant neglected public lands with community participation, and 'home aquaponics farm", i.e., agriculture in unused balcony and roof top spaces or landscapes outside, creating vertical farms in multi-storied buildings. Experiments with the techniques have been undertaken in the Sunderbans and parts of Mumbai and are expected to be commercially viable soon.

The discussion centred on the feasibility of this concept in India. The absence of an enabling environment through regulations and financing, availability of inputs like water, quality of air in urban areas and commercial viability were the challenges in moving forward.

Dealing with Congestion

May 11, 2015

The conversation on '*Dealing with Congestion*' was led by O. P. Agarwal, Executive Director, Indian School of Business, Mohali. Dr. Agarwal noted that urban congestion is a challenge in major cities across the globe and it is crucial to identify the underlying problem, which manifests itself in the form of congestion. The solution does not lie in simply widening roads. The principle of triple convergence (spatial, time, and modal) will cause traffic to match capacity, albeit with higher levels of congestion and pollution.

The solution lies in 'demand management' (compact cities, mixed land use planning etc.), and the establishment of an integrated public transport system. Simple provisioning of a metro rail system is not the solution. It is crucial that the approach is not a piecemeal one, and integration is ensured at all levels (institutional, physical, operational, fare, psychological) without compromising on the quality of services.

The discussions focussed on integrated transport systems and other transport initiatives in India. It emerged in the discussion that the success of these initiatives hinges upon the legal and financial capacities of operating entities to carry out their functions. The audience also posed questions on the impact of cultural factors on compliance rates, the political dimension of accountability. The urgent need to dovetail land-use planning exercise with transport planning for urban areas was also discussed.

India-USA

The Neemrana Conference is the signature event in ICRIER's calendar of policy focused interactions between India and the United States. Hosted at the picturesque Neemrana Fort Palace Resort in Rajasthan every year, this conference brings together top level Indian policy makers, academics, opinion makers and captains of industry to interact with leading researchers and policy makers from the USA. The partner institution for the annual event, from the United States, is the National Bureau of Economic Research (NBER). The Indian partners alternate between ICRIER and the National Council of Applied Economic Research (NCAER). The conference provides an opportunity for intensive and frank dialogue on current issues relating to economic policy and triggers stimulating discussion on areas of further study.

The 17th Annual Neemrana Conference was organised by ICRIER from December 18-20, 2015. Prior to the conference, the NBER delegates met with Union Finance Minister Shri Arun Jaitley. Later, they also met with Union Environment Minister Shri Prakash Javadekar. The conference discussions were structured into the following themes – '*India and the World Economy*'; '*Global Economic Governance*'; '*International Finance*'; '*Monetary Policy and Exchange Rate Management Issues*'; '*Environmental Regulation/Climate Change*'; '*Urban Economics and Sustainability*'; '*International Trade*'; '*Manufacturing, Investment Climate and Jobs*'; and '*Education and Skill Development*'. The Chief Economic Advisor, Government of India, Arvind Subramanian, addressed the participants on the state of the Indian economy and Ram Sevak Sharma, Chairman, Telecom Regulatory Authority of India, delivered a talk on "Digital India".

L to R: Arvind Subramanian and Isher Judge Ahluwalia at the *17th Annual Neemrana conference*

The NBER delegates included Martin Feldstein, Professor, Harvard University; Anne Krueger Professor, Johns Hopkins University; John Lipsky, Senior Fellow, Paul H. Nitze School of Advanced International Studies, Johns Hopkins University; Richard Portes, Professor, London Business School; Gita Gopinath, Professor, Harvard University; Nobuhiro Kiyotaki, Professor, Princeton University; Esther Duflo, Abdul Latif Jameel Professor of Poverty Alleviation and Development Economics, MIT and Abhijit Banerjee, Professor, MIT.

L to R: B. J. Panda and Amitabh Kant at the 17th *Annual Neemrana conference*

Among the Indian participants were Arvind Panagariya, Vice Chairman, NITI Aayog; B. J. Panda, Member of Parliament (Lok Sabha); Sachin Pilot, Member, Indian National Congress and former Minister of State (Independent Charge), Corporate Affairs; Montek Singh Ahluwalia, former Deputy Chairman, Planning Commission; Amitabh Kant, Secretary DIPP, Ministry of Commerce & Industry; Isher Judge Ahluwalia, Chairperson, ICRIER; N.K Singh, Member, ICRIER Board of Governors; Pramod Bhasin, Member, ICRIER Board of Governors; Rajat Kathuria, Director & CE, ICRIER and Shekhar Shah, Director General, NCAER.

India-Japan

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 6th Annual ICRIER-PRI workshop was held on March 25, 2016, at Tokyo to discuss economic engagement between India and Japan. From the macro economic trends in both countries to the impact of mega FTAs, the workshop went on to discuss India's efforts to improve the investment climate and the opportunities for Japanese investors. On this occasion Rajat Kathuria, Director & CE, ICRIER and Tetsuo Tominaga, President, PRI also signed an agreement to extend the MoU between the two institutions for three more years.

The first India-Japan Track 1.5 Dialogue on '*Strategic and Security Issues*' was held in Tokyo on March 23, 2016. Indicative of the importance attached by the Japanese side to this interaction, twenty-five well known and senior level Japanese strategic experts and representatives of Japanese government agencies participated in the conference.

L to R: Rajat Kathuria and Tetsuo Tominaga signing the agreement to extend the ICRIER-PRI MoU

At the conclusion of the conference, the Indian participants called on Mr. Hitoshi Kikawada, Parliamentary Vice Minister for Foreign Affairs, Japan.

India-Korea

The *India-Korea Dialogue* is jointly organised by ICRIER and the Seoul Forum on International Relations (SFIA). Since 1999, an annual dialogue is organised alternately in New Delhi and Seoul and this dialogue 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 in 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 14th India-Korea Dialogue was hosted by ICRIER on November 5-6, 2015, at New Delhi.

The papers presented at the 9th dialogue in 2010 have been brought out as a book by ICRIER while the papers presented at the 10th dialogue in 2011 have been brought out as a book by SFIA. To mark the 40th anniversary of diplomatic relations between India and Korea, ICRIER has also brought out a commemorative volume, '*Forty Years of India-Korea Relations and Looking Ahead*'.

In the backdrop of Prime Minister Narendra Modi's successful visit to Seoul, the theme of the 14th India-Korea Dialogue was '*India-Korea Partnership: Realising the Potential*'. The Inaugural Address was delivered by Shri Suresh Prabhu, Union Minister for Railways and the dialogue discussions were structured around the following sessions:

L to R: Rajat Kathuria, Hon'ble Union Minister Suresh Prabhu and JUNG Ku-Hyun

- Asian Security and India-Korea 'Special Strategic Partnership'
- Co-operation for Full Potential of India-Korea CEPA and the New Asian Economic Initiatives
- 'Make in India' Initiative & Opportunities for SMEs
- India-Korea Collaboration in Manufacturing Industries (Shipbuilding, Steel, Auto, Defence Industry, etc.)
- India-Korea Collaboration in High-tech Industries (IT/Internet, Games/Contents, Green/New Energy, etc.)
- Enhancing R&D Collaboration and Peoples Movement between India and Korea

The Korean delegation was led by JUNG Ku-Hyun, President of the Seoul Forum for International Affairs (SFIA); a special address was delivered by LEE Chung, Ambassador for National Security Affairs. The other members of the delegation included KIM Dalchoong, President *Emeritus*, SFIA; CHANG Kook Hyun, Secretary General of Indian Chamber of Commerce in Korea; KIM Jong Seok, President, Youido Institute, a think tank of the Sae Nuri Party, the ruling party of Korea since June 2015; CHO Choongjae, Head of South Asia team at Korea Institute for International Economic Policy (KIEP); KIM Changsu, Senior Research Fellow, Center for Security and Strategy of the Korea Institute for Defense Analyses (KIDA); LEE Haiwon, Professor, Hanyang University; LEE Joon-gyu, Ambassador at large at the Ministry of Foreign Affairs; and PARK Sung-Hoon, Professor of Economics and International Trade, Korea University.

India-Pakistan

ICRIER's research on India-Pakistan trade was a key factor in the breakthrough in the India-Pakistan trade normalisation process. ICRIER has since then been actively engaged in fostering multilevel dialogue platforms for regular interaction and discussion between policymakers, business persons and scholars from the two countries. Through these dialogues, ICRIER has played an extremely important role in bringing the issue of India-Pakistan trade normalisation into sharp focus, significantly enhancing bilateral interface, and increasing understanding among all relevant stakeholders in both countries.

The three dialogue forums initiated by ICRIER include:

1. The Annual Conference on *India-Pakistan Trade*
2. The Regional Chambers of Commerce Roundtable
3. The Distinguished Lecture Series

ICRIER has been commended and its role in keeping dialogue channels open when formal relations are strained has been widely appreciated. ICRIER has had considerable success in getting the participation of high-level members of the policy making community at all the dialogue forums and in creating new linkages between several industry bodies in the two countries.

Currently, ICRIER is involved in research that aims to identify key reform measures needed to facilitate trade in health services between India and Pakistan. In recent years, India has started to attract an increasing number of medical tourists, especially from the SAARC region, who are drawn towards Indian hospitals due to the availability of state-of-the-art infrastructure, latest technology as well as reputed doctors. However, the potential for medical tourism from Pakistan remains untapped. India can offer good medical services at affordable prices to Pakistani patients. There are also synergies in other sectors related to health between the two countries. The ongoing study at ICRIER identifies key reform measures needed to facilitate trade in health services between India and Pakistan. The conference on '*Enhancing Trade in Health Sector between India and Pakistan*' was organised in July 2016 at New Delhi.

BOOKS/ REPORTS RELEASES

Better Cities, Better Economy, Better Climate: Shining New Light on India's Smart Urban Opportunity

July 22, 2016

L to R: Rajat Kathuria, Isher Judge Ahluwalia, Rajiv Gauba and Madhav Pai at the release of the report *Better Cities, Better Economy, Better Climate: Shining New Light on India's Smart Urban Opportunity*

The report '*Better Cities, Better Economy, Better Climate: Shining New Light on India's Smart Urban Opportunity*' was released by Rajiv Gauba, Secretary, Ministry of Urban Development, Government of India, on July 22, 2016 at New Delhi. This report is the result of research conducted by ICRIER under the aegis of the New Climate Economy (NCE), the flagship project of the Climate Policy Initiative (CPI). A collaborative effort between ICRIER and the World Resources Institute (WRI), the report analyses the patterns of urbanisation in India, its links to economic growth and the associated environment externalities to business as usual cost of urbanisation.

The inaugural session was chaired by Isher Judge Ahluwalia, Chairperson, ICRIER, and Madhav Pai, India Director, WRI Ross Center for Sustainable Cities. In his remarks, Mr. Pai explained how the project takes forward the much discussed New Climate Economy report. The research findings were presented by Anil Markandya, Director, Basque Centre for Climate Change and Meenu Tewari, Associate Professor, University of North Carolina and HUDCO Chair Visiting Professor, ICRIER. This was followed by a panel discussion moderated by Chetan Vaidya, Director, School of Planning and Architecture, New Delhi. The panellists were Yoonhee Kim, Senior Urban Economist, World Bank and Smita Srinivas, Head, School for Economic Development, Indian Institute for Human Settlements.

De-carbonisation of Railways

July 22, 2016

The report '*De-carbonisation of Railways*' was released by ICRIER on July 22, 2016 at New Delhi. This report is the result of research conducted by ICRIER under the aegis of the New Climate Economy (NCE), the flagship project of the Climate Policy Initiative (CPI). The report analyses the feasibility of 100 percent de-carbonisation of the Indian Railways, and identifies pathways to that goal under different scenarios from both the demand and supply side.

At the release event, the findings on the demand side were presented by Saon Ray, Senior Fellow, ICRIER and Gireesh Shrimali, Director, CPI presented the supply side of the analysis. This was followed by a panel discussion moderated by Sunil Jain, Managing Editor, The Financial Express. The panellists were Sudhir Garg, EDEE(M), Indian Railways, Daljit Singh, Independent Consultant and Charith Konda, Consultant, Climate Policy Initiative.

Quantifying the Value of an Open Internet for India

July 20, 2016

The report '*Quantifying the Value of an Open Internet for India*' was released by ICRIER on July 20, 2016. The report is authored by Rajat Kathuria, Mansi Kedia, Vatsala Shreeti and Parnil Urdhwareshe.

L to R: R. Chandrasekhar, Parnil Urdhwareshe, Vatsala Shreeti, Rajat Kathuria, Ajay Kumar and Mansi Kedia at the release of the report *Quantifying the Value of an Open Internet for India*

Delivering a special address on the occasion R. Chandrasekhar, President, NASSCOM emphasised the need for quantitative studies and commended ICRIER for taking the initiative in this regard. He further stressed the importance of IT in government programmes and the need for India to enhance its engagement with the world on this subject. The keynote address was delivered by Ajay Kumar, Additional Secretary, DEITY, Government of India. Dr. Kumar highlighted the importance of indicative data for policy makers, particularly in the IT and ICT sectors, and noted the possibility of further research on the subject using methods such as option-value theory. The report release was followed by a panel discussion between Mahesh Uppal, Director, ComFirst, Virat Bhatia, President, AT&T South Asia, and Rajat Kathuria, Director & CE, ICRIER.

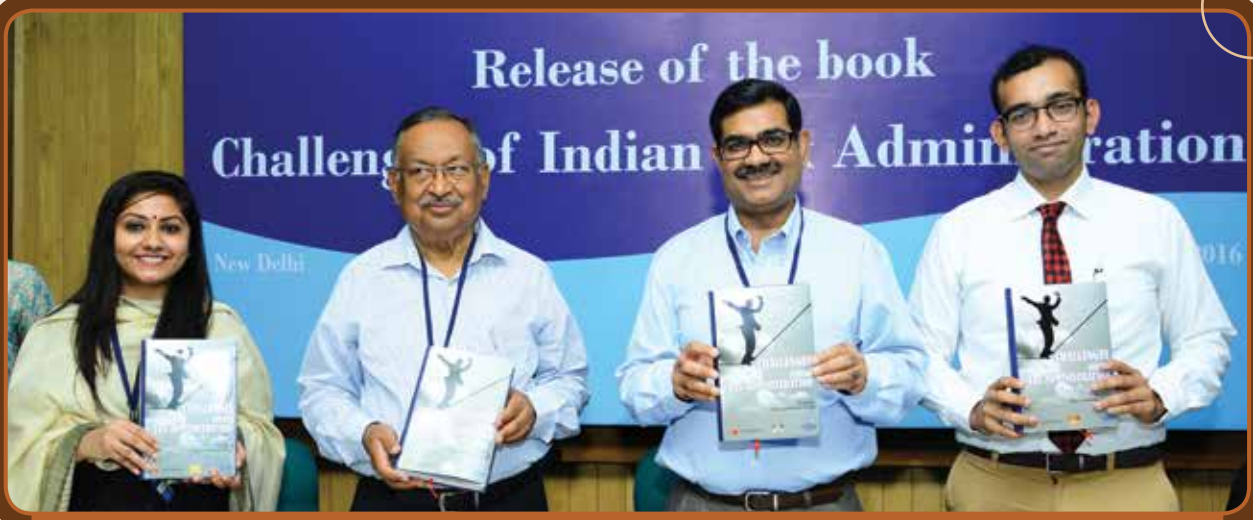
Challenges of Indian Tax Administration

June 20, 2016

The book '*Challenges of Indian Tax Administration*', edited by Rajiva Ranjan Singh, Member (Retd.) Central Board of Direct Taxes and Senior Consultant, ICRIER, was released on June 20, 2016. It covers various aspects of tax administration ranging from taxpayer information services, widening of the taxpayer base, tax data analysis to dispute resolution. Speaking at the inaugural session, Rajat Kathuria, Director & CE, ICRIER drew attention to different ways in which other countries are tackling the issue of tax evasion. Aurodeep Nandi, Acting Head, Economic and Trade Policy and Senior Economic Adviser, British High Commission, highlighted the importance of customer satisfaction in dealings of the public with the tax department and discussed various initiatives undertaken by the UK government in this regard.

In the discussion that followed, participants noted that in enhancing taxpayers' level of voluntary compliance, three factors play a very important role – certainty about the tax to be paid; the convenience to pay it; and the attitude of the tax administration. Participants stressed the importance of viewing the taxpayer as a 'customer' of the department and not as an adversary. From the perspective of widening the taxpayer base in India, it was felt that although the Income Tax

Department in India has been moving in the correct direction, there is still immense scope to widen the taxpayer base and stress should be laid on comprehensive measures to achieve this. On the tax dispute resolution front, it was acknowledged that India requires legislative changes in the area of dispute settlement and alternative dispute resolution mechanisms should be fortified in order to reduce litigation. Lastly, the panellists emphasised the importance of effective data analysis by the tax administration. It was pointed out that while the Income tax Department in India has a substantial database it is not being properly maintained or provided in the public domain. The role of ICT in this regard was highlighted.



L to R: Anandita Bagchi, Rajiva Ranjan Singh, Rajat Kathuria and Aurodeep Nandi at the release of the book *Challenges of Indian Tax Administration*

The World in 2050: Striving for a More Just, Prosperous and Harmonious Global Community

June 07, 2016

L to R: Montek Singh Ahluwalia, Hon'ble Union Minister of State Shri Piyush Goyal, Isher Judge Ahluwalia, Harinder Kohli, T. N. Ninan and V. Sivaramakrishnan at the release of the book *The World in 2050: Striving for a More Just, Prosperous and Harmonious Global Community*

In collaboration with Oxford University Press (OUP), ICRIER organised the India release of the book '*The World in 2050: Striving for a More Just, Prosperous and Harmonious Global Community*', edited by Harinder Kohli, Director and Chief Executive of the Emerging Markets Forum (EMF), Washington DC. The book takes a long view on some of the key issues facing the world up to 2050. It addresses a number of critical challenges in the areas of international trade,

urbanisation, food security, climate change, and global governance and highlights the growing role of emerging market economies. It is the joint effort of a multidisciplinary, multicultural team of twenty six authors from twelve different countries on five continents.

The book was released by Shri Piyush Goyal, Union Minister of State with Independent Charge for Power, Coal, New and Renewable Energy. In his address, Shri Goyal noted that the ten megatrends articulated in the book are relevant and extremely important for all of us to reflect upon. Talking about women empowerment in particular, he said that he had no doubt in his mind that Indian women have the ability to become agents of change and determine the country's destiny. He also discussed the emerging demographic concerns in the country and said that demographics can be either a boon or a disaster for the country, depending on our ability to channelise it in the right direction and focus on the development of skills and entrepreneurship among today's youth.

The book release was followed by a panel discussion moderated by Isher Judge Ahluwalia, Chairperson, ICRIER; the speakers included T. N. Ninan, Chairman and Editorial Director, Business Standard Ltd; Montek Singh Ahluwalia, Former Deputy Chairman, Planning Commission; and Arunabha Ghosh, CEO, Council on Energy, Environment and Water.

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

June 07, 2016

The report '*Institutional Framework for Collection of Statistics on Trade in Services: Four Pilot Surveys on Trade in Audiovisual, Logistics, Professional and Telecommunication Services*' authored by Arpita Mukherjee (et.al), was released at an event in New Delhi on June 7, 2016. The report examines the current process of collection of data on trade in services; the shortcomings of the current data collection process and regulatory framework; and the experiences of other countries in data collection using pilot surveys in four services sectors. The objective of this project was to understand how enterprise surveys can be conducted in India and make policy recommendations.

Authors and panellists at the release of the report *Institutional Framework for Collection of Statistics on Trade in Services*

In her welcome remarks, Isher Judge Ahluwalia, Chairperson, ICRIER, emphasised the role of data as building blocks for research. Several senior policy makers, experts and industry representatives including Arvind Mehta, Additional Secretary, Ministry of Commerce and Industry, T. C. A. Anant, Secretary & Chief Statistician of India, Anup Wadhawan, Director General, Directorate General of Foreign Trade, Ministry of Commerce & Industry, Sudhanshu Pandey, Joint Secretary, Department of Commerce, Ministry of Commerce & Industry, and Dipankar Sinha, Director General, Directorate General of Commercial Intelligence and Statistics, were present on the occasion.

Stitches to Riches? Apparel Employment, Trade, and Economic Development in South Asia

April 29, 2016

A seminar was organised by ICRIER in collaboration with the World Bank on April 29, 2016, to release the report '*Stitches to Riches: Apparel Employment, Trade, and Economic Development in South Asia*'. The report, edited by Gladys Lopez-Acevedo and Raymond Robertson, provides practical inputs for policymakers on free trade agreements and employment issues in the apparel sector. Speaking on the occasion, Amitabh Kant, CEO, NITI Aayog, noted that from India's perspective, apparel exports can be a strong growth driver since they already constitute 40 percent of India's textile exports. He stressed that no country can grow in the long run without penetrating the global market and, in this context, stressed the importance of comprehensive trade agreements for India. Vijay Mathur, Additional Secretary General, AEPC, emphasised the importance of synchronising domestic value chains with global standards.

L to R: Vijay Mathur, Rajat Kathuria, Amitabh Kant, Onno Ruhl and Gladys Lopez-Acevedo at the release of the report *Stitches to Riches? Apparel Employment, Trade, and Economic Development in South Asia*

The report release was followed by a panel discussion chaired by Sushmita Dasgupta, Economic Advisor, Department of Commerce. The panellists included Saon Ray, Senior Fellow, ICRIER, Chandrima Chatterjee, Advisor, Apparel Export Promotion Council (AEPC), and Sudhir Dhingra, Chairman, Orient Craft Limited. The speakers pointed out that the garments sector creates jobs in South Asia and in the background of the wage rise in China, there is great potential in each of the South Asian countries to capture the market vacated by China in this sector. India's strength lies in cotton textiles. However, there is need to move up the value chain in order to retain market share in the highly competitive market for garments. Given the challenges faced by the sector, especially due to the Trans Pacific Partnership (TPP), the industry needs to upgrade. This can be done by identifying the potential of each garment cluster to move up the value chain and to upgrade. The key factors from a buyers' perspective are cost, quality, lead time and reliability. While India scores on quality, it can improve on lead time. The policy suggestions for India include addressing the constraints to firm growth with the integration of textiles and apparel and greater access to man-made fibres. India also needs to address challenges in the labour markets.

India's Phytonutrient Report

February 04, 2016

The report '*India's Phytonutrient Report: A Snapshot of Fruits and Vegetables Consumption, Availability and Implications for Phytonutrient Intake*' was released by S. K. Malhotra, Agriculture and Horticulture Commissioner,

Ministry of Agriculture and Farmer's Welfare, Government of India, on February 4, 2016, in New Delhi. Authored by Arpita Mukherjee, Souvik Dutta and Tanu M. Goyal, the report takes its cue from a pioneering study by the World Health Organisation (WHO) on diet, nutrition and prevention of chronic diseases that has recommended a daily intake of at least 400 grams of fruits and vegetables to help prevent diet-related disease and micronutrient deficiency.

L to R: Souvik Dutta, Rajat Kathuria, S. K. Malhotra, Isher Judge Ahluwalia, Arpita Mukherjee and Sanu Kapila at the release of *India's Phytonutrient Report*

India is one the largest producers of fruits and vegetables in the world. It is also one of the largest consumer markets, with food and grocery having the largest share in the consumption basket. However, a number of studies show that Indian consumers do not consume the WHO recommended quantity of fruits and vegetables. This report, based on an analysis of secondary data and a survey of 1,001 consumers across different states in India, examined the production and availability of fruits and vegetables, consumption patterns, extent of shortfall in consumption, reasons for shortfall and implications of such shortfall for consumer health and well-being. It also highlights policy issues related to food safety and standards, the use of pesticides, organic products, food supply chain, foreign investment in retail, food pricing, and food supplements and nutraceuticals. The comprehensive report will enable businesses to understand the production and supply chain of fruits and vegetables and the policy environment as well as consumption patterns of Indian consumers.

The report release was followed by a presentation on the key findings and a panel discussion. The panel discussion was chaired by P. K. Joshi, Director for South Asia, International Food Policy Research Institute (IFPRI) and the speakers included Pawan Kohli, Chief Advisor, National Centre for Cold Chain Development, Department of Agriculture & Co-operation, Ishi Khosla, Clinical Nutritionist, The Weight Monitor, Bejon Misra, Founder Head, Partnership for Safe Medicines (PSM) India, Pravesh Sharma, Former MD, Small Farmers' Agri-Business Consortium, Vinay Kumar, Amway India Enterprise, and Souvik Dutta, Assistant Professor, Indian Institute of Management (IIM), Bangalore.

Trade in Services and Trade Agreements: Perspectives from India and the European Union

October 28, 2015

The book '*Trade in Services & Trade Agreements: Perspectives from India and the European Union*' edited by Arpita Mukherjee, Rupa Chanda and Tanu M. Goyal was released in Mumbai on October 28, 2015, in a function attended by senior policymakers, representatives from industry associations, academics and experts.

L to R: N. C. Saha, Dipankar De, S. K. Goel, Arpita Mukherjee and Tanu M. Goyal at the release of book *Trade in Services & Trade Agreements: Perspectives from India and the European Union*

Published by Sage Publications India Private Limited, the book attempts to present a roadmap for enhancing trade, investment and co-operation in the services sector between India and the European Union (EU). The services sector has emerged as the largest and fastest growing sector in the world economy. India and the EU are among the top ten exporters of services. The two economies have trade complementarities in services and are negotiating a broad-based trade and investment agreement (BTIA). Against this backdrop, the book highlights how a developing country and businesses in that country can prepare for trade agreements and how trade agreements in services can lead to a win-win situation for a developed and developing country. With several regional trade negotiations such as the Regional Comprehensive Economic Partnership (RCEP), Trans-Pacific Partnership (TPP) and Transatlantic Trade and Investment Partnership (TTIP) underway, the book also provides policy recommendations for future trade negotiations that involve India and the EU.

An Inquiry into the Impact of India's App Economy

July 14, 2015

The study titled '*An Inquiry into the Impact of India's App Economy*' authored by Rajat Kathuria, Sahana Roychowdhury, Mansi Kedia and Sugandha Srivastava was released at an event jointly organised by ICRIER and IAMAI on July 14, 2015. The study estimates the direct employment in apps to range between 1,51,230 and 1,59,010 by 2016. Apps currently account for 75,000 jobs in India. Accordingly, the increase in direct employment attributable to India's app economy is expected to range between 76,230 and 84,010 jobs from 2014 to 2016. Besides, apps create downstream jobs in sales and marketing and in customer sales management. They also cause income growth that has its own secondary impact on jobs. These indirect and induced effects could result in an increase in total employment by up to 8 times during the period 2014 to 2016. At its best, the app economy could generate over 6,00,000 jobs. The study also uses existing data to estimate the size of India's app economy at Rs.1,964 crore in 2016.

At the launch, Dilip Chenoy, MD & CEO National Skill Development Corporation and R. Chandrasekhar, President NASSCOM also shared their views on the future of India's app economy. The speakers highlighted the need to develop design competencies to exploit the potential of apps in India. Moreover, investing in network infrastructure and harnessing commercial synergies between telecom operators and app developers would help address other immediate challenges facing the industry. The increase in start-ups, coupled with an enhanced ecosystem, could create employment opportunities. These recommendations are in line with the findings of the study.

Harnessing Indian Agriculture to Global Value Chains: Prospects and Challenges

April 09, 2015

ICRIER, in association with Indian Institute of Management (IIM) Calcutta, organised a conference to release the report titled '*Harnessing Indian Agriculture to Global Value Chains: Prospects and Challenges*' on April 9, 2015. The keynote address was delivered by Sanjeev Chopra, Mission Director, National Horticulture Mission, Government of India; Ashok Gulati, Chair Professor, ICRIER, moderated the inaugural session. Presenting the key findings of the study, the principal author of the report, Parthapratim Pal, highlighted the steps needed for India's successful engagement in agricultural global value chains. He emphasised the importance of private sector participation, the adoption of contract farming and the increasing role of social entrepreneurs. Besides, he spoke of the need to remove regulatory restrictions and the resulting marketing challenges faced by small producers.

L to R: Rajat Kathuria, Parthapratim Pal, Pravesh Sharma, Ashok Gulati and Sanu Kapila at the release of the report *Harnessing Indian Agriculture to Global Value Chains: Prospects and Challenges*

The release of the report was followed by a panel discussion on '*Value Chain Approach to Sustainable Agriculture*'. It was chaired by Ashok Gulati and the panellists included Saubhik Deb, Independent Consultant, Pravesh Sharma, Managing Director, Small Farmers' Agri-business Consortium, Meetu Kapur, Executive Director, Food & Agriculture, Centre of Excellence (FACE), Confederation of Indian Industry (CII), and Ajay Vir Jakhar, Chairman, Bharat Krishak Samaj.

The speakers noted that sustainability has three dimensions – economic, social and environmental. To ensure the sustainability of agriculture, production must be market driven and there should be integration of small and large farmers. Some questioned the popular perception that the idea of value chains was only applicable to 'processed foods' or that value chains cater only to global markets. The speakers highlighted the importance of both the supply and demand sides of the agricultural value chain. It was pointed out that the development of value chains begins with research and public sector investment plays a crucial role in overall process. Dr. Gulati concluded by saying that for a sustainable sector, it is crucial for production to be demand driven and that it is necessary to build the required infrastructure either by the government and/or through other innovative means.

International Networking

South Asia Network of Economic Research Institutes (SANEI)

The South Asia Network of Economic Research Institutes (SANEI) is the South Asian regional partner of the Global Development Network (GDN). SANEI is a non-profit, regional initiative, established in 1998 to foster networking amongst economic research institutions in the South Asia region for establishing strong research inter linkages pertaining to broader concerns of regional cooperation, understanding and development. The Network comprises of member institutes based in the countries of South Asia (Bangladesh, India, Nepal, Pakistan and Sri Lanka). ICRIER is one of the founding members and was chosen as the first Secretariat of the Network. From 1st April 2015 the Secretariat is being hosted by the Integrated Development Studies (IIDS), Kathmandu, Nepal.

The results of the 17th Round of the Regional Research Competition were declared in June 2016. Under the selected theme of *Tax Policy and Reforms in South Asian countries*, five research studies have been funded in this round.

The Global Commission on the Economy and Climate: New Climate Economy

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 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 new development experiences in 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, which 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.

Network of Jobs and Development (NJD)

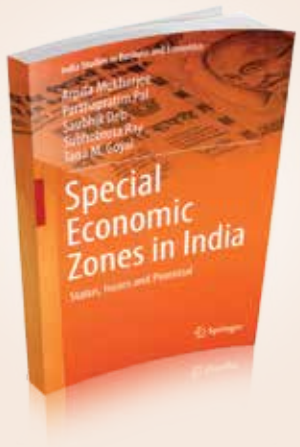
ICRIER is one of five global institutions participating in the Network of Jobs and Development (NJD) initiative of the World Bank. The initiative aims to develop a vibrant and engaging community of experts on 'jobs' and seeks to build consensus among policymakers, academics, private sector, labour unions, 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 are 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).

Global Trade and Innovation Policy Alliance (GTIPA)

An initiative of the Information Technology and Innovation Foundation (ITIF), the Global Trade and Innovation Policy Alliance is an international network of think tanks that conducts evidence-based research with regard to policies that can foster greater trade liberalisation, curb 'innovation mercantilism' and encourage governments to play proactive roles in spurring innovation and productivity. The Alliance includes 10 founding members from the Americas, Europe, and Asia; ICRIER is one of the founding members of GTIPA. The Alliance aims to highlight and cross-pollinate member organisations' work on trade, globalisation, and innovation policy, and create opportunities to collaborate on events, research and reports, and policy development on related topics.

PUBLICATIONS

Books



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

Springer, 2016, 254 pages

Challenges of Indian Tax Administration

Edited by Rajiva Ranjan Singh

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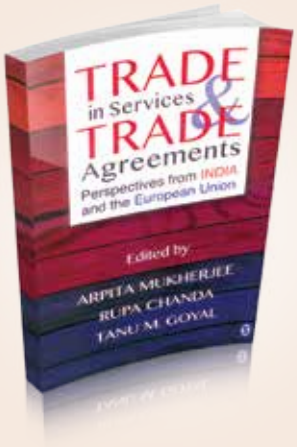
Edited by Rajat Kathuria and Neetika Kaushal Nagpal

Springer, 2016, 265 pages



Trade in Services and Trade Agreements: Perspectives from India and the European Union

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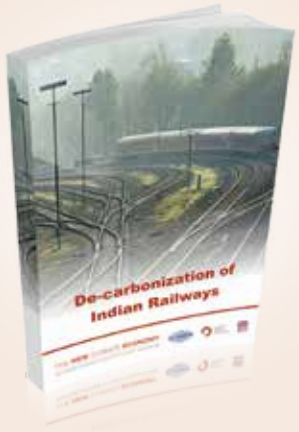

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Quantifying the Value of an Open Internet for India

By Rajat Kathuria, Mansi Kedia, Vatsala Shreeti and Parnil Urdhwareshe

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Edited by Arpita Mukherjee, Tanu M. Goyal, Bhavook Bhardwaj and Raj Kumar Shahi

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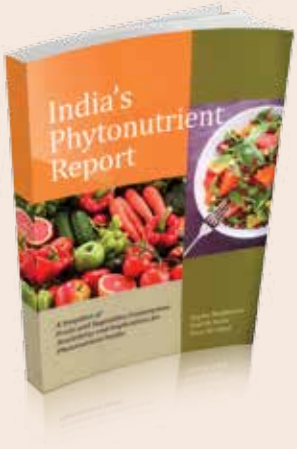

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By Arpita Mukherjee, Souvik Dutta and Tanu M. Goyal

Academic Foundation, February 2016, 100 pages

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328. Montek Singh Ahluwalia, Himanshu Gupta and Nicholas Stern, "A More Sustainable Energy Strategy for India", July 2016
327. Nisha Taneja, Samridhi Bimal and Isha Dayal, "India's Informal Trade with Pakistan", July 2016
326. Nisha Taneja, Saon Ray and Devyani Pande, "India – Pakistan Trade: Textiles and Clothing", June 2016
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322. Udaya S. Mishra, S. Irudaya Rajan, William Joe and Ali Mehdi, "Surveillance of Chronic Diseases: Challenges and Strategies for India", May 2016
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311. Durgesh K. Rai, "Trends and Economic Dynamics of Guar in India", October 2015
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309. Nupur Chowdhury, Pallavi Joshi, Arpita Patnaik and Beena Saraswathy, "Administrative Structure and Functions of Drug Regulatory Authorities in India", September 2015
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- 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
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- Cellular Operators Association of India
- Center for Strategic and International Studies, Washington, DC
- Department for International Development (DFID)
- Directorate General of Commercial Intelligence and Statistics (DGCI&S), Ministry of Commerce and Industry, Government of India
- Directorate of Income Tax, Ministry of Finance, Government of India
- Department of Economic Affairs, Ministry of Finance, Government of India
- Economic Research Institute for ASEAN and East Asia
- Embassy of Japan, New Delhi
- Export Promotion Council for EOUs and SEZs (EPCES)
- Foreign and Commonwealth Office (FCO), Government of U.K.
- Food and Agriculture Organisation, U.K.
- Friedrich Ebert Stiftung Foundation
- Housing and Urban Development Corporation Ltd. (HUDCO)
- Indian Institute of Management, Kolkata
- Infrastructure Professionals Enterprise Global (P) Ltd. (IPE)
- International Institute for Sustainable Development
- Internet and Mobile Association of India
- Kanakia Foundation
- London School of Economics
- Ministry of Commerce and Industry, Government of India
- Ministry of External Affairs, Government of India
- Ministry of Food Processing Industries, Government of India
- Mint, HT Media
- Pharmaceutical Research and Manufacturers of America (PhRMA)
- Policy Research Institute, Ministry of Finance, Japan
- Rockefeller Foundation
- South Africa Institute of International Affairs
- Syngenta Foundation
- The Asia Foundation
- Taipei Economic and Cultural Center (TECC)
- Talentnomics India
- Toshiba International Foundation
- United Nations University-World Institute for Development Economics Research (UNU-WIDER)
- World Bank
- World Resources Institute (WRI)

ICRIER Team

Research Team with the Director & CE

Administrative and Support Staff with the Director & CE

Director & Chief Executive

Dr. Rajat Kathuria

Research Faculty

Professors

Dr. Shankar Acharya (Honorary Professor)
Dr. Jaimini Bhagwati
Dr. Ashok Gulati
Mr. Anwarul Hoda
Dr. Arpita Mukherjee
Dr. Nisha Taneja
Dr. Meenu Tewari
Mr. Hemant Krishan Singh
Dr. Rajeev Anantaram

Senior Fellows

Dr. Saon Ray
Dr. Jaivir Singh

Senior Consultants

Ms. Sanjana Joshi
Mr. Sanjay Pulipaka
Mr. Rajiva Ranjan Singh

Fellows

Dr. Radhicka Kapoor
Dr. Ali Mehdi
Dr. Indro Ray
Dr. Pankaj Vashisht

In-house Consultants

Ms. Samridhi Bimal
Ms. Tanu Goyal
Ms. Mansi Kedia
Ms. Reena Kumari
Ms. P. P. Krishnapriya
Mr. Prateek Kukreja
Ms. Pallavi Rajkhowa
Ms. Aarsi Sagar
Ms. Shweta Saini
Ms. Smriti Verma
Ms. Deepika Wadhwa
Ms. Arunima Wanchoo

Research Associates

Ms. Kuntala Bandyopadhyay
Ms. Anandita Bagchi
Ms. Pritha Banerjee
Mr. M. Shuheb Khan
Ms. Smita Miglani
Mr. Rahul Mongia
Mr. Durgesh Kumar Rai
Ms. Ranjana Roy
Ms. Vasudha Wattal

Research Assistants

Ms. Aashna Arora
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Mr. Ramakrishna Reddy Bogathi
Ms. Divya Chaudhry
Ms. Vrinda Gupta
Ms. Pallavi Joshi
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Ms. Shilpi Sunil Kumar
Ms. Aastha Malhotra
Ms. Stuti Manchanda
Mr. Sandeep Paul
Mr. Utkarsh Patel
Ms. Deepmala Pokhriyal
Ms. Vatsala Shreeti
Ms. Prerna Terway
Ms. Priyanka Tomar
Mr. Parnil Urdhwareshe

Administration

Secretary

Mr. Rajeev Kapil

Senior Manager (Admin. & Events)

Mr. Manmeet Ahuja

Senior Accounts Executives

Mr. S. P. Chathli (consultant)
Mr. Prabhat Kumar

Account Assistant

Mr. Ram Kumar

IT Manager

Mr. Raj Kumar Shahi

Library cum Doc. Officer

Ms. Chhaya Singh

Private Secretaries

Mr. Rahul Arora
Mr. Anshul Bhojwani
Ms. Christina Das
Ms. Hilda Kathuria (consultant)
Mr. Devender Kumar
Mr. Anu Mohandas
Ms. Priti Rajput

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 Operator

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

Mukesh Butani
BMR Legal
Delhi, India

Maulik R. Chokshi
Public Health Foundation of India
Gurgaon, India

Homagni Choudhury
Aberystwyth University
Ceredigion, UK

Nupur Chowdhary
Centre for Law and Governance
JNU, New Delhi, India

Deb Kusum Das
University of Delhi
Delhi, India

Dipankar De
Dun & Bradstreet Tangram Advisory
Services Pvt. Ltd.
Delhi, India

Bishwanath Goldar
University of Delhi
Delhi, India

Yamini Gupt
University of Delhi
Delhi, India

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

William Joe
Institute of Economic Growth
Delhi, India

Renu Kohli
Independent Consultant
Delhi, India

Harish Kumar
Income Tax Department
Ahmedabad, India

Sanjay Kumar
Tax Administration
Reform Commission
Delhi, India

Anil Markandya
Basque Centre for Climate Change
Basque, Spain

Udaya Mishra
Centre for Development Studies
Thiruvananthapuram, Kerala, India

Parthapratim Pal
Indian Institute of Management
Kolkata, India

M. Ramachandran
Former Secretary
Ministry of Urban Development
Delhi, India

Irudaya Rajan
Centre for Development Studies
Thiruvananthapuram, Kerala, India

Saleema Razvi
GE Capital
Gurgaon, India

K. R. Sekar
Deloitte
Bengaluru, India

Anant Sudarshan
University of Chicago Centre
in India,
New Delhi, India

Anand Sahasranaman
Institute for Financial Management
and Research
Chennai, India

Bharat R. Sharma
International Water Management Institute
Delhi, India

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

Faculty Activities

DIRECTOR & CHIEF EXECUTIVE

RAJAT KATHURIA

Appointed

- Member of the Confederation of Indian Industry (CII) Committee on International Trade Policy and Exports 2016-2017, June 2016
- Member of the Implementation Committee for Intended Nationally Determined Contribution (INDC), Ministry of Environment, Forest and Climate Change, Climate Change Division, June 10, 2016
- Member of the Standing Committee on Services Sector (SCSS), National Statistical Commission, Ministry of Statistics & Programme Implementation (Economic Statistics Division), October 14, 2015
- Member of Faculty of Applied Social Sciences and Humanities (FASSH), South Delhi Campus,University of Delhi, September 16, 2015
- Member of the Advisory Council of ASSOCHAM, August 2015

International Conferences/Presentations

- Presentation on 'India-China Dialogue' at the 'Inaugural New Climate Economy Summit', New Climate Economy, London, June 28-30, 2016
- Speaker, 'The 2030 Agenda and Pathways to Sustainable Development' at the 'International T20 (Think Tank 20) Conference', German Development Institute/Deutsches Institute für Entwicklungspolitik (DIE) and the Kiel Institute for the World Economy (IfW), Berlin, May 10-14, 2016
- Presentation on 'Outlook on India's Economy: In view of External Factors', 6th PRI-ICRIER Workshop, Tokyo, March 25, 2016
- Chaired the session 'Trade, Commerce and Connectivity: The opportunity costs of war', in 'India-Pakistan Dialogue: How to Transform the Process', Friedrich Ebert Stiftung, Bangkok, October 15-17, 2015
- Presentation on 'Infrastructure and Connectivity in India: Getting the Basics Right' in '22nd Asia Economic Policy Review (AEPR) Conference on Connectivity and Infrastructure,' Japan Centre for Economic Research, Tokyo, October 10, 2015
- Panelist in the seminar on 'Infrastructure and Urbanisation in India – Opportunities for the EU', GRF-ICRIER, Supported by Friedich Ebert Stiftung, Brussels, September 21, 2015
- Meeting with Global Commission on the Economy and Climate, Ministry of the Environment and the New Climate Economy, Stockholm, June 26-27, 2015

National Conferences/Seminars/Workshops

- 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

- Keynote address at 'Managing Global Governance National Alumni Meeting', DIE (German Development Institute), New Delhi, April 4, 2016
- Chief Guest and Inaugural Address at 'International Programme in Management for Executives (IPMX)', IIM-Lucknow, Noida, April 4, 2016
- Moderator, session 'Research & Results: For Sustainable Development – Women Empowerment and Economic Growth – What can government and policy markers do?' in the conference 'Empowering Women for Sustainable Development', Talentnomics and ICRIER, New Delhi, March 14, 2016
- Moderator, session 'Responsible Finance – The Regulatory Framework vis-a-vis the Business of Lending', at seminar 'Financial Inclusion to Sustainable Development: The Road Travelled', South Asia Micro-entrepreneurs Network and Microfinance Institutions Network, New Delhi, March 8-9, 2016
- Speaker, 'The Union Budget 2016-17: Reforms and Development Perspectives', jointly organised by ICRIER, IDF, NCAER, NCR and NIPFP, New Delhi, March 5, 2016
- Chaired the Session 'Emerging E-Commerce: Implications for Competition' and Discussant – 'Interface between Competition Law an IPR' at 'First National Conference on Economics of Competition Law', Competition Commission of India, New Delhi, March 4, 2016
- Speaker, 'Beyond Growth and Development' at seminar 'The Discipline of Economics: Responding to People's Aspirations and Policy Challenges', OP Jindal Global University and Jindal School of Government and Public Policy, New Delhi, February 13, 2016
- Panelist in the session on 'I-way of the Future (M2M, IOT, Digital India, Smart Cities)', in the seminar 'Telecom and Broadcasting', Telecom Disputes Settlement and Appellate Tribunal (TDSAT), New Delhi, February 6, 2016
- Guest of Honour at Valedictory Session on 'Third International Conference on Competition Regulation & Competitiveness', Indian Institute of Management (Kashipur)-AZB & Partners- Shaping Tomorrow, New Delhi, February 5, 2016
- Moderator, workshop on 'India-Japan Partnership towards Meeting the Challenge of Infrastructure Development in India's Northeast', ICRIER, Nagaland, January 19-20, 2016
- Keynote Speaker, 'Emerging Challenges for India's Growth Model' at 'Nirma International Conference on Management (NICOM 2016)', Nirma Research Institute, Ahmedabad, January 8, 2016
- Chaired the session 'Environmental Regulation/Climate Change' at 'Annual Neemrana Conference', ICRIER, New Delhi, December 18-20, 2015
- Speaker in International Seminar 'Trade and Employment Challenges: Insights for South Asia', Institute for Human Development and International Labour Organisation, New Delhi, December 16-17, 2015
- Panelist, session on 'Adjudication, Regulation, Telecommunication of Convergence', seminar on i-way of the Future (M2M, IOT, Digital India, Smart Cities) TDSAT, New Delhi, December 14, 2015
- Moderator, 'Creating Jobs in South Asia' conference, World Bank-ICRER, New Delhi, December 3-4, 2015
- Presentation, 'Implementation Process of Bharatnet' at Consultation by Government of India on Optical Fiber Network programme, TRAI, New Delhi, December 2, 2015
- Panelist, 'Financial Inclusion' at Shared Value Summit 2015, jointly organised by Shared Value Initiative India and Institute for Competitiveness, Gurgaon, November 20, 2015
- Chaired the session 'Make in India: Japan's Role in Enhancing India's Manufacturing Prowess' at conference 'India-Japan Economic Relations: Bilateral Dimensions', ICRIER, New Delhi, November 17, 2015

- Discussant, 'Round Table Discussion on Governance and Integration through Free Trade Agreements (GIFTA), workshop 3: Asian Free Trade Agreements' in 'ESRC Conference on Asian Trade Agreements', Bournemouth University and Economic & Social Research Council, New Delhi, November 16-17, 2016
- Panelist, session on 'Key Sectors for Services Exports ICT, Telecom, Animation, R & D, Gaming etc.' at 'Services Conclave: Promoting Services Export from India Challenges, Opportunities & Issues', Ministry of Commerce & Industry and CII, New Delhi, November 12-13, 2016
- Panelist, session on 'De-risking transactions: Technology, Security and Fraud' at Mint Cash to Digital Summit on 'Disruption in banking: Traditional & Payment Banks', Live Mint, New Delhi, November 6, 2015
- Speaker, session on 'Next steps for EU-India cooperation' at 'EU-India Think Tank Conference: EU and India: Closer Partners in Global Governance?' jointly organised by EU –Asia, European Policy Centre and Friedrich Ebert Stiftung, November 3-4, 2015
- Special guest and moderator, 'India a Global Manufacturing Hub by 2025? – Pathways to unlock the potential', Dun & Bradstreet India, New Delhi, October 29, 2015
- Discussant, 'Roundtable – From Voice Factory to Data Factory', Cyber Media India Ltd., Gurgaon, October 13, 2015
- Presentation on 'Barriers to Compliance and Cost of Compliance of Direct Taxes in India', CBDT, New Delhi, October 6, 2015
- Speaker, 'International Economic Relations and Internal Governance', LILA PRISM Lectures 2015 on 'Transformative Governance', LILA Foundation, New Delhi, October 4, 2015
- Moderator, session on 'Towards an EU-India Partnership on Urbanisation', at seminar 'Infrastructure and Urbanisation in India – Opportunities for the EU', ICRIER-GRF, Delhi, October 1, 2015.
- Chaired the session 'ADBI Special Session – Urbanisation, Income Inequality and Health Inequity' and gave concluding remarks at the conference 'Challenges to Strong, Sustainable and Balance Growth: Views from G20 Countries', ICRIER, New Delhi, September 14-15, 2015
- Speaker, '5th Asia Pacific Housing Forum : Building Impact through Ecosystems for Bottom of the Pyramid Affordable Housing & Sanitation', Habitat for Humanity, Gurgaon, September 3-4, 2015
- Discussant in the roundtable discussion on 'Mega FTAs: Impact for global trade with special focus on India', Aspen Centre, New Delhi, September 4, 2015
- Panelist in the Seminar 'A Subaltern View of Climate Chang (Hazards Centre)', Press Club of India, New Delhi, August 28, 2015
- Moderator, 'Digital India Conclave-2015', Broadband India Forum, New Delhi, August 24, 2015
- Speaker, 'The Economics Summit, Conventus 2015', The Economics Club of IMI, New Delhi, August 22, 2015
- Chaired Technical Session on 'Standards Essential Patents' at '3rd International Conference: Interface between Intellectual Property & Competition Law', ASSOCHAM, New Delhi, August 7, 2015
- Speaker in the conference 'Strategies for Sustainable Development: Climate Action, Financial Reform', FICCI-ICRIER, New Delhi, August 3, 2015
- Discussant in the Session 'Growth and Challenge of Employment and Skills' at 'International Conference on Sustainable and Inclusive Urban Development', NITI Aayog and Institute of Human Development and University of Florida, New Delhi, August 1-3, 2015
- Moderator in the session 'India Update – Tax Policy Approach and 2015-16 Fiscal Year Budget' at '12th Annual Asia-Pacific Tax Forum', ICRIER and International Tax and Investment Centre, New Delhi, May 5-7, 2015

- Panelist, '3rd International Conference on Competition Law: Successes, Challenges and Reforms', ASSOCHAM, New Delhi, May 2, 2015
- Panelist in the session 'Impact of American Investment in India' at Annual General Meeting of American Chamber of Commerce in India, New Delhi, April 25, 2015
- Panelist in the session 'One Nation, Many Factories: Do we need an India model?' at 'Mindmine Summit: 2015', Hero Corporate Service Limited, New Delhi, April 22-23, 2015

Publications

Books/Reports/Chapters in Books

- Kathuria, Rajat, and Neetika Kaushal Nagpal, eds. "Global Economic Cooperation: Views from G20 Countries". Springer, 2015
- Kathuria, Rajat, Sahana Roy Chowdhury, Mansi Kedia, and Sugandha Srivastav. "An Inquiry into the Impact of India's App Economy", ICRIER, 2015

Papers in Referred Journals

- "Infrastructure and Connectivity in India: Getting the Basics Right", with Purva Singh, Asian Economic Policy Review,Vol. No. 11, Issue No. 2, July 2016
- "Growth? Yes, but India Must Do More for Those Left Behind", Global Asia, Issue No. 38, June 2016
- "Next phase of Banking Reforms", FICCI's Financial Foresights, Vol. No. 6, Issue No. 3, May 2016
- "India-Africa Trade and Investment Relationship: From Goods to Services", with Tanu M. Goyal in Hitachi Souken, Hitachi Research Institute, February 2016
- "Institutional Pathways to Promote Efficiency in Logistics: The Case of India", with Deboshree Ghosh and Parnil Urdhwareshe, Asian Journal, 2015

HONORARY PROFESSOR

SHANKAR ACHARYA

International Conferences/Presentations

- Speaker from Indian side on 'Bilateral Economic Ties & Trade Opportunities between India and Turkey: Scope for Partnership as emerging economies', Sixth India-Turkey Forum organised by Aspen Institute (India), Delhi, April 6, 2016
- Discussant on 'Corruption and Corporate Governance' at the session on 'Local governments and grass roots corruption', World Bank, Mumbai, March 30-31, 2016
- Participant in the '17th Annual Neemrana Conference' organised by ICRIER-NBER-NCAER, Rajasthan, December 18-20, 2015
- Participant in the 'India Policy Forum 2015 Conference', organised by Brookings and NCAER, IIC, New Delhi, July 14, 2015

National Conferences/Seminars/Workshops

- Speaker in The Growth Net session on 'Restoring higher growth in Emerging Markets' in the 4th Annual Meeting of Confederation of Indian Industry, New Delhi, April 7-8, 2016
- Delivered lecture on 'India's Macroeconomic Policies: Past Crises and Challenges Ahead' at Lady Sri Ram College, New Delhi, January 28, 2016

- Speaker in the Seminar on 'Inequality: Trends Worldwide and in India', organised by United Nations University-Wider and ICRIER, New Delhi, January 22, 2016
- Delivered lecture on 'India's Macroeconomic Policies: Past Experience and Challenges Ahead', Pune International Centre, Pune, December 16, 2015
- Chaired a session on 'Strengthening Service Delivery' at a seminar organised by National Institute of Public Finance and Policy, New Delhi, October 15, 2015
- Chaired the inaugural session on 'Drug Regulatory Reforms in India' at a seminar, organised by ICRIER, Delhi, September 25, 2015
- Delivered lecture on 'India's Growth Prospects Over the Next 5 Years' in the lecture series on 'Changing Asia', organised by Society for Policy Studies & India Habitat Centre, New Delhi, September 22, 2015
- Chaired the session on 'Accelerating Infrastructure Investments in G20 countries' at '7th Annual G20 Conference on Challenges to Strong, sustainable and Balanced Growth, Views from G20 Countries', organised by ICRIER, Delhi, September 14, 2015
- Panellist in the discussion on 'Resurgence in convergence- An Economic Outlook', Bengal Chamber of Commerce and Industry, AGM, Kolkata, September10, 2015

Publications

Books/Reports/Chapters in Books

- "Towards Economic Crisis (2012-14) and beyond," published by Academic Foundation, New Delhi, October, 2015

PROFESSORS

JAIMINI BHAGWATI

International Conferences/Presentations

- Discussant at regional conference on 'Economy of Tomorrow: Escaping the Transformation Trap', hosted by FES (Friedrich-Ebert-Stiftung), Bangkok, December 3-4, 2015
- Presentation on 'Economic Freedom as a Way to Happiness', QED Group, Bhutan Economic Freedom Network Asia (EFN Asia), Bhutan Chamber of Commerce & Industry and Friedrich Neumann Foundation for Freedom (FNF), Thimpu, Bhutan, November 23-24, 2015

National Conferences/Seminars/Workshops

- Chaired session on 'How much finance is too much? Lessons for emerging markets', organised by ICRIER and IMF, New Delhi, March 09, 2016
- Presentation at a seminar on 'Promoting Transnational Trade in Energy: SAARC, South East Asia and Central Asia', Independent Power Producers Association of India (IIPPAI), Goa, March 02, 2016
- Addressed Budget review session at PHD House, New Delhi, February 29, 2016
- Delivered lecture on 'Assam and Neighbouring States and Countries', lecture series under MEA, University of Tezpur, Assam, February 23, 2016
- Discussant on 'The return of geopolitics to Europe', Brookings India at India International Centre (IIC), New Delhi, January 14, 2016
- Delivered 'Dr. R. H. Patil Memorial Lecture' at '98th The Indian Economic Association (IEA) annual conference hosted by Center for Economic and Social Studies (CESS), Hyderabad, Andhra Pradesh, December 27, 2015

- Chaired, session on 'IMF's Fall 2015 World Economic Outlook-Adjusting to Lower Commodity Prices' at 'India-Japan Economic Relations: Bilateral Dimensions', hosted by ICRIER, New Delhi, November 20, 2015
- Chaired, session on 'China's Domestic Economic Policy-A Critical Understanding' at 'The China Symposia', IIC, New Delhi, November 17, 2015
- Chaired, session on 'India-Japan Investment Promotion Partnership: Financing India's growth' in the conference 'India-Japan Economic Relations: Bilateral Dimensions', ICRIER, New Delhi, November 17, 2015
- Discussant at Brookings India Seminar on 'China's Correction and India's Options', New Delhi, November 11, 2015
- Delivered lecture on 'Indian Diplomacy: Challenges and Prioritising since Independence', Tezpur University, Tezpur, Assam, November 03, 2015
- Discussant at T20 (think tanks of G20) meeting 'Turkey, India and the G20', Gateway House, Mumbai, October 19, 2015
- Chaired, session on 'Peace and Security Challenges: Exploring a Common Ground' in Pre-IAFS-III conference 'India-Africa in the 21st Century: Scale and Scope of Comprehensive Partnership', hosted by Indian Council of World Affairs (ICWA), New Delhi, October 16, 2015
- Participated in India Economic Convention 2015, hosted by IIC and India Foundation, New Delhi, September 17, 2015
- Chaired, session on 'Post-crisis International Financial Regulation: Where Have We Reached?' at 'Challenges to Strong, Sustainable and Balanced Growth: Views from G20 countries', New Delhi, September 15, 2015
- Delivered lecture on 'Reviving the India Growth Story' at Annual Infrastructure Group Conclave of SBI Capital Markets Limited (SBICAP), Aamby Valley, Maharashtra, August 8-9, 2015
- Chaired, session on 'Price and Income Elasticity of Indian Exports – the Role of Structural Rigidities', ICRIER, New Delhi, April 24, 2015
- Delivered lecture on 'India's Union Budget including MEA's Budget – Resources and Implications for Growth and Economic Diplomacy including Development Partnership Administration', Pondicherry University, April 2, 2015

ASHOK GULATI

Appointed

- Member, Task Force on Agriculture set up by the Prime Minister under NITI Aayog
- Member on RBI committee on Medium-term Path on Financial Inclusion, Reserve Bank of India (RBI)
- Member, Committee set up by Chief Minister of Madhya Pradesh to study Madhya Pradesh's Agriculture and suggests its future prospects
- Member of the Board, National Commodity and Derivatives Exchange (NCDEX)
- Member of the Board, Infrastructure Development Finance Company (IDFC) Foundation & IDFC Bank

International Conferences/Presentations

- Keynote Address on 'Assessment Methods and Metrics of PHL Measurement' at the 'First International Congress on Postharvest Loss Prevention', Rome, Italy, October 05, 2015
- Presentation on 'Augmenting Food Security through Trade Policy: Lessons from Indian Experience', ICAE, Milan, August 14, 2015
- Presentation on 'India: Food price spike of 2007-08 and its fall out', ICAE, Milan, August 11, 2015
- Presentation on 'Measuring Distortions to Agricultural Incentives', ICAE, Milan, August 10, 2015

- Presentation on 'Global challenges for food security: regional perspectives (focus on India)', organised by ICAE & EAAC with IARTC, Milan, August 8, 2015
- Presentation on 'India's Agri-Trade, Preliminary NRAs and Policy Landscape', OECD Group, Paris, June 22, 2015
- Presentation on 'India: Indicators of NRA', The World Bank Group, Paris, June 21, 2015
- Presentation on 'India: Preliminary NRA Estimates & Policy Implications', The World Bank Group, Paris, June 20, 2015

National Conferences/Seminars/Workshops

- Panelist in the Session on 'Policy Talk 1-Food-Water-Energy Nexus and Connectivity' at the conference 'Climate Resilient Development in Himalayan and Downstream Regions' by Ministry of Agriculture & FW, ICIMOD & IEG, India Habitat Centre, New Delhi, June 16, 2016
- Panelist in the Session on 'Agriculture and Food Processing' at the 24th AGM of American Chamber of Commerce in India (AMCHAM) India, New Delhi, April 22, 2016
- Policy Dialogue on 'Agricultural Marketing' with the Chief Minister of Maharashtra and the Leader of Opposition, February 04, 2016
- Address on 'Fixing Agri-Prices in a Globalising Economy' at India Agribusiness Leadership Programme, New Delhi, December 04, 2015
- Speaker on 'Unshackling India's Fertiliser Sector' at 'FAI Annual Seminar 2015', New Delhi, December 03, 2015
- Speaker on 'Technologies and Innovations in Agriculture: Pushing the Frontiers' at 'Global Agri Connect 2015', November, 02, 2015
- Presentation on 'MP Agriculture towards new Strides', under Krishi Manthan and a part of CM's task force on Agriculture, Government of Madhya Pradesh, October 31, 2015
- Presentation under policy dialogue series on 'Supporting Agriculture: Indian Experience', ICRIER, New Delhi, October 15, 2015
- Chief Guest Lecture on 'Honouring the past, seizing the present, Shaping the future' at 'Convocation of MBA Students', Dept of Business Economics, University of Delhi, South Campus, New Delhi, October 14, 2015
- Presentation on 'Key Issues in Indian Agriculture today', Venkateshwar College, University of Delhi, New Delhi, September 22, 2015
- Keynote address on 'Making Indian Agriculture sustainable, Productive and profitable' in a round table conference jointly organised by CII and ICRIER, New Delhi, September 18, 2015
- Chaired the session on 'Agrarian Distress and Coping Strategies' on the NABARD Foundation Day, New Delhi, July 12, 2015
- Talk on 'Limping Agriculture, Blinking Policies and Whining Farmers' in 'Saturday Discussion Group', India International Centre, New Delhi, July 11, 2015
- Presentation on 'Crop Insurance in India: Challenges and Options' to the Hon'ble Finance Minister, New Delhi, June 05, 2015
- Spoke at the training for IAS Officers on Issues of 'Indian Agri-food space' at Lal Bahadur Shastri National Academy of Administration (LBSNAA), Mussoorie, May 18, 2015
- Panelist in the Session on 'Agriculture and Food Processing: a vital link to tame food inflation' at the 'Food Conclave, 2015', New Delhi, May 12, 2015
- Chaired the session on 'Farmer, Agriculture' on Civil Services Day in Vigyan Bhawan, organised by the Department of Administrative Reforms & Public Grievances and Ministry of Personnel, Public Grievances & Pensions, New Delhi, May 9, 2015

Publications

Books/Reports/Chapters in Books

- "India's Food Security Policies in the wake of Global Food Price Volatility" co-authored with Shweta Saini, Chapter 14 in Kalkuhl M, Braun von Joachim and Torero M. (ed.) Food Price Volatility and its implications for Food Security and Policy. Springer Global, 2016
- "Ensuring Food Security: Challenges and Options" co-authored with Shweta Saini, Chapter 4 in Kathuria R. and Kaushal N. (ed.) Global Economic Cooperation: Views from G20 countries. Pp 69-74. Springer India. New Delhi, 2016
- "The National Food Security Act: Challenges and Options", co-authored with Shweta Saini, Chapter 25, Uma Kapila (ed) Indian Economy Since Independence, Academic Foundation, New Delhi, 2015
- "Food Inflation in India: Diagnosis and Remedies", co-authored with Shweta Saini, Chapter 26, Uma Kapila (ed) Indian Economy Since Independence, Academic Foundation, New Delhi.
- "The National Food Security Act (NFSA) 2013 and Implications for Buffer Stocking Norms", co-authored with Shweta Saini, Chapter 4, Volume 204, Raj Kapila and Uma Kapila (ed) Economic Developments in India, Academic Foundation, New Delhi, 2015
- "Leakages from Public Distribution System (PDS) and the Way Forward", co-authored with Shweta Saini, Chapter 3, Volume 203, Raj Kapila and Uma Kapila (ed) Economic Developments in India, Academic Foundation, New Delhi, 2015
- "Do not Turn Leaky PDS into FSA", co-authored with Shweta Saini, Chapter 2, Volume 202, Raj Kapila and Uma Kapila (ed) Economic Developments in India, Academic Foundation, New Delhi, 2015
- "The Political Economy of Food Price Policy in India", co-authored with Kavery Ganguly, Chapter 16, Part VI in Pinstrup-Andersen, Per (ed.), Food Price Policy in an Era of Market Instability: A Political Economy Analysis, Oxford University Press, 2015

Working Papers/Policy Series

- "Rationalising Fertiliser Subsidy in India: Key Issues and Policy Options" co-authored with Pritha Banerjee, ICRIER Working Paper, No. 307, August, 2015.
- India's Political Economy Responses to Global Food Price Shock of 2007-08: Learning Some Lessons, co-authored with Shweta Saini, WIDER Working Paper 2015/120. Helsinki, Finland: UNU-WIDER, 2015

ANWARUL HODA

International Conferences/Presentations

- Presentation on 'The Implementation of the ASEAN Economic Community and its Impact on Asia- Pacific Supply Chains, and India-Taiwan Economic Relations' in a seminar organised by Taipei Economic and Cultural Center in India, Ministry of Economic Affairs, Government of Taiwan, Taiwan, January 29, 2016
- Presentation on 'Non-Agricultural Market Access Negotiations and Major Developing Economies' at a Dialogue event on 'Restoring Multilateral Trade Cooperation' organised by China Institute for WTO Studies, University of International Business and Economics Beijing and The South African Institute of International Affairs (SAIIA), Beijing, April 13, 2015

National Conferences/Seminars/Workshops

- Panellist in the discussion on 'Need for Services Trade Data Collection: Present Status and a Roadmap for Future' at the Release of the Report '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 (MVT) organised by ICRIER, June 7, 2016
- Chaired the talk by Australian High Commissioner to India, HE Harinder Sidhu on the topic 'Pathways to trade liberalisation' organised by ICRIER, New Delhi, June 1, 2016
- Gave talk on 'Is Government Doing Enough to Support Agriculture?' at Ranchor Prasad Memorial Lecture 2016, Patna, Bihar, April 25, 2016
- Chaired the jury meeting for the 'Supply Chain and Logistics Award' organised by Indian Chamber of Commerce (ICC), New Delhi, March 10, 2016
- Chaired the brainstorming session on 'Drug Regulatory Reforms in India' organised by ICRIER, New Delhi, March 1, 2016
- Chaired the session 'WTO Regime on Trade in Natural Resources and Export Restriction' in the Workshop on 'Potential Impacts of export Restrictions on Natural Resources' organised by TERI, New Delhi, January 20, 2016
- Gave talk on 'Issues in Fertiliser Policy' at the Lecture Series on 'Governance issues in Agriculture' organised by IC Centre for Governance, New Delhi, January 15, 2016
- Chaired the session 'What Explains the Job Creating Potential of Industrialisation in the Developing World' in the 'International Conference on Jobs for Development-Creating Jobs in South Asia' co-organised by World Bank Group and ICRIER, New Delhi, December 3, 2015
- Chaired the round table discussion on 'The Political Economy of Australia and Indian Policy Reform' with Mr. Terence Moran, former Secretary of the Department of the Prime Minister and Cabinet, Australia, New Delhi, November 26, 2015
- Chaired the discussion on 'Supporting Agriculture: Indian and International Experience', ICRIER, New Delhi, October 15, 2015
- Chaired the session 'Global resource trade and domestic policies and regulation- impact and influence' at a conference co-organised by TERI & KAS on 'Accessing resources from global market: Geo-political challenges and strategies', New Delhi, September 17, 2015
- Chaired the session 'Addressing the financing challenging of SMEs and enhancing their participation in Global Value Chains (GVCs)' at ICRIER's 7th Annual International G20 Conference, New Delhi, September 15, 2015
- Chaired the session 'Low Carbon Strategies for India in Agriculture and Forestry' in ICRIER-FICCI conference on 'Low Carbon Growth and Sustainable Finance', New Delhi, August 3, 2015

Publications

Working Papers/Policy Series

- "Labour Regulations and Growth of Manufacturing and Employment in India: Balancing Protection and Flexibility" coauthor with Durgesh Kumar Rai, ICRIER Working Paper, No. 298, May 2015

ARPITA MUKHERJEE

Appointed

- Member of the Department of Commerce, Ministry of Commerce & Industry, Government of India, Sub-group on Creative and Entertainment Services

- Member of the Committee to study Delegation of Powers of the Government/Board of Approval (BoA) for SEZ to Unit Approval Committee (UAC)
- Advisor to the Services Exports Promotion Council, Ministry of Commerce and Industry, Government of India
- 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/Presentations

- Presentation on 'The Future of Retail Market in India' at the event 'Doing Business in India' organised by UK Trade and Investment (UKTI) and UK India Business Council (UKIBC), London, February 21-28, 2016
- Keynote speaker at the webinar on 'New opportunities in the Indian Agritech and the Food Supply Chain sector' organised by UK India Business Council (UKIBC), London, March 29, 2016
- Speaker at the webinar on 'Food and Drink Policy in India and what changes have taken place since the NDA government came into power?' organised by UKIBC, London, November 19, 2015

National Conferences/Seminars/Workshops

- Presented the key findings of the report on 'Institutional Framework for Collection of Statistics on Trade in Services: Four Pilot Surveys on Trade in Audiovisual, Logistics, Professional and Telecommunication Services' at the event-Release of the Report on '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 (MVT)-jointly organised by ICRIER and Directorate General of Commercial Intelligence and Statistics (DGCI&S), Kolkata, under the Ministry of Commerce, Government of India, New Delhi, June 7, 2016
- Chair 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' organised by Dun & Bradstreet Tangram Research Advisory Services, New Delhi, April 27, 2016
- Made presentation on 'Global Services Value Chain and Trade Agreement: The Case of India' at the National Seminar on 'Global Trade in Services: A WTO Perspective' organised by The Department of Commerce, Shaheed Bhagat Singh Evening College, New Delhi, March 31, 2016
- Made presentation on the Report on 'India's Phytonutrient Report: A Snapshot of Fruits and Vegetables Consumption, Availability and Implications for Phytonutrient Intake' at the Food Safety and Standards Authority of India (FSSAI), New Delhi, March 10, 2016
- Gave training on 'Services Value Chain & Manufacturing Linkages' to government officials at Indian Institute of Foreign Trade (IIFT), New Delhi, February 10, 2016
- Made presentation on the key findings of the Report titled 'India's Phytonutrient Report: A Snapshot of Fruits and Vegetables Consumption, Availability and Implications for Phytonutrient Intake' at the event on the Release of the Report – 'India's Phytonutrient Report: A Snapshot of Fruits and Vegetables Consumption, Availability and Implications for Phytonutrient Intake' organised by ICRIER, New Delhi, February 4, 2016
- Made presentation on 'Diversifying India's Service exports through SEZs' at the Department of Commerce, Ministry of Commerce & Industry, Government of India, New Delhi, January 5, 2016

- Panelist at the session on 'Towards an EU-India Partnership on Urbanisation' at the Seminar on 'Infrastructure and Urbanisation in India-Opportunities for the EU' jointly organised by ICRIER – Global Relations Forum (GRF – FES), New Delhi, November 4, 2015
- Presentation on the key findings of the book entitled 'Trade in Services and Trade Agreements: Perspectives from India and the European Union' co-edited with Rupa Chanda and Tanu M. Goyal, and published by Sage Publications, European Commission, New Delhi, November 5, 2015
- Presentation on the key findings of the book entitled 'Trade in Services and Trade Agreements: Perspectives from India and the European Union' and Panelist in a Panel Discussion on "Efficiency in Food Logistics-Where do We Stand and Where do We Go?" in a seminar on "Enhancing India's Competitiveness through Logistics and Supply Chain Efficiency" organised by D&B Tangram, Mumbai, October 28, 2015
- Panelists in the session on 'ASEAN-India Strategic Partnership: Progress and Development Dimensions' at the 'Roundtable on ASEAN-India: Integration and Development' & Release of AIC-RIS Report 'ASEAN-India Development and Cooperation Report 2015', organised by Research and Information System for Developing Countries (RIS), New Delhi, October 27, 2015
- Presentation on 'Export Potential of Professional Services- Architecture and Accounting: Opportunity and Challenges' at the workshop on 'Exports of Hotel and Travel Services and Professional Services from India: Potential & Challenges' organised by Services Export Promotion Council (SEPC), Department of Commerce, Ministry of Commerce & Industry, Government of India, Jaipur, September 11, 2015
- Presentation on 'Barriers in Export of Audio-Visual Services – Domestic & External' at the workshop 'Exports of Education & Entertainment Services from India: Potential & Challenges' organised by Services Export Promotion Council (SEPC), Department of Commerce, Ministry of Commerce & Industry, Government of India, Chennai, September 4, 2015
- Presentation on the Report titled 'Evaluation of the Impact of the Scheme for Mega Food Park of the Ministry of Food Processing Industries' before the Hon'ble Minister, Food Processing Industry, Ministry of Food Processing Industry, Government of India, New Delhi, July 17, 2015
- Speaker at the 'Make in India: Opportunities for Domestic & International Logistics Markets' at event 'National Summit on Logistics and Infrastructure' organised by Asia Aviation Association and Infralog, New Delhi, June 30, 2015
- Presentation on the report titled 'Revisiting Special Economic Zones (SEZ): A Review and Evaluation of India's SEZ Policy' at the Department of Commerce, Ministry of Commerce & Industry (MoC&I), Government of India, May 5, 2015
- Speaker at the webinar 'Opportunities in Food Logistics' and Supply Chain's in India' organised by UK Trade and Investment (UKTI), New Delhi, August 19, 2015

Publications

Books/Reports/Chapters in Books

- "Special Economic Zones in India: Status, Issues and Potential" co-authored with Parthapratim Pal, Saubhik Deb, Subhobrota Ray and Tanu M. Goyal, Springer India, July 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 Rajkumar 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

- "India's Phytonutrient Report: A Snapshot of Fruits and Vegetables Consumption, Availability and Implications for Phytonutrient Intake" co-authored with Souvik Dutta and Tanu M. Goyal, Academic Foundation, February 2016.
- "Trade in Services and Trade Agreements: Perspectives from India and the European Union" co-edited with Rupa Chanda and Tanu M. Goyal, Sage Publications, October 2015
- "Evaluation of the Impact of the Scheme for Mega Food Park of the Ministry of Food Processing Industries" submitted to Ministry of Food Processing Industries, Government of India, July 2015 accessible at http://www.mofpi.nic.in/#
- "Facilitating India-EU Mobility of IT Professionals" with Divya Satija in "India – EU People Mobility: Historical, Economics and Regulatory Dimensions" Ed. Rupa Chanda and Pralok Gupta, Cambridge University Press, June 2015
- "Movement of Indian Architects and Engineers: Prospects and Challenges in the EU" with Tanu M. Goyal in "India – EU People Mobility: Historical, Economics and Regulatory Dimensions" Ed. Rupa Chanda and Pralok Gupta, Cambridge University Press, June 2015

Papers in Refereed Journals

- "Services Sector in India: Trends, Issues, and the Way Forward", in Eurasian Geography and Economics, available at Taylor & Francis Online, February 2016, pgs 635-655.
- "Logistics Services in the WTO and Bilateral Agreements: The Case of India" with Ramneet Goswami in 'The Asian Journal – Journal of Transport and Infrastructure', Volume 1, Number 1, Asian Institute of Transport Development, January 2016, pgs 20-38.

Working Papers/Policy Series

- Imposition of MAT on SEZs: Concerns and the Way Forward, co-authored with Bhavook Bhardwaj, ICRIER Working Paper, No. 314, February 2016
- Diversifying India's Services Exports through SEZs: Status, Issues and the Way Forward, co-authored with Saubhik Deb, Tanu M. Goyal, Bhavook Bhardwaj and Shreya Deora, ICRIER Working Paper, No. 312, December 2015
- Integrating South and Southeast Asia through Services Value Chain: The Case of India and Thailand, co-authored with Tanu M. Goyal, ICRIER Working Paper, No. 301, June 2015

Others

- "ASEAN–India Development and Cooperation Report 2015" of ASEAN-India Centre, Research and Information System for Developing Countries published by Routledge, New Delhi, review published in South Asia Economic Journal (SAEJ) 17(1) 1-4, Sage Publications, 2015.
- "Globalisation of Legal Services and Regulatory Reforms: Perspectives and Dynamics from India" by Rupa Chanda and Pralok Gupta Book Reviews in South Asia Economic Journal, Volume 16, Issue 2, p1-4, Sage Publications, New Delhi, July 2015.

NISHA TANEJA

International Conferences/Presentations

- Presentation on 'Current situation of Indian FTA/EPA and prospect' in the session 'Trade and Regional Economic Partnership' at The 6th PRI-ICRIER Workshop 'Toward a Solid Economic Partnership between Japan and India: Dealing with Challenges and Opportunities', Tokyo, March 24, 2016

- Presentation on 'Informal Trade and SAARC Integration' in a session on 'Role of Customs in Trade Facilitation for moving towards South Asian Economic Union (SAEU)' at a SAARC-ADB Second Special Meeting on Regional Economic Integration Study (Phase II), Male, Maldives, January 27-28, 2016
- Discussant in the session on 'Reducing Non-Tariff Barriers in Trade: case of South Asian Agriculture Trade' at a Seminar on 'Regional Cooperation on trade, climate change and food security in South Asia: Reflections and way forward', Kathmandu, December 27-28, 2015
- Presentation on 'Intra-SAARC Trade Cooperation in South Asia' in a conference on 'Regional Cooperation for Sustainable Development in South Asia', Islamabad, Pakistan, December 7-8, 2015 also held meetings with SDPI on the ongoing project on Trade in Health Services between India and Pakistan
- Presentation on 'Investment linkages between India and Myanmar' at a workshop on 'FDI and Trade between India and Myanmar', Center for Economy, Environment and Society (CEES), Myanmar, November 17-21, 2015
- Presentation on 'India-Nepal Transit Agreement', Chaired by Secretary, Ministry of Commerce, Kathmandu, Nepal, July 10, 2015
- Presentation on 'India-Nepal Transit Agreement' at Birgunj Chambers of Commerce, Kathmandu, April 20, 2015

National Conferences/Seminars/Workshops

- Chaired the session on 'Trends and Patterns of Trade between India, Bangladesh and Myanmar' at the conference on 'Sub-regional Cooperation between India Bangladesh and Myanmar' organised by ICRIER, March 30, 2016
- Presentation on 'India's Transaction Cost Analysis of India's trade with Bangladesh and Myanmar' at the conference on 'Sub-regional Cooperation between India Bangladesh and Myanmar', organised by ICRIER, March 30, 2016
- Presentation on 'Sub-regional Cooperation between India Bangladesh and Myanmar' at a conference organised by ICRIER, March 30, 2016
- Presentation on 'Challenges to upgrade India Korea CEPA at a seminar on Upgrading Korea-Indo CEPA' organised by Embassy of the Republic of Korea, New Delhi, March 16, 2016
- Co-Chaired a session on 'South-South Cooperation, Trade and Investment Dynamic' at a conference on 'South-South Cooperation', organised by Research and Information System for Developing Countries (RIS), New Delhi, March 11, 2016
- Chaired the session on 'Trade in Health Services in South Asia: Opportunities and Challenges', organised by ICRIER and ASSOCHAM, February 19, 2016
- Chaired a session on 'Connectivity Imperatives in NER & Potential for India-Japan Cooperation' at a workshop on 'India-Japan Partnership towards Meeting the Challenge of Infrastructure Development in India's Northeast', Kohima, January 20, 2016
- Presentation on 'India-Pakistan Trade' in the session 'International Trade' at '17th Annual Neemrana Conference', organised by ICRIER, Neemrana, December 18-20, 2015
- Chaired a session on 'Cooperation for full Potential of India-Korea CEPA and the New Asian Economic Initiatives' at 14th India-Korea Dialogue on 'India-Korea Partnership: Realizing the Potential', New Delhi, November 5, 2015
- Presentation on 'Indo-Myanmar Border Trade' at Moreh Border Trade Chamber of Commerce, Moreh, November 3, 2015
- Presentation on 'India-Myanmar Trade at Stakeholder's Consultation', organised by Chamber of Commerce, Imphal, November 2, 2015
- Presentation on 'Investment Provisions in the model BIT for India and the US and its implications for the TPP and TTIP and RCEP' at a conference on G20, organised by Gateway House, Mumbai, October 19, 2015

- Presentation on 'India-Bangladesh Trade and Investment Cooperation' at Tripura Chamber of Commerce, July 13, 2015
- Panelist in the session on 'New Challenges before SAARC' at the launch of RIS South Asia Development Cooperation Report 2015, New Delhi, June 25, 2015
- Panelist in the second session on 'Designing Intense Connectivity Network through Infrastructure Development-Reconnecting the Ancient Production-trade-value-chains' at the 'India-Bangladesh Friendship Dialogue: Sixth Round', organised by India Foundation in association with Bangladesh High Commission, New Delhi, May 23, 2015

Publications

Books/Reports/Chapters in Books

- "India-Pakistan Trade: Strengthening Economic Relations", co edited with Sanjib Pohit, Springer, 2015

Papers in Refereed Journals

- "Nepal's Transit through India", with Isha Dayal Economic and Political Weekly, Vol. 50, Issue No. 45, November 2015
- "India's Trade Deficit with China: How to Bridge the Gap?, with Deepika Wadhwa, Economic and Political Weekly, Vol. 50, Issue No.28, July 2015

Working Papers/Policy Series

- "India's Informal Trade with Pakistan," co-authored with Samridhi Bimal, ICRIER Working Paper, No. 327, July 2016
- "India – Pakistan Trade: Textiles and Clothing," co-authored with Saon Ray and Devyani Pande, ICRIER Working Paper, No. 326, July 2016
- "Establishing India's National Trade Facilitation Committee- A Proposal," co-authored with Shravani Prakash, ICRIER Working Paper, No. 317, March 2016
- "An Analysis of Nepal's Transit through India," co-authored with Isha Dayal, ICRIER Working Paper, No. 316, March 2016

SENIOR FELLOWS/CONSULTANTS

SAON RAY

National Conferences/Seminars/Workshops

- Discussant at the workshop on 'Resource Use and Efficiency Potential in Indian Automobile Industry', organised by TERI and GIZ, New Delhi, May 30, 2016
- Discussant at 'BP Energy Outlook 2035', organised by ICRIER and BP, New Delhi, March 9, 2016
- Presentation on 'Decarbonisation of Indian Railways – demand side' at stakeholder workshop organised by ICRIER and Climate Policy Initiative, New Delhi, February 23, 2016
- Discussant at Seminar on 'Inequality – Trends worldwide and in India,' organised by ICRIER and UNU-Wider, January 22, 2016
- Presented a paper on 'Upgrading in the Indian garment industry – a study of three clusters' at 11th Annual Conference on 'Economic Growth and Development', Indian Statistical Institute (ISI), Delhi, December 17-19, 2015

- Presentation on 'Upgrading in the Indian garment industry – a study of three clusters' at 10th Annual Conference of 'Knowledge Forum on Technology, Growth and Sustainability', organised by Forum for Global Knowledge Sharing, Bengaluru, November 27-28, 2015
- Panellist at the session on 'Strategic Framework for Cities: Linking Economic Performance and Climate Performance', at a conference on 'Strategies for Sustainable Development: Climate Action, Financial Reform', organised by ICRIER and FICCI, New Delhi, August 3, 2015
- Discussant at the session on 'India's participation in GVCs,' at International Conference on 'A Stocktaking of India's Trade Policy: Past, Present and Future,' organised by the Jindal Global Law School, Jindal Global University and World Trade Institute, New Delhi, May 21-22, 2015
- Presentation on 'Air quality and industry' at workshop organised for Low Carbon Pathways for growth in India, New Delhi, April 10, 2015

Publications

Books/Reports/Chapters in Books

- "A Framework for Understanding Adaptation by Manufacturing Industries," In Soumyananda Dinda (ed.) Handbook of Research on Climate Change Impact on Health and Environmental Sustainability, IGI Global book series, ISBN 978-1-46666-8814-8 (hardcover). 978-1-46666-8815-5 (e-book)

Working Papers/Policy Series

- "Innovation (and upgrading) in the automobile industry; the case of India," co-authored with Smita Miglani, ICRIER Working Paper, No. 320, May, 2016
- "Upgrading in the Indian Garment Industry: A study of Three Cluster," co-authored with P. Mukherjee, and M. Mehra, MADB South Asia Working Paper Series, No. 43, April, 2016
- "Reimagining India's Urban Future: A Framework for Securing High Growth, Low Carbon, Climate Resilient Urban Development in India", co-authored with Meenu Tewari (et al), ICRIER Working Paper, No. 306, August, 2015

Papers in Refereed Journals

- "Weather conditions and Air Pollution: Impact of Odd-Even Policy in Delhi," with N Kumar, Economic and Political Weekly, Vol. 51, Issue No. 10, March 2016

Others

- Indo-Korea trade pact: Harnessing the potential in services, Ideas for India, May 2016
- Humanitarianism and resilience: Engaging the private sector. ACCCRN, May 2016.(co-authored with Nisha Taneja and Neetika Kaushal)
- Impact of American Investment in India. Ideas for India. May 2015.(co-authored with Smita Miglani)

RAJIVA RANJAN SINGH

Publications

Books/Reports/Chapters in Books

- Singh, Rajiva Ranjan (ed.) "Challenges of Indian Tax Administration", New Delhi, LexisNexis, 2016

Working Papers/Policy Series

- "Improving Taxation Environment: Attracting Foreign Direct Investment," ICRIER Working Paper, No. 325, ICRIER, June 2016

FELLOWS

PANKAJ VASHISHT

International Conferences/Presentations

- Presentation on 'Technology and Labour Demand: Insights from India' at International conference on 'Urbanisation, Structural Change and Employment', HKUST Business School, The Hong Kong University of Science and Technology, Hong Kong, December 11-13, 2015

National Conferences/Seminars/Workshops

- Presentation on 'Trade, Technology and Manufacturing Jobs', at '17th Neemrana conference', jointly organised by NBER, ICRIER and NCAER, Neemrana, Fort Palace, Rajasthan, December 18-20, 2015
- Presentation on 'Trade and Job: A Reality Check for make in India', at International Conference on 'Trade and Employment Challenges: Insights from South Asia', Jointly organised by ILO Research Department and Institute for Human Development, New Delhi, December 16-17, 2015
- Presentation on 'Technology and Labour Demand: Insights from Indian Manufacturing', at International Conference on Jobs for Development, Jointly organised by World Bank and ICRIER, New Delhi, December 3-4, 2015

Publications

Books/Reports/Chapters in Books

- Pandit B. L. and P. Vashisht (2015): 'Monetary Policy and Credit Demand During Crisis' in Pandit B. L. The Global Financial Crisis and Indian Economy, Springer Publication

Working Papers/Policy Series

- "Creating Manufacturing Jobs in India: Has openness to Trade Really Helped?" ICRIER Working Paper, No. 303, June 2015

Papers in Refereed Journals

- "Creating Manufacturing Jobs in India: Has Openness to Trade Really Helped" Journal of Asian Economics, Vol. 42, pp 53-64, 2016

RADHICKA KAPOOR

International Conferences/Presentations

- Presentation on 'Labour Regulations in India: Much Ado About Something?' in International conference on 'Jobs for Development', Intelligent Business Solutions (IBS), Poland, October 27, 2015
- Presentation on 'Technological Change and Employment' in ADB's 3rd Asian Think Tank Development Forum, Malaysia, September 8, 2015
- Presentation on 'Technology, Jobs and Inequality-Evidence from Indian Manufacturing Sector' in 10th IZA/World Bank Conference on 'Employment and Development', June 04, 2015
- Discussant in session on 'One Belt One Road Strategy' in Shanghai Forum, May 23, 2015

National Conferences/Seminars/Workshops

- Speaker in session on 'Encouraging and Influencing Young Minds to Dream' in the TalentNomics-ICRIER Conference on Empowering Women for Sustainable Development, March 14, 2016
- Presentation on 'The Contractualisation of India's Workforce' at '17th Neemrana conference', jointly organised by NBER, ICRIER and NCAER, Neemrana, Fort Palace, Rajasthan, December 18, 2015
- Presentation on 'Labour Regulations in India: Much Ado about Something?' in International conference on 'Jobs for Development', ICRIER, Delhi, December 3, 2015

Publications

Working Papers/Policy Series

- "Technology, Jobs and Inequality: Evidence from India's Manufacturing Sector", ICRIER Working Paper, No. 313, February 2016

Others

- The Labour Reforms Debate: Broadening horizons, Ideas for India, July 2015 (refereed)

RESEARCH ASSOCIATES/CONSULTANTS

SAMRIDHI BIMAL

National Conferences/Seminars/Workshops

- Presentation on 'India's outward Foreign Direct Investment: Perspectives for Myanmar and Bangladesh' at the conference on 'Sub-Regional Cooperation between India, Myanmar and Bangladesh', by ICRIER, New Delhi, March 30, 2016
- Presentation on 'Trade in Health Services between India and Pakistan' at Stakeholders' Consultation on 'Trade in Health Services in South Asia: Opportunities and Challenges', New Delhi, February 19, 2016

Publications

Papers in Refereed Journals

- "Nepal's Transit through India", Economic and Political Weekly, Vol. 50, Issue No. 45, 7 November 2015 (with Nisha Taneja and Isha Dayal)
- "India's Trade Deficit with China: How to Bridge the Gap?" Economic and Political Weekly, Vol. 50, Issue No. 28, July 2015 (with Nisha Taneja and Deepika Wadhwa)

Working Papers/Policy Series

- "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 Nisha Taneja and Isha Dayal ICRIER Working Paper, No. 316, March 2016

ANANDITA BAGCHI

National Conferences/Seminars/Workshops

- Presentation on 'Taxpayer Information Services' at the release of the book 'Challenges of Indian Tax Administration', organised by ICRIER, New Delhi, June 2016

- Presentation on 'Human Rights and Asian Values – A Forced Dichotomy' at the 'Asia-Pacific: 70 Years after the War' conference, organised by the East Asia Research Programme, ICRIER, New Delhi, November 2015

Publications

Books/Reports/Chapters in Books

- "Taxpayer Information Services", co-authored with Kalyan Chand, chapter 1 in Singh, Rajiva Ranjan (ed.). Challenges of Indian Tax Administration. New Delhi, LexisNexis, 2016
- "Human Rights and 'Asian Values' – A Forced Dichotomy", in Pulipaka, Sanjay and Sircar, Saranya (eds.), East Asian Security – Changing Contours, A Report of the East Asia Research Programme, ICRIER, New Delhi, 2016.

TANU M. GOYAL

National Conferences/Seminars/Workshops

- Presentation on 'Enhancing India's Competitiveness through Logistics and Supply Chain Efficiency: The Role of a Web Portal' at an event organised by Dun & Bradstreet Tangram Advisory Services Private Limited in Mumbai, October 28, 2015
- Presented a paper 'India-Morocco Trade and Investments' at an international round table conference on 'India-Morocco: Imperatives for Cooperation' organised jointly by Society for Policy Studies and the Embassy of the Kingdom of Morocco at the Claridges, New Delhi, April 10, 2015

Publications

Books/Reports/Chapters in Books

- India's Phytonutrient Report: A Snapshot of Fruits and Vegetables Consumption, Availability and Implications for Phytonutrient Intake" with Arpita Mukherjee and Souvik Dutta, Academic Foundation, February 2016
- "Trade in Services and Trade Agreements: Perspectives from India and the European Union" co-edited with Arpita Mukherjee and Rupa Chanda, Sage Publication India Private Limited, November 2015
- "Movement of Indian Architects and Engineers: Prospects and Challenges in the EU" with Arpita Mukherjee in Rupa Chanda and Pralok Gupta (Ed.), India-EU People Mobility: Historical, Economic and Regulatory Dimension, Cambridge University Press, Delhi, 2015
- "Evaluation of the Impact of the Scheme for Mega Food Park of the Ministry of Food Processing Industries" for Ministry of Food Processing Industries, Government of India, July, 2015

Working Papers/Policy Series

- "Diversifying India's Services Exports through SEZs: Status, Issues and the Way Forward", co-authored with Arpita Mukherjee, Saubhik Deb, Shreya Deora and Bhavook Bhardwaj, ICRIER Working Paper, No. 312, December 2015
- "Integrating South and Southeast Asia through Services Value Chain: The Case of India and Thailand" co-authored with Arpita Mukherjee, ICRIER Working Paper, No. 301, June 2015

Others

- "India-Africa Trade and Investment Relationship: From Goods to Services", with Rajat Kathuria in Hitachi Souken, Hitachi Research Institute, February 2016
- "Creating a Services Value Chain between India and Thailand", with Arpita Mukherjee, Column in Ideas for India accessible at http://www.ideasforindia.in/article.aspx?article_id=1475, July 8, 2015

SMITA MIGLANI

Publications

Books/Reports/Chapters in Books

- 'Expanding Collaboration in Logistics: The BTIA and beyond' in Trade in Services and Trade Agreements: Perspectives from India and the European Union, edited by Arpita Mukherjee, Rupa Chanda and Tanu M. Goyal, Sage Publication, 2015
- 'Trade and Collaboration Energy Services' in Trade in Services and Trade Agreements: Perspectives from India and the European Union, edited by Arpita Mukherjee, Rupa Chanda and Tanu M. Goyal, Sage Publication, 2015

Working Papers/Policy Series

- "Innovation (and upgrading) in the automobile industry: the case of India", co-authored with Saon Ray, ICRIER Working Paper, No. 320, May 2016

Papers in Refereed Journals

- 'Opportunities and constraints for investment in logistics sector in India', Asian Journal, pp. 46-60, March 2016

DURGESH KUMAR RAI

Publications

Working Papers/Policy Series

- "Trends and Economic Dynamics of Guar in India", ICRIER Working Paper, No. 311, October 2015
- "Labour Regulations and Growth of Manufacturing and Employment in India: Balancing Protection and Flexibility", co-authored with Anwarul Hoda, ICRIER Working Paper, No. 298, May 2015

VASUDHA WATTAL

National Conferences/Seminars/Workshops

- Presentation on 'Harmonisation of Drug Registration Procedures: An Impact Assessment for India' at the 'Brainstorming Session on Drug Regulatory Reforms in India', New Delhi, March 1, 2016

Publications

Working Papers/Policy Series

- "Drug Quality and Safety Issues in India," co-authored with Maulik Chokshi and Rahul Mongia, ICRIER Working Paper, No. 310, September 2015

Papers in Refereed Journals

- "The Essential Cancer Drugs", Economic & Political Weekly, Vol. 50, No. 49, December 05, 2015

AUDITED ANNUAL ACCOUNTS

Audited Annual Accounts

V SAHAI TRIPATHI & CO
CHARTERED ACCOUNTANTS

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E-Mail : vst@sahaitripathi.com

AUDITORS' REPORT

The Members,
Indian Council for Research on
International Economic Relations,
Core 6A, 4th 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, 2016 and Balance Sheet as at March 31, 2016 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, 2016; 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, 2016

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

(Rajan Sachdeva)
Partner
M. No: 093081

New Delhi
Dated: August 2, 2016

8-E, Hansalaya, 15 Barakhamba Road,Connaught Place, New Delhi - 110001
Tel. : +91-11-23319596, 23352449, 23324045, Fax : +91-11-23702808
Website : www.sahaitripathi.com

Indian Council for Research on International Economic Relations
Balance Sheet as at March 31, 2016

Particulars	Current Year (in Rs.)	Previous Year (in Rs.)
SOURCES OF FUND		
Endowment Fund	**304,971,469**	**304,451,469**
Opening Balance	304,451,469	273,947,826
Life Membership fee received during the year	20,000	-
Donations received during the year	-	30,000,000
Transferred from General Fund to RBI - Chair EF	500,000	500,000
Transferred from GOI Securities	-	3,643
Building Fund	**100,000,000**	**100,000,000**
Opening Balance	100,000,000	80,000,000
Received during the year	-	20,000,000
Interest on Investment of Building Fund during the year	2,241,325	4,146,534
Transfer towards rent & maintenance paid to IHC	(2,241,325)	(4,146,534)
Fixed Assets Fund-Net Block	**72,480**	**99,781**
Fixed Assets Fund-Gross Block	4,000,000	4,000,000
(Depreciation Reserve)	(3,927,520)	(3,900,219)
General Fund	**48,867,661**	**25,816,924**
Opening Balance	25,816,924	23,160,839
Transferred From Income & Expenditure Account	23,050,737	2,656,085
Investment Equalisation Reserve	**342,862**	**439,464**
Current Liabilities & Provisions(As per Schedule 3)	**24,927,034**	**28,775,757**
Current Liabilities	7,668,918	13,430,396
Provisions	6,016,159	3,563,223
Grant received in advance	11,241,957	11,782,138
TOTAL	**479,181,506**	**459,583,395**
APPLICATIONS OF FUND		
Fixed Assets (As per Schedule 1)	**110,302,752**	**64,877,966**
Gross Block	152,865,516	105,362,072
Depreciation Reserve	(42,562,764)	(40,484,106)
Investments	**331,730,000**	**309,830,000**
Long-term Investment	331,730,000	309,830,000
Investment Equalisation Fund	-	-
Current Assets, Loans & Advances(As per Schedule 2)	**37,148,754**	**84,875,429**
Cash and Bank	17,222,036	48,037,672
Loans, Advances & Other Recoverables	10,785,899	13,998,194
Grant Receivable	6,033,466	19,842,534
Prepaid Expenses	3,107,354	2,997,028
TOTAL	**479,181,506**	**459,583,395**

Significant Accounting Policies and Notes (Schedule 4)
In terms of our separate report of even date
FOR V SAHAI TRIPATHI & CO
CHARTERED ACCOUNTANTS

Rajan Sachdeva
(Partner)
M. No.093081

(Secretary)

Rajat Kathuria
(Director & CE)

Isher Judge Ahluwalia
(Chairperson)

V SAHAI TRIPATHI & Co. New Delhi Chartered Accountants

Indian Council for Research on International Economic Relations
Income & Expenditure account for the year ended March 31, 2016

Particulars	Current Year (in Rs)	Previous Year (in Rs)
A. INCOME		
Grants	143,109,578	113,779,015
Received during the year	156,378,465	95,296,645
Receivable during the year	6,033,466	19,842,534
Received during the year for previous year	(19,842,534)	(2,993,846)
Grant return during the year	-	-
Brought Forward from Previous Year	11,782,138	13,415,820
Carried Forward for next year	(11,241,957)	(11,782,138)
Income/Profit on Investment	24,787,707	25,148,287
Interest on Investments for the year	27,029,032	29,294,821
Transfer to Building Fund	(2,241,325)	(4,146,534)
Transfer from Building Fund for Extra office space	2,241,325	4,146,534
Interest on Savings Bank Account	2,163,283	1,424,206
Exchange Rate Fluctuation	598,130	506,180
Other Income	2,273,122	1,793,263
TOTAL (A)	175,173,145	146,797,486
B. EXPENDITURE		
Research Expenses:-	119,438,174	112,610,420
Salaries & Allowances	52,209,534	42,309,706
Consultancy Charges	25,364,222	28,620,676
Travel Expenses	14,391,183	15,634,792
Workshops Seminars & Meetings	19,448,326	15,932,438
Publication Expenses	1,689,549	2,448,286
Communication Expenses	1,515,897	1,820,168
Library Expenses	4,819,463	5,844,354
Administrative Expenses:-	21,663,359	20,058,176
Salaries & Allowances	18,215,676	15,772,804
Professional Services	352,861	269,629
Office Expenses	3,083,322	3,916,140
Fees and Subscriptions	11,500	99,603
Bad Debts Written Off	-	-
Overheads:-	8,469,519	8,165,631
Rent/Utility & Electricity Charges	7,192,855	7,022,403
Repair and Maintenance	955,766	817,767
Property Tax	320,898	325,461
Exchange Rate Fluctuation	-	-
TOTAL(B)	149,571,052	140,834,228
Surplus/(Deficit) before Depreciation (A-B)	25,602,094	5,963,258
Depreciation	2,078,658	2,632,051
Transfer of Depreciation to Fixed Assets Fund Account	(27,301)	(53,884)
Transferred to RBI Chair Endowment Fund	500,000	500,000
Loss on Sale of Fixed Assets	-	229,006
Surplus/(Deficit) after depreciation	23,050,737	2,656,085
TOTAL	175,173,145	146,797,486

Significant Accounting Policies and Notes (Schedule 4)
In terms of our separate report of even date
FOR V SAHAI TRIPATHI & CO
CHARTERED ACCOUNTANTS

Rajan Sachdeva
(Partner)
M. No. 093081

V. SAHAI TRIPATHI & CO. New Delhi Chartered Accountants

Rajeev Kapil
(Secretary)

Rajat Kathuria
(Director & CE)

Isher Judge Ahluwalia
(Chairperson)

Indian Council for Research on International Economic Relations
Details of Fixed Assets (FY 2015-16)

Own Assets:

Schedule 1

(In Rupees)

Particulars	Rate of Depreciation (%)	Gross Block					Depreciation				Net Block	
		As at 01.04.2015 Own	Additions More than 180 days Own	Additions Less than 180 days Own	Sales/ Written Off	As at 31.03.2015	As at 01.04.2015	For the Year Own	Deductions	Upto 31.03.2016	As at 31.03.2016	As at 31.03.2015
Air Conditioners	15%	35,250	-	-	-	35,250	21,978	1,991	-	23,969	11,281	13,272
Buliding	10%	22,186,295	-	-	-	22,186,295	17,082,409	510,389	-	17,592,798	4,593,497	5,103,886
Car	15%	939,111	-	-	-	939,111	70,433	130,302	-	200,735	738,376	868,678
Computers	60%	9,741,232	24,235	159,903	-	9,925,370	8,662,385	709,820	-	9,372,205	553,165	1,078,847
Electrical Fittings	10%	1,063,525	-	-	-	1,063,525	703,728	35,980	-	739,708	323,817	359,797
EPABX	15%	105,820	-	-	-	105,820	80,630	3,779	-	84,409	21,411	25,190
Fax	15%	160,210	-	-	-	160,210	151,629	1,287	-	152,916	7,294	8,581
Cell Phone	15%	363,343	58,170	-	-	421,513	139,634	42,282	-	181,916	239,597	223,709
Furniture & Fixtures	10%	12,972,265	7,020	20,445	-	12,999,730	8,246,585	474,292	-	8,720,877	4,278,853	4,725,680
Laser Printer	60%	915,424	-	155,900	-	1,071,324	814,992	107,029	-	922,021	149,303	100,432
Misc. Equipments	15%	248,482	-	-	-	248,482	137,430	16,658	-	154,088	94,394	111,052
Multimedia Presentation System	15%	270,400	-	-	-	270,400	260,565	1,475	-	262,040	8,360	9,835
Overhead Projector	15%	257,770	-	-	-	257,770	164,656	13,967	-	178,623	79,147	93,114
Refrigenator	15%	14,500	-	-	-	14,500	8,992	826	-	9,818	4,682	5,508
Scanner	60%	39,975	-	-	-	39,975	37,841	1,280	-	39,121	854	2,134
Total As at 31.3.2016		49,313,602	89,425	336,248	-	49,739,275	36,583,887	2,051,357	-	38,635,244	11,104,031	12,729,715
Total As at 31.3.2015		49,166,917	1,169,506	1,614,949	2,637,770	49,313,602	36,296,184	2,578,167	2,290,464	36,583,887	12,729,715	12,870,733

Funded Assets:

(In Rupees)

Particulars	Rate of Depreciation (%)	Gross Block					Depreciation				Net Block	
		As at 01.04.2015 Funded	Additions More than 180 days Funded	Additions Less than 180 days Funded	Sales/ Written Off	As at 31.03.2016	As at 01.04.2015	For the Year Own	Deductions	Upto 31.03.2016	As at 31.03.2016	As at 31.03.2015
Land*		2,246,820	-	-	-	2,246,820	-	-	-	-	2,246,820	2,246,820
Computers**	60%	3,655,612	-	-	-	3,655,612	3,629,409	15,722	-	3,645,131	10,481	26,203
EPABX**	15%	87,620	-	-	-	87,620	51,658	5,394	-	57,052	30,568	35,962
Laser Printer**	60%	168,050	-	-	-	168,050	166,845	723	-	167,568	482	1,205
Overhead Projector**	15%	88,718	-	-	-	88,718	52,307	5,462	-	57,768	30,950	36,411
Total As at 31.3.2016		6,246,820	-	-	-	6,246,820	3,900,219	27,301	-	3,927,520	2,319,300	2,346,601
Capital Work-In-Progress*		41,738,271	19,490,716	33,370,269	-	94,599,256	-	-	-	-	94,599,256	41,738,271
Capital Advances		8,063,380	807,516	-	6,590,731	2,280,165	-	-	-	-	2,280,165	8,063,380
Total As at 31.3.2016		49,801,651	20,298,232	33,370,269	6,590,731	96,879,421	-	-	-	-	96,879,421	49,801,651
Grand Total As at 31.3.2016		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
Grand Total As at 31.3.2015		76,137,549	29,728,688	36,486,415	6,402,872	105,362,072	40,142,519	2,632,051	2,290,464	40,484,106	64,877,966	35,995,030

* Against Building Fund
** Against Capital Grant

V. SAHAI TRIPATHI & Co. New Delhi Chartered Accountants

Indian Council for Research on International Economic Relations

FY 2015-16

Schedule 2

Current Assets, Loans & Advances:

Particulars	Current Year (in Rs.)	Previous Year (in Rs.)
A) Current Assets	**17,222,036**	**48,037,672**
-Cash in Hand	142,909	290,857
-Balances with Bank in Saving Account	15,405,414	46,271,708
-Balances with Bank in US Dollar Account	1,673,712	1,475,107
B) Loans, Advances & Other Recoverables	**10,785,899**	**13,998,194**
-Advances Recoverable in Cash or in Kind	6,793,636	9,942,948
-Interest Accrued	3,360,263	3,423,246
-Other Recoverables	632,000	632,000
C) Grants Receivable	**6,033,466**	**19,842,534**
D) Prepaid Expenses	**3,107,354**	**2,997,028**
Total	**37,148,754**	**84,875,427**

Schedule 3

Current Liabilities & Provisions:

Particulars	Current Year (in Rs.)	Previous Year (in Rs.)
A) Current Liabilities:-	**7,668,918**	**13,430,396**
-Sundry Creditors	3,213,513	10,360,474
-Statutory Dues	896,432	1,812,984
-Retention Money - Builder	3,558,973	1,256,938
B) Provisions:-	**6,016,159**	**3,563,223**
-Expenses Payable	3,626,134	3,563,223
-Provision for Gratuity (as per LIC computation)	2,390,025	-
C) Grants Received in Advance:	**11,241,957**	**11,782,138**
Total	**22,537,009**	**28,775,757**

V. SAHAI TRIPATHI & Co. New Delhi Chartered Accountants

ICRIER DETAILS OF GRANT RECEIVABLE FOR THE YEAR 2015 - 16

Schedule 4

Details of Grant Receivable as on 31.3.2016 :

Particulars	Amount(Rs.)
Opening as on 1.4.2015	**20,474,534**
Less: Written off during the year	0
Less: Received during the year	19,842,534
Grant Receivable for previous F/Ys:	632,000
ADD: Grant Receivable for F/Y: 2015-2016	6,033,466
Closing as on 31.3.2016	**6,665,466**

Working:

Details of Grant Receivable as on 01.04.2015	Amount(Rs.)
Grant Receivable A/c - BHC	2,014,405
Grant Receivable A/c - BHC Lcp	921,493
Grant Receivable A/c - BHC Pak	8,506,276
Grant Receivable - WRI	2,330,557
Grant Receivable A/c - IAMAI	510,825
Grant Receivable - India Korea Dialogue	250,000
Grant Receivable - IPE	1,146,581
Grant Receivable - PhRMA 2	4,012,987
Grant Receivable - PRI	72,650
Grant Receivable - UNU	76,760
Grant Receivable - Indo Nepal Cooperation	32,000
Grant Receivable - NTB Portal	600,000
Grand Total	**20,474,534**

Grant Received During The Year for receivable of PY:

Particulars	Amount(Rs.)
Grant Receivable A/c - BHC	2,014,405
Grant Receivable A/c - BHC Lcp	921,493
Grant Receivable A/c - BHC Pak	8,506,276
Grant Receivable - WRI	2,330,557
Grant Receivable A/c - IAMAI	510,825
Grant Receivable - India Korea Dialogue	250,000
Grant Receivable - IPE	1,146,581
Grant Receivable - PhRMA 2	4,012,987
Grant Receivable - PRI	72,650
Grant Receivable - UNU	76,760
Grand Total	**19,842,534**

Grant Receivable as at 31.3.2016:

Particulars	Amount(Rs.)
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
Grand Total	**6,033,466**

Other Recoverables as at 31.3.2016:

Particulars	Amount(Rs.)
Grant Receivable - Indo Nepal Cooperation	32,000
Grant Receivable - NTB Portal	600,000
Grand Total	**632,000**

Grant Received in Advance as at 31.03.2016:

Particulars	Amount(Rs.)
Grant Received in Advance - PhRMA	3,628,404
Grant Received in Advance - BMGF II	3,739,535
Grant Received in Advance - Rockefeller	2,604,393
Grant Received in Advance - ZEF	1,269,625
Total	**11,241,957**

V SAHAI TRIPATHI & Co. New Delhi Chartered Accountants

Indian Council for Research on International Economic Relations

Schedule 5

Other Income for the year ended March 31, 2016:

Particulars	Amount(Rs.)
Royalty	0
Interest on Income Tax Refund	445,017
Expenses Payable Written off	1,482,020
Income Recognized on Discount GOI Invtt.	122,402
Miscellaneous Receipts	223,684
Total	**2,273,122**

Bank Accounts- INR:

Particulars	Amount(Rs.)
ICICI Bank Ltd A/c No: 000701062084	92,103
Kotak Mahindra Bank A/c No: 01720010028420	13,865,408
SCB (AE) A/c No: 52011022120	377,737
State Bank of India A/c No: 30614820322	1,070,166
Total	**15,405,414**

Bank Accounts- USD:

SCB USD A/C NO: 3582023815001	1,673,712
Total	**1,673,712**
Grand Total	**17,079,126**

Imprest:	Amount(Rs.)
Petty Cash-Imprest	2,321
Petty Cash - Imprest (USD)	140,588
Total	**142,909**

Investments:	Amount(Rs.)
Investments in Fixed Deposit with Banks	281,730,000
Investment in Mutual Funds	50,000,000
Total	**331,730,000**

Schedule-6

Indian Council for Research on International Economic Relations
For the Year Ended March 31, 2016

Significant Accounting Policies and Notes to the accounts

(A) Accounting Policies

1. a. Accounts are maintained on accrual basis.

   b. Grants are accounted for in the year in which they are received.

   c. Grants recoverable are accounted for as income if either sanction orders have been received or the amounts have been recovered in the subsequent period.

   d. 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.

2. a. Mutual Fund investments, which are readily encashable, are shown under current assets. Increase in net asset value at the end of the year over its cost/opening net asset value, as the case may be, is shown as income for the year and a reduction, if any, as an expense.

   b. Investment for fixed periods is shown as long term investments 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.

   c. 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.

3. The Council 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. On fixed assets added/disposed off during the year, depreciation is charged on a pro-rata basis from/upto the date that the asset is put to use or disposed off.

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

   b. Expense on computer software is fully charged to the Income and Expenditure account when the expense is incurred.

5. Donations received towards the corpus are carried forward in the Balance Sheet under Endowment Fund.

6. An LIC Policy has been taken to cover against future liability on account of gratuity payable to the staff. The actual liability has been provided as per the valuation made by LIC.

7. Funded assets are valued by the management and shown as an addition to the fixed assets with a corresponding credit to a "Gifted Assets Fund' account. Annual depreciation on gifted assets is deducted from the cost as well as the 'Gifted Assets Fund' account.

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

V. SAHAI TRIPATHI & Co. New Delhi Chartered Accountants

9. Keeping in view the nature of activities of the Council and the method of accounting followed only the following Accounting Standards are applicable:-

(i) AS-1 Disclosure of Accounting Policies
(ii) AS-5 Net profit or Loss for Period, Prior period Items and changes in Accounting Policies
(iii) AS-6 Depreciation Accounting
(iv) AS-9 Revenue Recognition
(v) AS-10 Accounting for Fixed Assets
(vi) AS-11 Effect of Changes in Foreign Exchange Rates
(vii) AS-12 Accounting for Government Grants
(viii) AS-13 Accounting for Investments
(ix) AS-15 Employees Benefits
(x) AS-26 Intangible Assets
(xi) AS-28 Impairment of Assets
(xii) AS-29 Provision, Contingent Liabilities and Contingent Assets

The above Accounting Standards have been generally followed, except to the extent stated otherwise.

(B) Notes to the Accounts

1. During the year, a total liability of 33.90 lacs was booked as an expense on account of gratuity and a payment of Rs. 10 lacs was made to LIC during the year. Being the expense has been booked on the accrual basis instead of the cash basis, as per past practice, the surplus has been reduced by 23.90 lacs for the year and the surplus would have been 279.92 lacs against a surplus of Rs. 256 lacs as per Income & Expenditure Account.

2. Interest on Building Fund Investments amounting to Rs. 22.41 lacs for this year has, as per decision of the Board will transfer to the income of the year to pay for the rent & maintenance for extra space taken from IHC.

3. Contingent liability on account of a labour dispute awaiting settlement in the Hon'ble Delhi High Court is estimated at Rs. 10.00 lacs.

4. 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.

5. During the year Rs. 5.00 lacs up to March 31, 2016 has been transferred to the Endowment Fund from the Income & Expenditure account on account of the transfer of income on the Investments made out of the RBI- Chair Fund as per their Endowment Grant conditions.

6. Schedules 1 to 6 form an integral part of the Balance Sheet and Income and Expenditure account.

7. Previous year's figures have been regrouped where ever necessary to make them comparable with the figures for the current year.

V. SAHAI TRIPATHI & Co. New Delhi Chartered Accountants

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 it 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
- BCCI
- Bank of Baroda
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- Bharti Airtel Ltd.
- Canara Bank
- Central Bank of India
- Citi Bank
- Corporation Bank of India
- Deutsche Bank
- DLF Ltd.
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- 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 Technologies Ltd.
- Infrastructure Development Finance Company
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- Ministry of Finance
- Mitsui Tokyo Kobe Bank
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- NASSCOM
- Oriental Bank of Commerce
- Punjab & Sind Bank
- Punjab National Bank
- Ranbaxy Laboratories Ltd.
- Reliance Industries Ltd
- Religare Enterprises Ltd.
- Reserve Bank of India
- 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:

1. Macro Management, Financial Liberalisation and Regulation
2. Global Competitiveness of the Indian Economy – Agriculture, Manufacturing and Services
3. Challenges and Opportunities of Urbanisation
4. Climate Change and Sustainable Development
5. Physical and Social Infrastructure including Telecom, Transport, Energy and Health
6. Promoting Entrepreneurship Skill and Development
7. Asian Economic Integration with focus on South Asia
8. 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.

Indian Council for Research on
International Economic Relations

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