



Indian Council for Research on
International Economic Relations

Annual Report 2018-19



“Linking India
with the World”

Annual Report 2018-19



Indian Council for Research on
International Economic Relations

Research
in
Economic
Relations

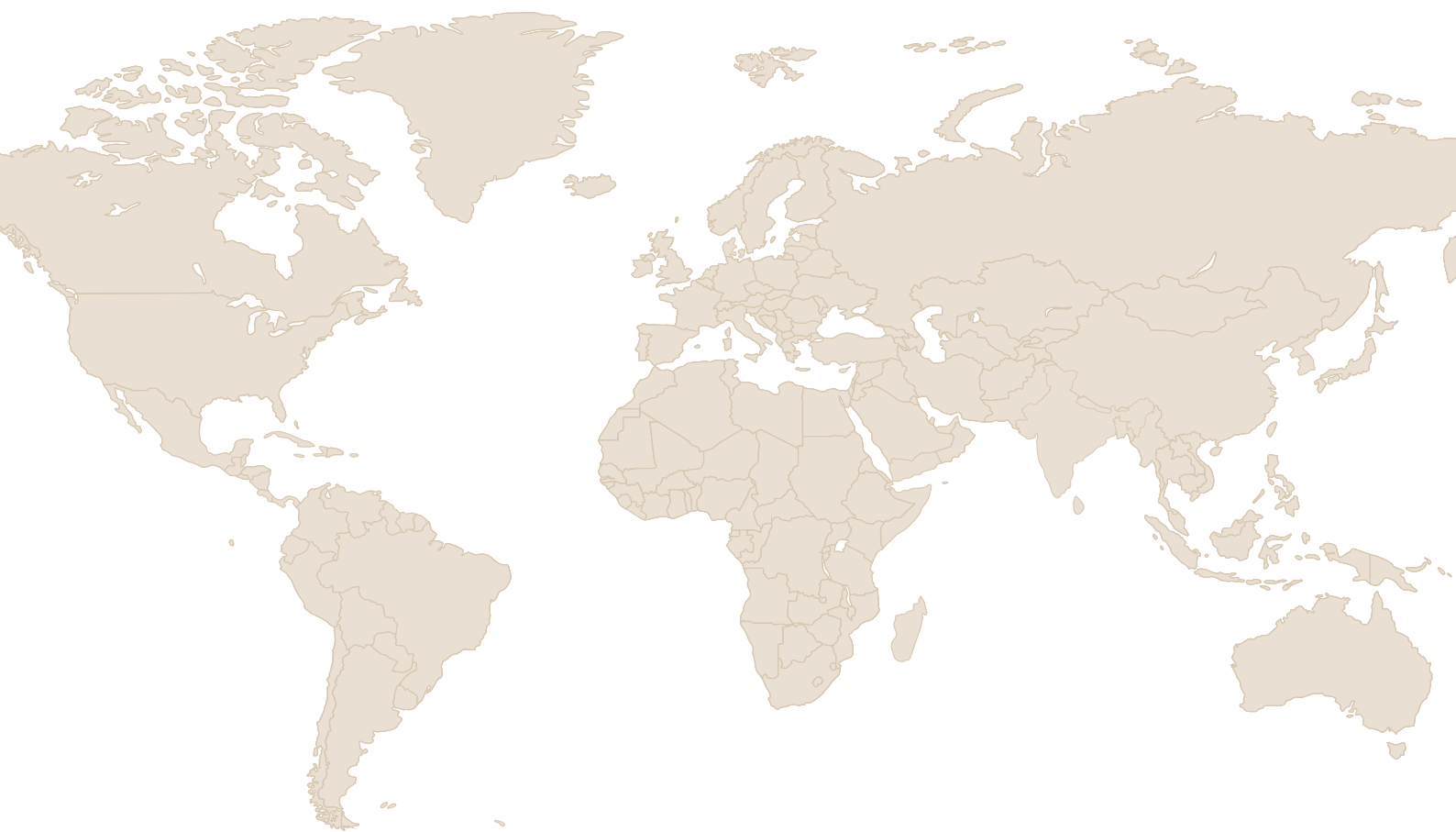


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Foreword by Chairperson



The year 2018-19 has been another productive year at ICRIER. The Indian economy is becoming increasingly integrated with the rest of the world. Transmission of global shocks, therefore, is immediate and sustained, making for a challenging and more complex policy environment. At the same time, India is now looking to play a bigger and more influential role in shaping the global economic discourse.

A number of research studies were conducted for the Department of Economic Affairs, Ministry of Finance, under the UK-India Economic Policy and Prosperity Partnership (EPPP) programme. These studies provided inputs for India's engagement during the G20 meetings in Osaka on a wide range of topics under the Finance and Sherpa tracks, including tax challenges in the digital economy, women empowerment through digitised means of financial inclusion, infrastructure for development and the future of work. More research is being commissioned and the ultimate aim is to identify themes of national interest that can form the core

agenda when India assumes the presidency of the G20 in 2022. The Annual G20 Conference organised by ICRIER is now firmly established and a widely anticipated event in our calendar. ICRIER has been approached by the Saudi Secretariat to identify the key challenges likely to be faced by G20 members in the coming years. Saudi Arabia assumes the Presidency of the G20 in 2020.

ICRIER was invited by the Department of Commerce to prepare a road map for the Regional Comprehensive Economic Partnership (RCEP) trade agreement expected to conclude this year. We submitted a report after widespread consultations with all stakeholders. In the area of climate change negotiations, ICRIER was tasked by the Ministry of Finance to estimate the cost of meeting the ambitious Nationally Determined Contribution (NDC) targets made by India under the Paris Climate agreement of 2015. A draft report has been submitted to the government.

Research at ICRIER on the Indian economy branched out into some new areas. We prepared studies for the Fifteenth Finance Commission on different aspects of municipal finances and also an analysis of development expenditures in the states after the Fourteenth Finance Commission Award. In telecommunications, ICRIER signed an agreement with the Department of Telecommunications (DoT) to prepare a Broadband Readiness Index (BRI) that will rank Indian states on the quantity and quality of the underlying broadband infrastructure, including the enabling policy environment. The BRIs will be published for three years beginning in 2019 to energise the spirit of competition to spur underperforming states to emulate the better performing ones.

ICRIER has completed a study on India-Myanmar border trade that highlights the impediments to formal trade across the land border and suggests measures to facilitate the formalisation of the pervasive informal trade. A comprehensive study is being conducted of the infrastructure gaps at all land customs stations and integrated check posts in the eight north-eastern states of India. This is also one of the key objectives of the *National Trade Facilitation Action Plan*.

Research on agriculture remains a key thrust area at ICRIER. The book, *Supporting Indian Farms the Smart Way* was released by the late Shri Arun Jaitley, Hon'ble Union Minister of Finance. ICRIER partnered with OECD to prepare another report, *Review of Agricultural Policies in India*, which provides a comprehensive picture of agricultural support in the country and has been widely acclaimed.

The bilateral policy dialogues included the 3rd *India-China Dialogue* focusing on finance, energy, climate change and growth, held in Beijing from 21-24 March 2019 and the 9th ICRIER-PRI workshop on *Economic Reforms in India: Opportunities for Enhancing India-Japan Economic Partnership* held in New Delhi on March 8, 2019. Later this year, we will host the 21st Annual Neemrana conference, a signature event in ICRIER's calendar of policy-focused interactions between India and the United States.

I am delighted that ICRIER's new green building in Saket is now complete and functioning as the research hub. The spacious accommodation pleasantly balances the twin needs of proximity and privacy for the faculty and will also allow ICRIER to expand its research activities. This would not have been possible without the generous support of our donors and I take this opportunity to convey our heartfelt gratitude to each one of them.

These donors are: State Bank of India, ICICI Bank, Kotak Mahindra Bank, Fortis/Religare, Bharti Enterprises, Trident Group, Jamnalal Bajaj Foundation, Bajaj Auto, ITC, Essar, Financial Technologies, DLF, GMR, Max Financial Services Ltd., Pirojsha Godrej Foundation, Reliance Industries Limited, Tata Sons (P) Ltd., Nandan and Rohini Nilekani, Rohan Murthy and Kiran Mazumdar-Shaw.

Our high rank among Indian and global think tanks is a matter of great pride. ICRIER continues to be among the top Indian think tanks in the world. In the 2018 *Global Go to Think Tank Index Report* brought out by the University of Pennsylvania, ICRIER ranked number one in 'International Economics in India' and also number one in 'International Development in India'. Globally, ICRIER ranks fifteenth in 'International Economics'. Indeed, true to its founding vision, ICRIER remains committed to fostering and facilitating research in critical areas of contemporary and emerging issues of policy relevance for India and its engagement with the global economy.

I am happy to note that ICRIER is successfully adapting to new challenges and harnessing opportunities in our fast changing economy and the global economic environment. I am confident we will continue to strive for excellence. I take this opportunity to thank all stakeholders for the enormous trust and confidence reposed in our work.



Isher Judge Ahluwalia
Chairperson, ICRIER

Board of Governors

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Dr. Isher Judge Ahluwalia

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Dr. Rajat Kathuria

Director & Chief Executive, ICRIER
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Director's Report



Since its inception in 1981, ICRIER has attempted to provide policy solutions to the biggest economic challenges facing India, using nonpartisan research firmly grounded in facts. Today, as our economy faces domestic and global challenges, policymakers need reliable, accessible and useful information about how current policies are working, as well as possible alternatives and their likely costs and consequences. Our work, therefore, is more important than ever before.

Research and dialogue activities at ICRIER have once again focused on areas of central importance to India's policy agenda. In the *Global Go to Think Tank Index Report* released by the University of Pennsylvania, ICRIER was ranked number one in 'International Economics in India' and also number one in 'International Development in India'. Globally, ICRIER ranks fifteenth in 'International Economics'.

As India takes up the G-20 presidency in 2022, it has the opportunity to set the global economic governance agenda and make it inclusive. As we prepare for

this momentous occasion, ICRIER is undertaking a series of research and capacity building activities to support the Department of Economic Affairs (DEA) and other departments under Ministry of Finance (MoF) for G20 negotiations. The UK-India Economic Policy and Prosperity Partnership (EPPP) funded by the Department for International Development (DFID) has commissioned ICRIER to undertake research studies on subjects such as universal health care, artificial intelligence, tax challenges in a digital economy, women empowerment through digitised means of financial inclusion, future of work, and resilience against natural disasters. In the run up to the G-20 summits held in Buenos Aires, Argentina, in November-December 2018 and in Osaka, Japan, in June 2019, ICRIER organised two annual international conferences bringing together academics and key policy makers from G20 countries to reflect on pressing challenges of economic co-ordination and sustainable development. Additionally, as Saudi Arabia prepares for the presidency in 2020, we undertook a study for their G-20 Secretariat to identify emerging challenges for the G20.

The 15th Finance Commission provides a massive opportunity to set out a blueprint for India's future that rests on the foundation of strong federalism. ICRIER has been awarded four research studies by the Commission to inform its deliberations. The first study on the State of Municipal Finances in India has reviewed the recommendations of previous Central and State Finance Commissions with regard to urban local governments, compiled national and state level indicators on municipal finance across 29 states covering 4259 urban local governments, and suggested measures to improve the same. The second study, *Finances of Municipal Corporations in*

the Metropolitan Cities of India, has focussed on the finances of municipal corporations of 37 cities with a population of one million or above. It analysed the changes in sources of own revenue, which includes tax and non-tax revenues of municipal corporations, and transfers from central and state government over the past five years. The third study, *Development Expenditure in the States Post Fourteenth Finance Commission Award: How Have States Spent the Award Money*, assesses the net additional resources received by states after the increase in the devolution percentage and how they spent these resources. The fourth and final study *Remaining Centrally Sponsored Schemes*, assesses centrally sponsored schemes after the devolution package to states.

The global economy is witnessing mammoth transitions due to automation and the Fourth Industrial Revolution (FIR). The study, *Challenge of Productive Employment Creation in India*, is part of our ongoing Ford Foundation-funded research programme that seeks to address gaps in employment creation and measurement in India. ICRIER also co-hosted the third edition of the Jobs and Development Conference on *Improving Jobs Outcomes in Developing Countries* with the World Bank and IZA in June 2019 in Washington DC. This annual conference enables policymakers and researchers to exchange ideas about what works to improve jobs outcomes and how developing countries are tackling the future of work agenda.

The related issue of the competitiveness of the Indian economy is the focus of the *Programme on Global Competitiveness of the Indian Economy*, jointly funded by the IDFC Foundation and Dr. Rajiv Lall. The objective of this programme is to examine the reasons for India's low competitiveness in the world economy, such as infrastructural bottlenecks, a narrow industrial base and the continued dependence on agriculture for a large proportion of employment despite its low contribution to gross value added. The first study under this programme

explores *Job Creation in the Renewable Energy Sector*, the second study aims to examine *India's Export Competitiveness and Linkages to Global Value Chains (GVCs)*, and the third study examines ways to accelerate *Job Creation by Enhancing the Industrial Competitiveness of Indian Firms*, particularly small, medium, micro and medium-sized enterprises.

With approximately half of India's workforce engaged in the agriculture sector, the challenge of enhancing agricultural productivity and improving farmers' incomes is an urgent priority. It is recognised that agricultural growth alleviates poverty much more effectively than equivalent growth in other sectors, and this has remained an important area of research at ICRIER. The ICRIER-OECD study *on Agriculture Policies in India* spelt out a comprehensive set of policy measures that, taken together, will improve the incomes and wellbeing of farm households. Extensive data analysis informed the producer support estimates (PSE) for India for the first time. As an extension of this project, the OECD has commissioned another study to provide an update of the PSE estimates along with a summary and analysis of agriculture policies in 2018-19.

As the Internet continues to alter the structure of the economy, research under the Ministry of Electronics and Information Technology (MeitY) Chair for Internet Policy at ICRIER has provided crucial policy support on aspects of Internet openness, security and governance. The first year of the programme focused on a study related to the *Domain Name Market in India*, and the performance of the country code top-level domain (ccTLD). Another paper looked at *Data Flows and Data Localisation policies in India* within the global context. The National Digital Communication Policy (NDCP) 2018 acknowledged the need to build a robust digital communications infrastructure, leveraging the existing assets of the broadcasting and power sectors including collaborative models involving state, local bodies and the private sector. Accordingly, the policy

recommended that a Broadband Readiness Index (BRI) for states and UTs be developed to attract investments and address right of way (RoW) challenges across India. The Department of Telecom (DoT) has tasked ICRIER to develop a *BRI for Indian States and Union Territories*. The first estimate will be made in 2019; subsequently, estimates will be made every year until 2022.

Improved connectivity between the north-eastern states of India with neighbouring countries is essential to strengthen economic co-operation and develop strategic relationships as envisaged in the 'Act East Policy'. The project on *Facilitating India's Act East Policy: Gap Analysis in Infrastructure at Land Customs Stations in the North Eastern Region of India* attempts to identify and address gaps in the corresponding hard and soft infrastructure to build secure economic ties with neighbouring countries. The first phase of the *India-Myanmar Trade and Connectivity Project* examined the effectiveness of the trade policy measures adopted by India in 2015 to switch from barter trade to normal trade and the persisting impediments at the India-Myanmar border. The second phase of this project is now examining how impediments in formal trade can be addressed to increase trade and how informal trade can be shifted to formal channels through corrective and adaptive measures.

As the US-China trade war creates uncertainty about the global economy, it is important to understand the challenges and opportunities for India. The World Trade Organization (WTO) and Trade Policy project at ICRIER examined the provocations underlying the US-China trade dispute and its implications for India and for the multilateral trade order. The Department of Commerce commissioned ICRIER to help formulate tariff offers and analyse requests for the Regional Comprehensive Economic Partnership (RCEP) negotiations. The study includes an analysis of existing goods offers of other participating countries, preparation of request lists that may be submitted by India to the participating countries

and an examination of India's tariff commitments in existing free trade agreements (FTA).

Climate change is now affecting every country on every continent. To understand the links between climate change and sustainable development, ICRIER undertook three critical research studies. The first study examines the financing requirements to achieve the ambitious *Nationally Determined Contributions (NDCs) made by India under the Paris Agreement* for the MoF. The second explores *Cost Reduction Strategies for Electric Vehicle Batteries* for the Shakti Foundation, whilst the third prepares a *Strategy for Linking Tourism, Local Environment and Waste Generation in Indian Himalayan States*, commissioned by the Ministry of Environment Forest and Climate Change (MoEFCC).

Dr. Alok Sheel joined ICRIER in January 2019 as RBI Chair Professor enhancing our research capacity on issues of macroeconomic management and financial sector regulation. His recently published study *The Global Economy and Financial Markets: Ten Years after the Global Financial Crisis* provides a synoptic view of the evolution of macroeconomic policies from the time of the Great Depression, the current thinking on stabilising business cycles and financial markets, and an overview of the policy response to the recent global financial crisis.

International conferences/seminars, public policy workshops, public lectures and publications form an integral part of ICRIER's outreach activities. The conference on *Visions for India in 2030* focused on India's growth potential and the policy strategies needed to respond to challenges. The host of internet policy issues facing India formed the discussion agenda of the conference on *Future of the Digital Economy: Cross Currents in Emerging Regimes*; the International Conference on *Values in Foreign Policy: Interests and Ideals* examined the relationship between espoused national values and actual foreign policy interests and policies while

the 10th Annual International G20 Conference was organised by ICRIER on October 11-12, 2018, in the context of the G20 Summit in Buenos Aires, Argentina. The seminar on *Economic Resilience in a Changing Climate: Tales of Adaptation from Four Indian Cities* disseminated the major findings of ICRIER's project on the economic competitiveness of cities in an era of climate change and a special lecture was delivered by H.E. Harinder Sidhu, Australia's High Commissioner to India, on the occasion of the release of the report *An India Economic Strategy to 2035: Navigating from Potential to Delivery*.

The 3rd India-China Dialogue on Climate Change held in Beijing focussed on Finance, Energy and Cities. The 9th ICRIER-PRI Workshop was dedicated to Global Economic Trends and India-Japan Economic Partnership. A special session was devoted to Japan's G20 Presidency and potential areas for India-Japan co-operation. Notable speakers at the successful series Conversations on Urbanisation, a partnership between ICRIER and the India Habitat Centre, included Bhure Lal, Chairman, Environment Pollution (Prevention & Control) Authority for the National Capital Region, A. K. Gosain, Professor, Department of Civil Engineering, Indian Institute of Technology, Delhi, and C. R. Babu, Professor Emeritus, Centre of Environmental Management

of Degraded Ecosystems (CEMDE), University of Delhi.

Research work at ICRIER culminated in the release of numerous books, reports, working papers and journal articles. These are all listed in the Annual Report. At ICRIER, we remain committed to our founding vision of enhancing knowledge content for policymaking and facilitating India's effective engagement with the global economy.

I am particularly delighted to say that this year, we have moved into our new office in Saket, New Delhi. This move is likely to be accompanied by growth in staff numbers and an increase in research activities. The prospects are exciting and I thank all stakeholders for their steadfast support for the high quality, evidence-based, policy-oriented research that is the hallmark of ICRIER. I have no doubt that with your continued support we will continue to move from strength to strength.



Rajat Kathuria
Director & CE



Research Activities

1. Macroeconomic Management, Financial Liberalisation and Regulation

1.1 The Global Economy and Financial Markets: Ten Years after the Global Financial Crisis

Project Leader: *Alok Sheel*

Research Team: *Akshaya Aggarwal*

Commencement: January 2019

Date of Completion: April 2019

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

The study provides a synoptic view of the evolution of macroeconomic policies from the time of the Great Depression and the current thinking on stabilising business cycles and financial markets, besides providing an overview of the policy response to the recent global financial crisis. It analyses the adjustments made in the global economy and in the financial markets in the ten years since the global financial crisis. The concluding section discusses the current outlook for the global economy, and the risks that possibly lie ahead.

1.2 Forensic 'Smell Test' of Competing Indian Growth Narratives

Project Leader: *Alok Sheel*

Research Team: *Akshaya Aggarwal*

Commencement: May 2019

Expected Date of Completion: September 2019

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

This study aims to discuss and analyse the two competing growth narratives arising out of the recent revisions in India's Gross Domestic Product (GDP) data, namely the contemporaneous one based on 2004-05 prices and the revised narrative based on 2011-12 prices. Based on the assumption that several economic data sets like bank credit, investment, consumption, exports, etc. are strongly correlated to growth, a forensic 'smell' test is being carried out to cross check the robustness of the two narratives.

1.3 Development Expenditure in the States Post Fourteenth Finance Commission Award

Project Leader: *Sindhushree Khullar*

Research Team: *Divya Satija and Kumar Abhishek*

Commencement: April 2018

Date of Completion: May 2019

Funded by: Fifteenth Finance Commission of India (Rs. 14.34 lakh)

Over the last five years, there have been rapid institutional and structural changes in India. In 2014-15, the plan/non-plan classification in expenditure was discontinued and expenditure was classified as revenue and capital expenditures. In addition, the transfer of block grants from the central government directly to implementing agencies at the state level was discontinued. Instead, a state's share of centrally sponsored schemes (CSS) is now transferred to the consolidated fund of state governments. Following the replacement of the Planning Commission with the NITI Aayog in 2015-16, the share of taxes devolved upon the states increased from 32 per cent to 42 per cent, as recommended by the Fourteenth Finance Commission (FFC), increasing the fiscal space available to states. In 2016-17, the

Cabinet approved the rationalisation of CSS, and the number of CSS was reduced from 66 to 28. Against this background, ICRIER has conducted two studies for the 15th Finance Commission of India.

1.3.1   *Development Expenditure in the States Post Fourteenth Finance Commission Award: How Have States Spent the Award Money?*

Sindhushree Khullar, Divya Satija and Kumar Abhishek

Completed

This study assesses the net additional resources received by states after the increase in the devolution percentage and how they spent these resources. This has been done by analysing the outlays and outcomes of development schemes and programmes and any changes in their composition, mix and priorities and their consequent impact on the desired national goals for the first two years of the award period, i.e., 2015-16 and 2016-17.

1.3.2   *Development Expenditure in the States Post Fourteenth Finance Commission Award: An Assessment of the Remaining Centrally Sponsored Schemes*

Sindhushree Khullar, Divya Satija and Kumar Abhishek

Completed

This study assesses the impact of reduced fiscal space for the union government on the outcomes of national development schemes and programmes. In addition, this study analyses the effect of rationalisation of CSS on the design and implementation of these schemes and how the collective efforts of the union and the states are being harmonised to meet the international commitment to achieve the 2030 Sustainable Development Goals.

1.4   *UK-India Economic Policy and Prosperity Partnership (EPPP)*

Project Co-ordinator: *Arpita Mukherjee*

Commencement: *September 2017*

Expected Date of Completion: *October 2020*

Funded by: Department for International Development (DFID), UK Government, and Department of Economic Affairs (DEA), Ministry of Finance, Government of India (Rs. 276 lakh)

The Department for International Development (DFID), UK, is supporting the Government of India's reform programmes under the UK-India Economic Policy and Prosperity Partnership (EPPP), which includes research and capacity building in Indian central government agencies. The Ministry of Finance is the nodal ministry, PwC India is the project manager and ICRIER is a consortium partner. As of June 2019, 15 research studies have been commissioned, based on the request received from the Department of Economic Affairs (DEA) and other departments under the Ministry of Finance for G20 negotiations and domestic policymaking. The duration of the project is 3 years and it is divided into 3 phases.

In the first phase, ten studies were commissioned and the final report was submitted to the DEA, Ministry of Finance, Government of India, for the G20 negotiations. At present, the second phase is underway and four new studies have been commissioned for the year 2018-19.

Research Studies Completed between December 2017 – September 2018

1.4.1 *Research Based Policy Making in Taxation: Building Revenue Analytics Capability Following Best Practices from the UK and Other Countries such as Australia and Canada*

Rajiva Ranjan Singh, Anandita Bagchi and Divya Satija
Completed

To make the tax policy making process in India more structured and robust, this study explored the possibility of adopting an 'evidence-based' tax policy making approach in India, using a comparative analysis of best practices in tax policy-making in selected countries including the UK, Australia and Canada. The study has examined the process of evidence-based tax policy making in the selected countries, analysed the existing process of tax policy making in India in order to identify gaps, if any, and provided recommendations for India to improve the process. The key findings of the study are that in India, there is no structured or documented process for evidence-based policy making; no regulatory impact assessment (RIA) is done or consultations held while a policy is being designed; and such analysis is usually ex-post. The study provides recommendations on how India can develop a well-structured process of evidence-based tax policy making. The study also suggests that India can strengthen its revenue analytics capabilities by collaborating with the UK using field visits, training programmes and other capacity building initiatives to develop a guidebook for tax policy making, create a central repository for tax data, and strengthen survey-based research (for example tax payer surveys).

1.4.2 *Agenda for Inclusive Growth under G20*

Suresh Aggarwal, Divya Satija and Suheb Khan
Completed

Inclusive growth strategies are increasingly a global concern, particularly among the G-20 countries. The objective of this study was to identify specific policies that have a positive impact on both growth and inequality and can be the focus of collective policy action by G20 countries. The study analyses the effectiveness of different fiscal policy instruments and prioritises public expenditure to achieve desired outcomes. Using a host of policy and outcome indicators, the status and pattern of G20 members on these indicators have been measured. The G20 countries have also been ranked based on a comparative analysis of these indicators. Based on the study outcomes, common issues related to inclusive growth among the G20 have been identified and suggestions have been provided vis-à-vis countries with which India can co-operate.

1.4.3 *Tax Challenges in the Digital Economy Particularly in Case of E-commerce*

Rajat Kathuria, Mansi Kedia and Richa Sekhani
Completed

The proliferation of global digital businesses has encouraged an evaluation of the applicability of existing international taxation principles to the evolving digital ecosystem. In the absence of an international consensus, several countries including India have adopted unilateral measures of taxation based on the OECD BEPS recommendations (2015). While adoption of VAT for digital services (including business to consumer services) has been a popular reform, implementing changes to direct taxes is much more complex. However, countries worked with interim measures, such as India's

equalisation levy, until permanent revisions on concepts such as significant economic presence are agreed upon. The study discussed multilateral efforts and solutions proposed by the G20, the OECD and the UN along with unilateral measures adopted by each country until as recently as April 2018. The study also summarised the proposals presented by the EU and the UK to redefine the criteria for significant economic presence that are best suited to a digital world. It explored the literature on value creation and presented a theoretical basis for a balanced approach to taxation that includes value attribution to source countries. The study proposed a way forward including a list of countries that are likely to align with India's position on taxation of digital businesses.

1.4.4 Inclusion of Totalisation/Portability of Social Security Benefits in the G20 Agenda

Anwarul Hoda and Durgesh Kumar Rai

Completed

The main objective of the study is to build a case for international action to address the issue of improving social security protection of international migrant workers. The findings show that there are wide gaps in the social security protection of migrant workers around the world. The most significant gap is because, in almost all countries, there is a qualification requirement in terms of relatively long periods of contributions, employment or residence for most social security benefits, which migrant workers find difficult to fulfil as they work in several jurisdictions during their lifetime. This gap can be ascribed almost entirely to the lack of bilateral or multilateral agreements among major migrant-receiving and sending countries. For example, the US, which is the largest destination for migrant workers, does not have social security agreements with three of the four largest migrant sending countries – India, China and Mexico. The UK, which is the fifth largest destination for migrant workers, similarly has no agreements with these important migrant sending nations. Saudi Arabia, which is the fourth largest destination, does not have an agreement with any G20 country. The main reason for the lack of social security agreements between major migrant sending and receiving countries is the asymmetry in the two-way flows of migrant workers among them. The migrant receiving countries send out fewer numbers of migrant workers than they receive and the migrant sending countries receive fewer migrant workers than they send out. The outward flow is highly skewed in favour of the major migrant sending countries, which has the implication that the economic benefits from a social security agreement providing for portability would also be highly skewed. The study argues that both migrant-sending countries and receiving countries have a shared interest in improving the social security benefits of migrant workers and recommends that India should join hands with China, Indonesia and Mexico in the G20 to strongly encourage member countries to initiate action to conclude bilateral social security agreements with countries with whom they share significant flows of migrant workers.

1.4.5 Women Empowerment through Digitised Means of Financial Inclusion

Rajat Kathuria, Mansi Kedia, Kaushambi Bagchi and Sashank Kapilavai

Completed

Programmes such as the G20 Financial Inclusion Action Plan (FIAP) and Women 20 have been involved in designing interventions to alleviate the socio-economic condition of women in both developed and developing countries. This study presents a comparative framework of

socio-economic and policy indicators that present the overall ecosystem supporting financial inclusion, or the lack thereof, across G20 nations. Through a demand-supply analysis, the study illustrates the importance of financial inclusion in empowering women and analyses the various challenges limiting the gender impact of financial inclusion schemes. A detailed analysis of the evolution of financial institutions in India highlights the use of technology and innovative practices that have significantly improved the well-being of women in India. Secondary data analysis and a series of stakeholder interactions helped identify relevant case studies across G20 countries that highlight the use of technology to address both the demand and supply side challenges of financial inclusion. The case studies draw attention to best practices in this area and identify solutions that can be adapted to the Indian context. The study also proposes an agenda for collaboration among G20 nations in this area.

1.4.6 *Application of Innovative Technologies for Promoting Financial Inclusion*

Saon Ray, Smita Miglani and Sandeep Paul

Completed

To ensure quality access to formal financial services to all has been a long running and challenging policy agenda in India. However, financial inclusion is not just about access but also about the use of financial services. While access essentially refers to supply of services, use is determined by demand as well as supply. It is in this context that innovative technological solutions, including block chain and artificial intelligence (AI), hold potential to approach the issue from both the demand and supply side to enhance financial inclusion in the country. These innovations can be rapidly adopted, provide greater scope for innovation and are pioneered largely by new and small players. At the same time, such upcoming operational models require a rethink of the current regulatory structure. The approach to fintech is similar across countries with governments keen to maximise the benefits of emerging technologies, regardless of the stage of maturity the domestic industry is in, and bring in regulatory clarity. This has led regulators to strive towards an optimal regulation that would promote innovation without risking the financial system or harming consumer interests.

This study delves into the questions of how banks and other financial institutions can use innovative technology such as block chain and AI to foster financial inclusion while benchmarking global standards and best practices. It also underlines the impediments to the use of ongoing fintech innovations and suggests actions that could effectively increase their utilisation.

1.4.7 *Promoting Transfer of Technology in G20 to Enhance Resilience to Climate Change*

Amrita Goldar, Shubham Sharma, Viraj Sawant and Sajal Jain

Completed

The objective of the study was to highlight ways to increase co-operation in the G20 on transfer of technology for enhancing resilience to climate change, while remaining relevant for all member countries and aligning with India's interest. It is based on interviews with various stakeholders across industry, academia and government, engaged in the broad domain of technology driven sustainable development across prioritised sectors such as energy, transport and end use, etc., as well as secondary desk research. The study finds that lack of finance is the biggest barrier but the lack of absorption capacity among recipient countries, mode of technology transfer, nature of technologies, etc., also

impede the transfer of technologies. An opportunity exists for India in the G20 to promote uptake of renewable energy through the International Solar Alliance and to build a consensus on the transfer of carbon capture and storage technologies, technologies for small hydropower projects, offshore wind energy technologies, etc.

1.4.8 *Synchronised Surveillance Systems: How G20 should Tackle Antimicrobial Resistance*

Ali Mehdi, Priyanka Tomar, Pallavi Joshi and Divya Chaudhry

Completed

Antimicrobial resistance (AMR) has attracted enormous international attention in recent years. Although it is widely recognised as a complex problem, AMR surveillance on the human side is narrowly focused on health care variables and related industries – laboratory-based antimicrobial susceptibility testing (AST) and antimicrobial use (AMU). This study reviewed the dimensions and determinants as well as the international, regional and national practices of AMR surveillance and proposed an alternative framework which is patient-and population-centric rather than pathogen – and pharmaceutical – centric. Beyond the One Health (human-animal-environment) approach, it made the case for ‘One Human Health’ (taking multiple morbidities and their mutual impact into consideration) and ‘One Risk’ (taking multiple risks and their mutual impact into consideration) approaches to AMR surveillance in the spirit of the 2030 Agenda, and proposes the leveraging of information technology to develop a synchronised system of AMR/health/risk surveillance in which data and analyses flow across stakeholders for real-time, multi-level action.

1.4.9 *Future of Work*

Radhicka Kapoor, Surbhi Ghai, Serene Vaid and Mayank Jain

Completed

Technological progress has historically been the principal source of economic growth and development of nations. The world has gone through a series of ‘industrial revolutions’ since the 18th century. The first industrial revolution began in the late eighteenth century with the mechanisation of the textile industry and the emergence of the steam engine. The second industrial revolution brought in the age of mass production using electricity and the moving assembly line. The third was the digital revolution that began in the 1980s. The advent of computers and the internet, along with information and communication technology (ICT), initiated the process of simplifying cumbersome tasks through automation. Today, the world stands on the brink of the fourth industrial revolution, which cuts across the physical, digital and biological realms to redefine what is considered “intrinsically human.” Although it is conceptualised as an upgrade on the third industrial revolution, it is widely believed that the speed, scope and ubiquitous nature of the fourth industrial revolution distinguish it from the earlier phases.

While this technological revolution promises higher productivity and efficiency in the work space, it is as yet unclear how its broader impact on employment, skills and the ‘future of work’ will unfold. What is clear, though, is that it will affect almost every industry across every country. Marked by the advent of technologies such as machine learning and artificial intelligence, it is believed that Industry 4.0 will fundamentally alter the organisation of work, production and delivery processes of goods

and services, throwing up challenges while concomitantly presenting a myriad of opportunities for new jobs and markets to be created. The concept of work is expected to fundamentally change with some arguing that the idea of a 'permanent' job is likely to become antiquated and the concept of job security more nebulous, thus raising questions on the adequacy of existing legal, institutional and social protection frameworks.

Given the widespread anxieties and apprehension about the impact of the ongoing technological revolution across the developed and developing world, the G20 Argentinean Presidency has identified the 'Future of Work' as a priority area for 2018. This study presents the current discourse on the impact of the ongoing technological revolution on the world of work and outlines appropriate policy responses to deal with the challenges thrown up by Industry 4.0.

1.4.10 *Infrastructure for Development*

Debarpita Roy, Himanshu Shekhar, Kuntala Bandyopadhyay and Tara Nair
Completed

Infrastructure financing found renewed focus in the Argentinean G20 2018 presidency. While sustained availability of cheap finance remains an important issue, there is also need for standardisation of infrastructure projects and diversification of financial instruments to mitigate risk and attract more investment. According to the Indian Economic Survey 2018, around US\$4.5 trillion worth of investment is required by India until 2040 to develop infrastructure to improve economic growth and community wellbeing. The current trend shows that while India can meet around US\$3.9 trillion of this infrastructure investment requirement, there would remain a gap of about US\$526 billion by 2040. Accordingly, the development of infrastructure as an asset class is being encouraged as the key thrust of India's 'infrastructure for development' track at G20 2018. This study discusses India's infrastructure and its financing ecosystem, the challenges faced, and the risks associated with and the risk mitigation mechanisms in the context of financing infrastructure development. The study also highlights the consensus and alignment India can achieve at the G20 on 'Infrastructure for Development'.

Research Studies in 2018-19

1.4.11 *India's Strategy under the G20 Compact with Africa Initiative*

Anirudh Shingal, Minakshee Das and Akshaya Aggarwal
Completed

The objective of this study was to support the Department of Economic Affairs, Ministry of Finance, Government of India, in taking an informed decision on India's strategy under the G20 Compact with Africa (CwA) initiative. The CwA was initiated under the German G20 Presidency to promote private investment in Africa, including in infrastructure. The CwA's primary objective is to increase the attractiveness of private investment through substantial improvements of the macro, business and financing frameworks. It brings together reform-minded African countries, international organisations and bilateral partners from the G20 and beyond to co-ordinate country-specific reform agendas, support policy measures and advertise investment opportunities to private investors. The initiative is demand-driven and open to all African countries. So far, twelve African countries have joined the initiative: Benin, Burkina Faso, Côte d'Ivoire, Egypt, Ethiopia, Ghana, Guinea, Morocco, Rwanda, Senegal, Togo and Tunisia.

1.4.12 *Universal Health Care*

Ali Mehdi, Pallavi Joshi, Divya Chaudhry and Priyanka Tomar

Ongoing

The notion of universal health coverage (UHC) has gained prominence with its inclusion as Sustainable Development Goal (SDG) 3.8. The United Nations General Assembly declared December 12 as the International Universal Health Coverage Day, and will convene its first high-level meeting on UHC in September 2019. The objective of this study is to analyse the UHC trajectory and develop the conceptual and empirical bases for the promotion of technical counter surveillance measures (TCSM) in the G20 forum. The study will analyse a) the evolution of the international discourse on UHC, b) the experiences and challenges of major G20 countries vis-à-vis UHC, c) the fiscal implications of UHC and the lessons for emerging market economies and lower middle income countries, d) how UHC has evolved in India, starting with the National Rural Health Mission (NRHM) and culminating in Ayushman Bharat and POSHAN Abhiyan and what have been the major challenges, e) the international discourse on traditional and complementary systems of medicine (TCSM), and f) the type of TCSM in G20 countries and the approach of these countries to get TCSM recognised on global platforms.

1.4.13 *Resilience against Natural Disasters*

Saon Ray, Sandeep Paul and Samridhi Jain

Ongoing

The rapidly evolving policy area with regard to reduction of disaster risk and strengthening of climate resilience has attracted much attention in recent times. With climate change emerging as a global threat on a never before scale, the magnitude and frequency of natural hazards is bound to multiply, bringing in new challenges at all levels of governance – global, national and local. Enhanced resilience and improved adaptive capacity is important not only for risk reduction but also to ensure sustainable development. A disaster means disruption of developmental pathways, loss of economic and social gains and a disproportionate burden on the most vulnerable in affected regions. Many of the countries in disaster hotspots are prone to multiple hazards with likelihood of repeated losses. It is in this respect that disaster risk financing and insurance assumes importance. However, the current measures of resilience, including post-disaster assistance and insurance only partly cover the losses, leaving the vast majority highly vulnerable. The objective of this study is to highlight other measures that the G20 forum can adopt to strengthen the financial resilience of member countries to natural disasters.

1.4.14 *Society 5.0 and Artificial Intelligence with a Human Face*

Rajat Kathuria, Mansi Kedia, Richa Sekhani and Sashank Kapilavai

Ongoing

Introduced in Japan's 5th Science and Technology Basic Plan in April 2016, Society 5.0 is an "Imagination Society" where digital transformation combines the imagination and creativity of diverse people to solve social problems and create value. Society 5.0 aims to contribute towards delivering the United Nation's Sustainable Development Goals (SDGs). Artificial intelligence (AI), with its range of characteristics, makes it particularly well placed to generate social welfare. However, the adoption of AI towards Society 5.0 is not straightforward. AI presents nation states with great potential for social welfare while at the same time posing significant risks that may lead to exclusionary and anti-welfare outcomes. As AI takes centre

stage in the policy space, it is incumbent upon the G-20 countries, which have individually recognised the benefits of AI, to call upon its collective strength to address and mitigate the risks posed by AI.

Through a secondary data analysis using broad-based ICT indicators, indicators of human capital, distribution of AI-based patents, concentration of AI-based venture capital funding, etc., this study will understand the drivers of AI ecosystems across G-20 countries. Besides, the case studies that highlight use cases of AI being deployed towards achieving Sustainable Development Goals (SDGs) across G-20 countries will also be explored. The study will identify the role of the government to achieve Society 5.0, compile and analyse the relative strengths of national AI strategies as developed (or as being developed) across G-20 countries. It will also examine the cross-border implications, including that of data mobility, and the scope, if any, for collaboration across G20 countries. This study will also propose a way forward, including a list of G20 countries that can align in finding a common solution to the identified challenges pertaining to AI.

1.5 Exploring Trade and Investment Opportunities between India and Select African and Asian Countries

Project Leader: *Anirudh Shingal*

Research Team: *Neha Gupta, Meenakshi Das, Akshaya Aggarwal and Varsha Jain*

Commencement: January 2019

Expected Date of Completion: September 2019

Funded by: Department for International Development (DFID) (Rs. 43.2 lakh)

The objective of this study is to examine trade and investment opportunities between India and 41 African and Asian countries. The study focuses on these countries' export opportunities in the Indian market and on India's investment opportunities in the selected countries. The study also examines barriers to realising identified trade and investment opportunities, based on a review of the existing literature. The analysis involves secondary research based on literature and data on trade and investment available from different reliable trade and FDI databases. The study covers thirty-three African and eight Asian economies.

1.6 Identifying Emerging Challenges for G20 Countries

Project Team: *Rajat Kathuria and Tanu M. Goyal*

Commencement: *October 2018*

Date of Completion: April 2019

Funded by: Saudi Secretariat (Rs. 27.60 lakh)

International economic governance saw a breakthrough as the Group of Twenty or the G20 came into existence as the premier forum for facilitating economic co-operation. The G20 summits, held under a rotational presidency system, provide a platform to discuss major world economic issues. The run-up to the summit involves a preparatory process with several ministerial and working group meetings and discussions channelled on two tracks – the finance track and the Sherpa's track. Studies indicate that the G20 derives its credibility from its ability to engage key stakeholders beyond its membership, co-ordinate on major reforms of international financial institutions, develop transparent arrangements for mutual assessment and ensure coherence in policy development and implementation. Till date, thirteen G20 Summits have been concluded; the 14th Summit is scheduled in Osaka, Japan, in 2019 and the 15th in Riyadh, Saudi Arabia, in the year 2020. India assumes the G20 Presidency in the year 2022.

Given this background, the objective of this report was to identify the key challenges likely to be faced by the G20 members in coming years. These include both short-term and long-term challenges. The report, from an India perspective, also discusses the likely implications of the potential challenges and workable responses from the G20 as a forum. The findings of this report are based on a primary survey of about twenty-five sector experts and an analysis of existing studies on G20 issues.

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: *Ranjana Roy*

Commencement: October 2014

Expected Date of Completion: September 2019

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

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

Ongoing

As per NSSO's Consumer Expenditure Survey, there has been a steady decline in per capita per day intake of energy and protein in India, particularly since 1993. International experience advocates a direct correlation between income and nutrition levels, which makes the Indian experience puzzling. Given this background, we re-estimated the calorie/protein consumption of the Indian population using a supply side approach. Per day per capita food availability is converted to its calorie and protein equivalent and figures are compared with intake figures directly obtained from NSSO survey reports. We find an interesting temporal trend of rising availability-intake gap, 2 per cent in 1993 to 14 per cent in 2011 for cereals. The gap is severe for dairy, meat, vegetables and fruit products. Our study also finds that improvement in the recall period (from 30 days to 7 days) of NSSO surveys reduces the availability-intake gap. The study points out the urgency to monitor nutrition better by moving from a 7-day recall to a 1-day recall period. The nutritional value of 'food taken outside home' should be examined more efficiently as the frequency of eating out has increased in recent times.

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

Project Leader: *Ashok Gulati*

Research Team: *Shweta Saini, Siraj Hussain, Ranjana Roy and Shyma Jose*

Commencement: April 2015

Expected Date of Completion: September 2019

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

2.2.1 *Gujarat's Agrarian Miracle: Sources, Drivers, and Policy Lessons*

Nearing Completion

Gujarat performed exceedingly well in agriculture in the period of 2002-03 to 2013-14. The sector's growth rate was 8 per cent per annum, which was the highest among all states and very high compared

to the all-India average of 3.3 per cent per annum. This study makes an attempt to find out the sources and drivers of agricultural growth in the state. The findings show that the major source of agriculture growth in Gujarat was fibre followed by oilseeds, livestock and fruits and vegetables, and that three variables played a significant role in boosting Gujarat's agriculture: investment in irrigation, all-weather roads and price incentives for farmers. However, in the last few years, there has been a sharp decline in the growth rate of agriculture in the state. Even though investment in irrigation was the foremost driver of agriculture, two consecutive droughts (2014-15 and 2015-16) have had a severe impact. The sector grew at -0.4 per cent per annum in the period of 2014-15 to 2016-17.

The study makes the following recommendations for Gujarat to revive high growth: 1) become the centre of textile industries by moving towards apparel exports 2) promote 'Operation Veggie' by investing heavily in logistics and link processing industries with organised retailing; 3) liberalise the land lease market 4) encourage micro irrigation techniques and 5) promote solar power as a third crop to promote sustainability.

2.2.2 *Linkages between Agriculture, Poverty and Malnutrition in India*

Ongoing

Despite a high growth rate, a large section of the Indian population has remained undernourished for a long time. Even though the poverty headcount ratio has been going down, the pace of decline in malnutrition has remained unsatisfactory and the present level of under-nutrition remains quite high. According to data in a recent National Family Health Survey (NFHS 4, 2015-16), 38.4 per cent of children were stunted while 21 per cent were wasted and 35.7 per cent were underweight. Moreover, while India has been going through a structural change with a higher share of GDP coming from the services sector, agriculture still plays a vital role in the country's economy with around 47 per cent of the work force employed in agriculture. This paper tries to examine the linkages between agriculture, poverty and malnutrition. Half of the population is dependent on agriculture and allied activities as a source of livelihood. Improvement in productivity directly affects their income and hence uplifts economic status, which in turn influences their nutritional status. Other factors that have a noteworthy impact on malnutrition are literacy, child care, sanitation and access to health care facilities.

2.2.3 *Performance of Agriculture in Uttar Pradesh: District Level Analysis*

Ongoing

The agriculture sector dominates the economy of Uttar Pradesh, providing employment to more than 46.9 per cent of total workforce (GOI, 2016). The state is critically important for the country's food production and food security. The state contributed to one-fifth (16.9 per cent) of total food grain production and 15.8 per cent of the total area under food grain cultivation in the country in the triennium ending (TE) 2016-17. The average income of a farming household in the state was Rs. 6,668 per month as against the national average of Rs. 8,931 in 2015-16 (NABARD, 2018). Given the importance of the agriculture sector in the state and the dismal situation of farming households, the present study will determine the sources and drivers of agriculture growth across regions to propose policy recommendations and strategies to revitalise the state's agricultural sector. The performance of the agricultural sector varied across the four regions of the state given the historical differences in government investment in irrigation, agro-climatic characteristics, landholding structure and pressure

of population on land for agriculture. The analysis shows that the primary source of agricultural growth in Uttar Pradesh was livestock followed by cereals and sugarcane. The study uses panel data regression analysis to determine the drivers of growth across the 70 districts of Uttar Pradesh for the period from 2004-05 to 2014-15. The study finds that irrigation facilities, surfaced roads, power to the agricultural sector and diversification towards livestock sector have a significant impact on agricultural growth in Uttar Pradesh. Proper price incentives, better road network, adequate power supply to the agricultural sector, investment in agro-processing, and irrigation development across the four regions are needed for agricultural growth in Uttar Pradesh.

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

Project Leader: *Ashok Gulati*

Research Team: *Pravesh Sharma and Anisha Samantara*

Commencement: October 2015

Expected Date of Completion: September 2019

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

2.3.1 Innovations in Agriculture Extension in India

Ongoing

The demand driven extension system in India has experienced major conceptual, structural, and institutional changes since the late 1990s to meet the needs of increased production and demand. Both quantity and quality are expected to drive India's agricultural sector and the policies that govern it. Greater use of the internet and mobile technology can ease outreach and make pricing transparent, benefiting both farmers and consumers. These developments rest on the pillars of agricultural extension and innovation. Recently, extension has moved from a narrow definition to one which bridges gaps between farmers and markets, especially in India. The changing definitions of extension come from a rethinking of ideas putting farmers' welfare at the core and aligning that with new technological innovations in agriculture.

The first part of the study looked at public sector spending with respect to agricultural extension and research and education, while carrying out a quantitative analysis to determine how much spending on agricultural extension contributes to agricultural GDP. The study also focused primarily on selected Indian states. To take that forward and expand the scope of the study, the second part of the paper deals with the changing paradigms of extension in the modern age of climate change and sustainability. India as a whole might have not performed as desired on the extension front but It is worthwhile to both assess the agricultural extension from a perspective different from the traditional lens of expenditure and look at space-specific and sector-specific extension outside the six states.

This short systematic review gives a flavour of how extension is perceived in the 21st century and a brief summary of the first part of the extension research, giving details of India's overall performance as well as six selected states studied. Moreover, the analysis will also shed light on concepts of new extension paradigms like 'm-agriculture' and 'e-agriculture', which cut across most field-demonstrations and transfer of knowledge activities.

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

Project Leader: *Ashok Gulati*

Research Team: *Shweta Saini*

Commencement: May 2015

Expected Date of Completion: September 2019

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

2.4.1 Indian Farm Wages and its linkage with Food Prices

Nearing Completion

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

2.5 Agriculture Sustainability, Productivity and Profitability

Project Leader: *Ashok Gulati*

Research Team: *Ritika Juneja and Abhinav Jain*

Commencement: April 2016

Expected Date of Completion: September 2019

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

Efficient technology, effective policy and good governance have contributed immensely to the growth of the agricultural sector globally. This project aims to understand how innovations in technology, institutions, processes and products play an important role in making Indian agriculture globally competitive and domestically responsible, sustainable, productive and profitable. The interplay of different innovations that have helped India to achieve its agriculture growth over the years starting from the green revolution era will be reviewed, documented and analysed. On the input side, the project will concentrate on water resources, a critical input for agriculture production, and highlight how innovations in water use and management can achieve sustainable agricultural development without overlooking productivity and profitability.

2.5.1 Innovations in Indian Agriculture: A Review

Ongoing

With a population of 1.35 billion to feed in 2018, innovations in Indian agriculture all along the value chains are critical to develop sustainable, productive and profitable agriculture. In this study, the focus is on innovations in various production technologies, farming practices, policies and institutional engineering that have had a significant impact in raising production and have been

termed revolutionary. For instance, the Green Revolution is identified with significant changes in the production of wheat and rice, the White Revolution in milk, the Blue Revolution in fisheries, the Red Revolution in poultry meat and eggs, the Golden Revolution in fruits and vegetables and the Gene Revolution in cotton. The study not only looks at innovations and their impact in the past, but also examines innovations that are currently unfolding in other inputs in production processes such as in water usage (irrigation), fertiliser usage, soil health maintenance and optimal use of farm machinery in small holder-dominated agriculture. The study further critically evaluates agricultural incentive policies and institutions (land, credit and farm machinery) in India based on the four-pillared principle of CISS – competitiveness (efficiency), inclusiveness, environmental and financial sustainability, and scalability. The key message of this study is that a lot can be achieved with small holders when innovations that are science based and are backed by predictable, inclusive and sustainable policies and institutions are adopted.

2.6 Agricultural Markets in India

Project Leader: *Ashok Gulati*

Research Team: *Siraj Hussain, Tirtha Chatterjee and Sakshi Gupta*

Commencement: April 2016

Expected Date of Completion: September 2019

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

The purpose of futures trade is to reduce market uncertainty and bring stability to all stakeholders through the process of price discovery and risk management. Indian agricultural commodity futures have gone through a roller-coaster ride since their mega opening in 2003 and have been subject to abrupt regulatory interventions. Against this background, this study looks into the agricultural commodity market and provides recommendations to deepen markets in India. The questions this study asks are the following: (1) whether all commodities have similar prospects in the futures market; if not, which commodities are potential winners (2) how can farmers be linked to the futures market and (3) how best to support farmers?

2.6.1 Agricultural Commodity Futures: Searching for Potential Winners

Ashok Gulati, Tirtha Chatterjee and Siraj Hussain

Completed

The objective of this paper was to identify commodities with high potential in the futures market. A review of the evolution of the futures market in China and USA showed that some of the characteristics common among all highly traded commodities are the following: (1) its use as food or feed, (2) the availability of a surplus, (3) its share in global trade, (4) its price volatility and (5) the sensitivity of the commodity to government intervention and food security. The study uses ‘Principal Component Analysis’ and finds that commodities that are relatively less sensitive from the perspective of the food security of the common man have higher prospects of success in agricultural commodity futures than staples.

Further, the analysis suggests that the Indian futures market can be deepened by (1) focusing first on ‘non-sensitive’ commodities which are less susceptible to government intervention (2) reviewing of

the potential of a commodity at regular intervals, (3) developing delivery based contracts that will increase the comfort of the regulator and policy maker (4) encouraging state trading enterprises to trade on the futures platform so that they have better information and comfort about the dynamics of these markets (5) making the futures platform more attractive by allowing global players and Indian importers currently hedging in exchanges in foreign countries, especially for edible oils such as palm and soya oils and (6) the regulator, the government and the commodity exchanges working in harmony for the benefit of various stakeholders.

2.6.2 *Linking Indian Farmers to Futures*

Nearing Completion

The objective of this study is to identify constraints in the participation of farmers/farmer groups in futures markets, and how best to resolve them. Accordingly, it also looks at some selected Indian case studies and experiences in some other small holder economies, especially China, to learn best practices that can help increase farmers' participation in futures. The study posits that the first limitation in farmer participation is the small-sized holding itself. It is here that the role of farmer producer organisations (FPOs) as an aggregator becomes crucial. The FPOs can aggregate the produce and ensure that both size and quality standards are met as per requirements for participation in futures markets. Based on lessons from some case studies in India and the path followed by China, the study identifies lessons and the way forward for the futures market in India. Some of the key takeaways are: (1) focus initially on commodities not protected by heavy government intervention since this helps in gaining confidence in its functioning, (2) identify production centres for these crops, build delivery centres around them and encourage futures trading in these, (3) provide necessary training in resource institutions, (4) encourage government initiatives like Rajeevika in Rajasthan in other regions, (5) like China, focus on futures, reduce protection and customise products, (6) ensure that government bodies directly participate in the futures market and (7) encourage the use of instruments like forwards and options.

2.6.3 *How Best to Support Farmers?*

Ongoing

Agricultural markets in India are inefficient and characterised by long and fragmented marketing channels, low share of farmers in consumer spending and high price volatility, particularly for perishables like fruits and vegetables. With plummeting market prices of almost all agricultural commodities, farm distress is at its highest. Several schemes like Minimum Support Price (MSP) and Pradhan Mantri Annadata Aay Sanrakshana Abhiyan (PM-AASHA), price deficiency payment and direct income support-based schemes have been implemented in the last few years. However, none of these have really helped the farmer either because of lack of efficiency or lack of reach or both, and none of these schemes is sustainable in the long run. Against this background, the objective of the paper is to identify ways of getting agricultural markets right and identifying the best way to help the farmer. We identify the problems with the current system and recommend reforms required to resolve these. We focus on reforms required in Agricultural Produce Market Committee Act, Essential Commodities Act, export and import policies, futures market, and infrastructural support among others. Lessons will be drawn from the experiences of countries like China and the USA.

2.7 NABARD Centre for Research in Agri-Economics

Project Leader: *Ashok Gulati*

Research Team: *Anwarul Hoda, Bharat R. Sharma, T. Nanda Kumar, Pravesh Sharma, Kavary Ganguly, Sandip Das, Harsh Wardhan, Pritha Banerjee, Gayathri Mohan and Anisha Samantara*

Commencement: May 2016

Expected Date of Completion: September 2019

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

Three studies are being undertaken under this project.

2.7.1 Research Study on Land Acquisition and Land Use

Anwarul Hoda

Completed

The enactment of the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013, has made sweeping changes in India's land acquisition laws (LARR Act, 2013). It is generally acknowledged that the 2013 law has redressed the imbalance that existed between the government as the custodian of public interest and individual landowners. But there is also a concern that some of the provisions would have far-reaching effects on industrialisation and urbanisation.

The paper analyses the LARR Act, 2013, assesses its favourable effect for landowners and examines its impact on the development process. It takes the view that by increasing the compensation for acquired land, mandating social impact assessment to be undertaken and requiring prior consent of land holders in particular cases, the Act has indeed corrected the imbalance that existed in the pre-existing land acquisition procedures between the interests of landowners on the one hand and project developers and the government as a custodian of public interest. It has significantly increased transparency in the land acquisition process and given a voice to landowners in decisions on land acquisition. But the paper also comes to the conclusion that the implementation of the Act, as originally enacted, could retard the development process by slowing down the building of public infrastructure and industrialisation and impeding the provision of affordable housing for the vast majority of the population moving from rural to urban areas. The paper recommends action to alleviate these adverse effects through the enactment of the LARR Amendment Bill, 2015, and other actions. It also takes the view that unless the development of urban sprawls is effectively controlled by means of spatial planning and provision of affordable housing on a large scale, urbanisation will lead to a contraction of land available for agriculture in the country.

2.7.2 Issues related to Water Use in Agriculture

The studies under this area of research intend to identify the major issues ailing the water sector that impede effective agricultural water use and management along with recommending policies to best resolve these issues. The broad themes of the studies are water productivity of selected crops and surface and groundwater irrigation status across major Indian states. The studies outline competitive, inclusive, sustainable, scalable and financially feasible solutions to the problems prevailing in the sector that are based on existing best practices in the country as well as world.

2.7.2.1 *Understanding and Bridging the Gap between Creation and Utilisation: Timely Completion of Surface Irrigation Projects in India*

Nearing Completion

Creating a large public irrigation system constituted the main thrust of public expenditure on irrigation under planned development of India. Yet, there is a large gap between India's irrigation potential creation (IPC) and its utilisation (IPU), mainly through major and medium irrigation (MMI) projects, that has stubbornly increased over time, especially since the 1980s. This means under achievement of planned targets, low returns on large investments and continuing scarcity of irrigation water for farmers. In this paper, the current gap between potential created and utilisation is assessed and costs of IPC and IPU estimated. The paper also looks into cases of selected MMI projects to observe time and cost overruns. The study finds that although some of these projects have picked up speed in terms of creating irrigation potential, there is little advancement in or no information available about the current status of regarding irrigation service delivery.

To bridge the increasing IPC-IPU gap, the paper suggests speeding up the completion of ongoing projects under the Accelerated Irrigation Benefits Programme (AIBP), using underground pipeline systems, increasing the pace at which potential is being created in the eastern region where the cost is comparatively low, correcting cropping patterns, ensuring proper use of information technology to assess potential utilisation, and most importantly, concentrating on concurrent management and planning of projects to avoid time and cost overruns. It also suggests the establishment of a 'National Irrigation Authority of India' with powers to fund and grant technical approval on the lines of the National Highway Authority of India (NHAI) or the Central Electricity Authority (CEA) to provide guidance in policy formulation, to improve the speed and efficiency of project completion and last-mile service delivery and to ensure comprehensive management of national irrigation resources.

2.7.2.2 *Addressing Groundwater Challenges in Indian Agriculture*

Nearing Completion

Overexploitation of groundwater is emerging as a major issue in ensuring sustainable development of Indian agriculture. On the positive side, the increasing use of groundwater has improved production, productivity, diversification and incomes even for small farmers but the boom in its usage has threatened the very base of the resource itself. The populist policy of subsidised/free electricity has been one of the root causes responsible for injudicious groundwater use, particularly in the north western and southern states. In our study, apart from assessing the issue and identifying the causes, we have empirically estimated the cost of groundwater exploitation in major agrarian states like Punjab, Uttar Pradesh, Tamil Nadu, Maharashtra, Gujarat, Rajasthan and Bihar. This will help throw light on how subsidised (electric) power and free water undermine the value of groundwater resources and hinder optimal management.

The analysis showed that the electricity subsidy per hectare of area irrigated with groundwater were found to be highest in states with acute groundwater stress like Punjab (Rs.12194/ha) Tamil Nadu (Rs.6667/ha), Rajasthan (Rs.3677/ha) and Maharashtra (Rs.3015/ha). These states also have deeper water levels. On the other hand, eastern states like Bihar with a safer level of groundwater development and shallow water levels, were found to have low electricity subsidy per unit of area

irrigated with groundwater (Rs.121/ha). Some of the effective local demand-side and supply side best practices in groundwater management like direct benefit transfer on energy usage highlighted in the study can be scaled up to manage groundwater resources sustainably through support from financial institutions like NABARD. Other interventions required for optimal groundwater use in India include re-aligning the cropping pattern with respect to sustainable groundwater use and productivity, effective regulations and sensitising farmers.

2.7.3 Financial Inclusion of Small Holders in High Value Agriculture

The focus under this theme is the value chain in the dairy, horticulture (onion, potato, banana and mango), poultry, fisheries and pulses. All these value chains are being analysed in the framework of competitiveness, inclusiveness, sustainability and scalability (CISS) and access to finance (F). To ensure the overall growth of these sectors, it is important that the chains are competitive in terms of domestic market efficiency and are trade competitive. Given the predominance of smallholders in Indian agriculture, ensuring inclusiveness is the key to farmers' participation and their benefiting in terms of remunerative returns. The study will focus in particular on the different stages of the value chain that require financial assistance and examine innovative financing methods followed in different countries as well as assess the extent to which these can be replicated in India.

2.7.3.1 Poultry Value Chain in India

Nearing Completion

Among the Indian livestock based sectors, poultry farming has occupied an exceptional position due to its rapid growth and sustained expansion. While agricultural growth has been rising rather slowly at about 2-3 per cent per annum over the past two decades, poultry production has been rising at the rate of around 8 per cent per annum (Food and Agriculture Organisation, 2017).

The present growth rate of poultry in the country has put India among the top poultry producers in the world, with India being the third largest egg producer after China and the USA. India was also the fifth largest chicken meat producer in 2017-18. The transformative growth in the poultry sector has been spearheaded by the commercial poultry industry, which contributes nearly 80 per cent of the total output, whereas the rest (20 per cent) comes from backyard or traditional poultry. However, the lack of adequate cold chains and regulated wet markets puts pressure on wholesale prices of poultry products due to cyclical boom and bust trends. Since marketing is in the hands of commission agents and private traders, procurement in remote and backward areas is hardly prioritised. The concentration of commercial poultry in certain areas has excluded other rural areas from gaining from this revolution, which can be overcome with a strong marketing network to free the sector from the shackles of middlemen.

This paper seeks to capture the dynamics of the industry's growth from four critical angles over the recent past (2000 onwards): competitiveness, scalability, inclusiveness and sustainability (overarched by financing patterns that intersect all of these). Utilising production, growth, export and price data for the period between 2000-01 and 2015-16, the study will examine (a) the trends and features of development in the Indian poultry sector (b) the rise of integrators and their working models (c) structural changes in the livestock sector vis-à-vis poultry farming and their implications for the

inclusion of small farmers and the sustainability of such growth economically and environmentally and (d) how this seriously undermines their competitiveness. It will also provide policy recommendations based on the analysis.

2.7.3.2 *Deconstructing Value Chains of Tomatoes, Onions and Potatoes (TOP)*

Nearing Completion

Even with a record production of vegetables year after year, vegetable cultivation in India is characterised by fragmentation, substantial quality and quantity losses, high price volatility and low levels of processing. The prevalence of these problems has not only limited India's potential in global trade but also resulted in low returns to the farmers growing these high value crops.

This study analyses the existing value chains of the three most important vegetable crops in India tomatoes, onions and potatoes (TOP) and provides recommendations to develop more competitive, inclusive, sustainable and scalable value chains with an improved financing mechanism (CISS-F). The research is based on a combination of secondary data analysis, field visits and discussions with stakeholders in the value chain. The study is expected to help policymakers to best operationalise the recently launched 'Operation Green' scheme, aimed at stabilising the prices of TOP vegetables. The study finds that all TOP vegetables are export competitive in the international market, but frequent distortions in Indian trade policies lead to substantial fluctuations in exports. The efficiency of the value chain has been analysed by estimating the mark ups (costs and margin) of each stakeholder for selected value chain models of TOP. The study has covered inclusiveness in production, marketing, post-harvest management and contract farming models, financial and environmental sustainability, scalability of production and exports, and the existing financing mechanism for all stakeholders. The paper suggests policy recommendations for bringing efficiency in existing value chains.

2.7.3.3 *Towards Efficient Banana and Mango Value Chains in India*

Nearing Completion

In India, fruit crops are high-value agricultural crops and are mostly managed by individual farmers unlike in western countries where large private corporations are involved in their production and exports. India's fruit production increased significantly from 28.6 MMT in 1991-92 to 97.4 MMT during 2017-18. Among fruits, bananas and mangoes are the most important with a 50 per cent share in the total acreage under fruits, production and value. The study finds that while bananas are export competitive throughout the period of study, mango (Alphonso variety) exports were occasionally competitive. While poor quality because of fragmented land holdings and lack of pre and post-harvest management are reasons for low exports in bananas, high air freights to the US, EU, or Japan are reasons for low mango exports, the only selling point being the unique flavour, colour and taste of Indian mangoes.

As a majority of banana and mango farmers are small and marginal, agencies such as National Bank for Agriculture and Rural Development (NABARD), Small Farmers' Agri-Business Consortium (SFAC) and state governments must play a pro-active role in enhancing dysfunctional Farmer Producer

Organisations (FPOs) so that farmers' price realisation increases. Both bananas and mangoes have been found to be profitable and hence, financially sustainable. Steps like drip irrigation, high density planting and organic waste management can ensure the environmental sustainability of these crops. This study analyses the existing financing mechanism available for stakeholders and identifies major constraints in the value chain. The policy recommendations suggested in this paper will go a long way in correcting the inefficiencies inherent in the existing banana and mango value chains.

2.7.3.4 Dairy Value Chain in India

Nearing Completion

Since 1998, India continues to hold the number one position (around 19% share in world milk output) amongst the milk producing countries of the world. Between 2001-02 and 2017-18, India's milk production rose from 84.4 million tons (MT) to 176.3 MT at a compound annual growth rate of 6.4 per cent. Much of the rise in milk production is attributed to the success of Operation Flood. As a result, the present per capita availability of milk in India is 375 gram per day as compared to the global average per capita availability of 229 gram per day. Milk contributes to one-third of the gross income of rural households. In the case of the landless, half of their gross income contribution is from milk. It is estimated that 16 million farmers are engaged in dairying. The value of the milk output was Rs.5.60 lakh crore, which surpassed the value of food grain (cereals and pulses) of Rs.3.74 lakh crore in 2015-16.

The objective of this study is to analyse existing value chains in the dairy sector and recommend policy measures for creating competitive, inclusive, sustainable and scalable value chains with adequate financing options. The research is based on a combination of secondary data analysis, field visits and discussions with all stakeholders such as officials (from dairy co-operatives as well as private sector players), farmers and traders in the value chain. A draft report on the dairy value chain has been prepared based on the field visits conducted and data analysis from secondary sources; the final report is being prepared after getting inputs from reviewers.

2.7.3.5 Pulses Value Chain in India

Nearing Completion

Pulses are integral to addressing the protein gap in Indian diets and sustaining food security. India has been a major producer, consumer and importer of pulses. With an unprecedented production level of 23.95 million tonnes in 2017-18 (2nd AE), Indian farmers were in severe distress because of their inability to find remunerative markets for their produce. Pulses in India are no longer only about augmenting production but enhancing marketing opportunities in order to ensure pulses production is profitable for farmers. The objective of the study is to map the current pulses value chain, focusing on gram/chana/chickpea and pigeon pea/tur (together accounting for nearly half of the production basket) and assess the competitiveness, inclusiveness, sustainability and scalability (CISS) of the chains. The study also includes access to finance and risk mitigation (FRM) with respect to the different stakeholders involved. Under competitiveness, domestic value chain efficiency is measured in terms of the share of farmer's income in consumer price for gram/chana/chickpea and pigeon pea in particular. It also includes the trade competitiveness of these two pulses

value chains. The sustainability of the pulses value chain is analysed in terms of environmental and financial sustainability. Pulses, being less water and resource intensive, are amenable to sustainable production. Lastly, scalability is measured in terms of the potential to diversify to pulses other than gram and pigeon pea and to diversify production of pulses to more states that are agro climatically suitable for growing pulses and have scope to improve yield levels. The study approach includes analysis of secondary data and information and includes interaction with key stakeholders (farmers, wholesalers, and processors) in the value chain to understand the issues, challenges and ways to address them.

2.7.3.6 *Grape and Pomegranate Value Chain in Maharashtra*

Nearing Completion

Grapes and pomegranates are positioned globally as high value fruits. India is the second largest producer of grapes and the largest producer of pomegranates in the world. The grape and pomegranate value chain in India (Maharashtra) is relatively young, but has evolved to include small farmers, small and big exporters, firms producing processed products such as arils and raisins, traders, bankers, owners of cold chains, import agents in Gulf and the EU, and super market retail chains. Grape and pomegranate value chains from Nasik to other markets in India and the world are highly remunerative and boast of the high involvement of tech-savvy, scientific minded, small farmers. Yet India's export-production ratio is one of the lowest in the world. This study aims to document the presence, remuneration and risk of every player in the value chains in terms of their competitiveness, inclusiveness, sustainability, scalability and financial requirements (CISS-F). It finds that grape and pomegranate exports are competitive currently, but more research into varieties is needed in order to sustain exports in the future. Both value chains are inclusive for small farmers and small exporters and have scaled up well too. However, there is a huge requirement for domestic as well as export credit guarantees to strengthen the value chains further. The study also finds a lack of insurance culture within the value chains, even though climate uncertainty has threatened the viability of both the commodities.

2.8 **Updation of Producer Support Estimates for India for 2017 and 2018**

Project Leader: *Ashok Gulati*

Research Team: *Shweta Saini*

Commencement: December 2018

Date of Completion: February 2019

Funded by: Organization for Economic Co-operation and Development (OECD) (Rs. 7.64 lakh)

The project is an extension of the recently completed OECD-ICRIER project on "Agriculture Policies in India". In the earlier project, extensive data analysis was undertaken to measure the producer support estimate (PSE) of India for the first time. The report Agriculture Policies in India, which outlines the policy environment for farmers in India, was released in July 2018. The current work has provided an update of the PSE estimates along with a summary and analysis of agriculture policies in 2018-19. The report will be published this year by the OECD.

2.9 Facilitating Trade through Promoting Ease of Doing Business in India's Food Sector – Streamlining Imports and Reducing Compliance Burden

Project Leader: *Arpita Mukherjee*

Research Team: *Ali Mehdi, Divya Satija, Pallavi Joshi, Divya Chaudhry, Priyanka Tomar, Angana Parashar Sarma, Soham Sinha, Raj Kumar Shahi and Brahma Chauhan (External Consultant)*

Commencement Date: November 2018

Date of Completion: March 2019

Funded by: Foreign & Commonwealth Office (FCO), UK (Rs. 45.49 lakh)

The Foreign and Commonwealth Office (FCO) of the UK government is working closely with the Food Safety and Standards Authority of India (FSSAI) on a capacity building initiative to improve the ease of doing business in India. The objective of FSSAI is to leverage information technology (IT) to enhance the consistency, transparency and predictability of the business environment and reduce the compliance burden. This project aimed to support FSSAI in streamlining the process of food imports and reducing the compliance burden for domestic companies to facilitate trade and ease of doing business. The four studies conducted under the aegis of this project focused on the challenges in importing food products into India, in establishing operations in India and on how the challenges can be mitigated. The studies included a review of the FSSAI's IT initiatives, field visits to ports in India and the UK and a primary survey of 150 stakeholders in India and the UK.

2.9.1 *Streamlining Food Imports for Trade Facilitation and Ease of Doing Business in India*

Arpita Mukherjee, Divya Satija, Angana Parashar Sarma and Soham Sinha

Completed

The FSSAI, being the nodal agency in the food import clearance process, has taken a carefully designed approach to reform, aiming to improve the business regulatory environment over the course of the next few years. They have set up standards for food products and aligned them with international standards to ensure that Indian consumers have access to safe and hygienic food. In recent times, they have also introduced innovative and efficient use of technology to reduce the clearance time for food import consignments and ensure transparency through paperless transactions to streamline the import process. Accordingly, the objective of this study was to (a) provide an overview of the food import clearance process in the UK and India (b) identify the issues in the import process in India and (c) make recommendations on how to streamline the process using technology and automation and learning from the best practices of countries such as the UK.

The study has made recommendations that will (a) help improve co-ordination within FSSAI and between FSSAI and other agencies, (b) streamline the food import process through the use of technology to develop a robust risk management system and for data analytics, (c) address infrastructure gaps and (d) improve manpower efficiency through training and capacity building.

2.9.2 *Streamlining Food Safety Compliance Ecosystem in India*

Ali Mehdi, Pallavi Joshi, Divya Chaudhry and Priyanka Tomar

Completed

Given the significant contribution of the food industry to economic growth and employment generation in both India and the UK, this study undertook a comparative assessment of the food

safety regulatory compliance ecosystems in the two countries, surveyed the compliance burden faced by the food industry in India, and suggested steps that FSSAI and related government agencies could consider to make food safety compliance rational and proportionate vis-à-vis its stated objectives and reduce the compliance burden on the food industry in India. The study conducted a situation and problem analysis based on desk research as well as field interactions with FSSAI representatives at the New Delhi headquarters and Chennai zonal office as well as twenty-one domestic and multinational food companies across different firm sizes and food industry segments in Delhi, Gurgaon, Mumbai and Chennai. The research team also interacted with the UK food regulatory bodies including the Food Standards Agency (FSA), Department for Environment, Food & Rural Affairs (DEFRA) and the Department for Business, Energy & Industrial Strategy (BEIS) as well as a few major food companies, the British Retail Consortium (BRC) and a food safety consultancy in London.

2.9.3 *IT Manual: Facilitating Trade through Promoting Ease of Doing Business in India's Food Sector: Streamlining Imports in India*

Arpita Mukherjee, Divya Satija, Brahma Chauhan and Raj Kumar Shahi
Completed

In the context of international trade, the FSSAI plays a pivotal role in ensuring that imported food products in India adhere to food safety and standards requirements. In doing so, FSSAI also has to align its policies and processes to meet a number of objectives including improving the ease of doing business in India, and streamlining import clearances. The FSSAI has been actively taking several initiatives to meet this objective and, in line with the Indian government's "Digital India" drive and World Trade Organization's Trade Facilitation Agreement to which India is a signatory, the focus of FSSAI in recent times has been on introducing innovative and effective use of technology to ensure faster and paperless clearances of imports, lower risk and improve the ease of doing business.

In this context, the objective of this study was to identify gaps in the existing information technology (IT) processes in FSSAI while retaining the best practices that have already been implemented. The study has recommended solutions to enhance the ease of doing business, reduce procedural barriers and implement technology and automation-oriented solutions that can help resolve some of the structural bottlenecks including risk management, inter-agency co-ordination, information availability and clearances, among others.

2.9.4 *IT Manual: Facilitating Ease of Doing Business and Streamlining Food Safety Compliance Ecosystem: India*

Arpita Mukherjee, Ali Mehdi, Brahma Chauhan and Raj Kumar Shahi
Completed

The FSSAI plays a pivotal role in ensuring that domestic food products meet its food safety and standards requirements and that the standards and processes are aligned to international standards such as the Codex Alimentarius and India's commitments in the World Trade Organization (WTO). In doing so, FSSAI also aims to achieve greater transparency in processes through the use of technology and automation. Given the quasi-federal nature of governance in India, technology can be used to achieve FSSAI's objective of "one country one law". Given this background, the study was based on the premise that in a modern globalised world, food safety systems/processes should be technology

driven. Technology can ensure traceability from farm to fork. From a business perspective, technology reduces compliance cost and improves transparency and helps address consumers' need for safe food and nutrition. Technology can be used to improve co-ordination across FSSAI offices and businesses can engage better with FSSAI and help with food safety compliance. The IT manual that has been prepared identifies the technology gaps and makes policy recommendations to FSSAI that would enhance and improve its engagement with food business operators and have a uniform policy across its different offices in India.

3. Challenges and Opportunities of Urbanisation

3.1 State of Municipal Finances in India

Project Leader: *Isher Judge Ahluwalia*

Research Team: *P. K. Mohanty, O. P. Mathur, Debarpita Roy, Ayush Khare and Shreya Mangla*

Commencement: April 2018

Date of Completion: August 2019

Funded by: Fifteenth Finance Commission of India (Rs. 4.94 lakh)

ICRIER conducted a study for the 15th Finance Commission on the state of municipal finances in India. The study reviewed the recommendations of previous Central and State Finance Commissions with regard to urban local governments, compiled national and state level indicators on municipal finance across 29 states covering 4259 urban local governments, and suggested measures to improve municipal finances. The study pointed out that finances of urban local governments in India are in a state of decay. There is a growing mismatch between their responsibilities and revenues. Municipal 'own revenues' lack buoyancy leading to increased dependence on transfers from higher levels of government. The introduction of the Goods and Services Tax (GST) that subsumed several local taxes has been a blow to the fiscal autonomy of urban local governments. The report noted that the long term solution to the problems of dwindling own revenues of urban local governments emanating from the GST regime is to amend the Constitution to provide sharing of the revenues from GST with urban local governments.

3.2 Finances of Municipal Corporations in Metropolitan Cities of India

Research Team: *Ayush Khare, Debarpita Roy and Shreya Mangla under the guidance of Isher Judge Ahluwalia, P. K. Mohanty and O. P. Mathur*

Commencement: April 2018

Date of Completion: August 2019

Funded by: Fifteenth Finance Commission of India (Rs. 9.94 lakh)

This study conducted by ICRIER for the 15th Finance Commission focussed on the finances of 37 municipal corporations in Indian cities with a population of one million or above. It analysed the changes in sources of own revenue, which includes tax and non-tax revenues of the Municipal Corporations, and transfers from central and state government over the past five years. Special focus was laid on finances of the six largest Municipal Corporations of Mumbai, Bengaluru, Hyderabad, Ahmedabad, Chennai and Kolkata, the administration of property tax in these cities, and the lack of a metropolitan view in the governance of metropolitan economic regions in India.

4. Climate Change and Sustainable Development

4.1 Linking Tourism, Local Environment and Waste Generation in Indian Himalayan States Using CGE Model: Case-Study of Uttarakhand

Project Leader/Co-ordinator: *Amrita Goldar*

Research Team: *Manisha Mukherjee, Shubham Sharma and Viraj Sawant*

Commencement: January 2019

Expected Date of Completion: January 2020

Funded by: National Mission on Himalayan Studies, Ministry of Environment, Forest and Climate Change (Rs. 35 lakh)

The objective of this study is to prepare a strategy for linking tourism, local environment and waste generation and highlight policy instruments for effective waste management in the states in the Indian Himalayan Region (IHR). To quantify the impact of rising tourist footfalls on the state economy, a regional input-output (IO) table is being created, focusing on the tourism sector, that will be used as a base to construct a social accounting matrix (SAM) for the state of Uttarakhand. The bi-directionality between the amount of municipal solid waste generated and tourist footfalls in the state is explored by development of a Computable General Equilibrium (CGE) model on the generated IO table. The study uses secondary research and primary data collection as part of its methodology to estimate state-level CGE parameters. Once all the parameters of the model are estimated, various policy instruments will be tested to analyse their efficacy in managing solid waste generated in the region and understand their possible effects on other economic parameters such as tourism revenue and employment.

4.2 Assessment of the Financial Requirement for Implementing India's Nationally Determined Contribution (NDC)

Project Leader: *Amrita Goldar*

Research Team: *Himanshu Shekhar, Shubham Sharma, Sajal Jain, Diya Dasgupta and Viraj Sawant*

Commencement: October 2018

Expected Date of Completion: October 2019

Funded by: Department of Economic Affairs (DEA), Ministry of Finance (Rs. 31.85 lakh)

The study examines the costs of successfully achieving the ambitious Nationally Determined Contributions (NDCs) of India to the United Nations Framework Convention on Climate Change (UNFCCC) by a thorough examination and analysis of the financial requirements as well as the effective channels, sources, instruments and structures that need to be put in place. The objective is to provide a detailed and realistic assessment of the total financial requirement with an updated understanding of climate to successfully meet committed NDCs. The study is being undertaken in three parts. The first part focuses on estimating the financial requirement for mitigation NDCs; the second part looks at the adaptation funding requirements and the last part examines the funding gaps that exist and the potential mechanisms (financial innovations, market instruments, policies, etc.) to source the finance required from international and private sources. It moves from an assessment of 'need' to 'availability' and finally to an estimate of the financing gap and the sources to deal with the gap.

4.3 Exploring Cost-reduction Strategies for Electric Vehicle (EV) Batteries

Project Co-ordinator: *Amrita Goldar*

Research Team: *Himanshu Shekhar, Shubham Sharma, Viraj Sawant and Utkarsh Patel*

Commencement: February 2019

Expected Date of Completion: October 2019

Funded by: Shakti Sustainable Energy Foundation (Rs. 38.5 lakh)

Electric mobility is considered the future of mobility, especially for India, which remains a big importer of fossil fuels. The Indian automobile manufacturing sector has developed a local manufacturing ecosystem of components, making low-cost vehicles with significant and increasing export contribution. This globally competitive sector should be further supported to ride on the global transition to EVs which, according to BCG, is expected to account for 50% of all vehicle sales by 2030. However, due to the nascent technology, the relatively high battery cost compared to fossil fuels remains an impediment to the adoption of EVs. The battery accounts for almost 50 per cent of the vehicle cost.

State support for the promotions of EVs has also grown with the National Electric Mobility Mission Plan (NEMMP), Faster Adoption and Manufacturing of Electric Vehicles (FAME) and other policies that target financial support for the vehicle manufacturer and consumers to increase penetration. A part of the proposed new policy also factors in support for developing a manufacturing base of EVs in India.

As the cost of batteries/storage has been identified as the key challenge in higher penetration of electric mobility, the primary outcome of the project is to identify plausible policy options for the government to reduce the cost of batteries and accordingly recommend battery technologies which could suit the Indian conditions. The study will focus on the domestic battery ecosystem to provide an optimum package of policy instruments with respect to existing policies of the central and state governments, domestic battery manufacturing capabilities and financial requirements. It will also present the range of battery technologies that may be suitable for Indian usage patterns and environmental conditions and various vehicle categories like 2-wheelers, 3-wheelers, 4-wheelers, buses, etc.

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

5.1 MeitY Chair for Internet Policy: Value, Security and Governance Project

Project Leader: *Rajat Kathuria*

Research Team: *Mansi Kedia, Richa Sekhani, Gangesh Sreekumar Varma and Ujjwal Krishna*

Commencement: September 2017

Expected Date of Completion: September 2019

Funded by: Ministry of Electronics and Information Technology (MeitY) (Rs. 95.43 lakh)

The Internet continues to alter the structure of the economy; more fundamentally, it has altered how people and institutions relate to each other. While it has contributed tremendously to GDP growth, it has led to disruptions in business models and socio-political tensions, which demand nuanced

governance responses. Moreover, the pervasive use of the Internet in the daily organisation of social lives, and its global reach raise issues of security and privacy of individuals and communities, which warrants an understanding of how to manage and govern the Internet, both in the national and international contexts. The MeitY Chair for Internet Policy at ICRIER primarily aims to support policy based research on aspects of Internet openness, security and governance. The objective is to undertake evidence based research that will build capacity for India's participation in international forums while strengthening domestic policy. To achieve these objectives, the first year of the programme focused on a study related to the domain name market in India, and the performance of the country code top-level domain (ccTLD) in particular. The second paper looked at data flows and data localisation policies in India within the global context. The focus in the second year will be on the digital divide in India and exploring the challenges and opportunities in transitioning into Internet Protocol Version 6 (IPv6).

Along with the research papers, a fortnightly news digest on Internet policy related news is being prepared and widely disseminated as a part of this research programme through the two years. A database curating content on global internet infrastructure and policy related datasets is also being developed on a dedicated website www.internetpolicy.in.

5.2 ICANN Research and Multi-stakeholder Engagement Assistance Programme

Project Leader: *Rajat Kathuria*

Research Team: *Gangesh Sreekumar Varma, Sashank Kapilavai, Kaushambi Bagchi, Ujjwal Krishna and Raj Kumar Shahi*

Commencement: June 2018

Expected Date of Completion: May 2021

Funded by: National Internet Exchange of India (Rs. 331 lakh)

The Internet Corporation for Assigned Names and Numbers (ICANN) is among the key global Internet governance institutions responsible for the co-ordination and management of the domain name system (DNS). ICANN is the exemplar of the multi-stakeholder model of Internet governance. India announced its support for the multi-stakeholder approach in Internet governance at the ICANN53 meeting in 2015. In November 2016, ICANN57 was held in Hyderabad, marking an important milestone in the transfer of oversight to the 'global multi-stakeholder community' and presented an important opportunity for greater influence and leadership by developing countries such as India.

Through this programme, ICRIER aims to enable meaningful and sustained engagement of Indian stakeholders with ICANN. Over the three years of engagement, ICRIER will provide research support for India's representation in the Governmental Advisory Committee of ICANN, and in facilitating greater multi-stakeholder engagement on ICANN related issues. Over the three-year duration of the project, we will update and contextualise various stakeholder positions to bring out Indian perspectives and crystallise the issues to be raised by Indian stakeholders in various fora. Finally, through multiple stakeholder engagements, we will aim to develop capacity and build expertise among Indian stakeholders on ICANN related issues.

5.3 An Analysis of Competition in India's Mobile Handset Market

Project Leader: *Rajat Kathuria*

Research Team: *Mansi Kedia, Kaushambi Bagchi and Gauri Bansal*

Commencement: August 2016

Expected Date of Completion: September 2019

Funded by: Qualcomm Incorporated (Rs. 95.33 lakh)

Telecom and information technology have transformed the way we live. Mobile phones have been the key to this revolution in India. It is now the second largest smart phone market globally. At present, the mobile phone market in India is overcrowded with over 100 brands and 3400 models. Moreover, the market is also very dynamic; the pecking order of firms is constantly evolving with new brands challenging established manufacturers.

This study mapped the transformation of the industry through technological progress, usage and price of mobile phones in India, identifying competition issues if any. The competition analysis includes an overview of the market structure, technological advancements, estimation of concentration ratios and an entry-exit analysis. The analysis is based on data for mobile sales in India from 2007 to the second quarter of 2018. While there seem to be no immediate concerns related to significant market power in the overall industry, some trends stand out as concerns for the future. One among these is the high proportion of irrelevant firms in the market. Policy interventions, therefore, must allow for incentives to develop innovation capabilities within the larger set of manufacturers in the industry. Substantive value addition as proposed under the phased manufacturing plan is also likely to limit the cases of hit and run entry, which currently crowds the market.

The study also used survey data collected through an online platform on consumer preferences to identify patterns of brand lock-in. While there is evidence that familiarity with operations and functioning of an existing Smartphone determines future choices of handset brands, a large percentage of respondents also reported a willingness to switch to other models and brands for new experiences and features. Additionally, though handset prices have declined in recent years, there is a clear preference for mid-range smartphones, regardless of income categories. The demand for mobile phones in India is unquestionable. Affordable domestic manufacturing is essential to help satisfy this demand and benefit from its spill-overs. The government has taken appropriate policy measures to address this; however, further collaboration with the industry is necessary to build domestic capabilities and accelerate growth.

5.4 Regulating Data & India's Digital Economy

Project Leader: *Rajat Kathuria*

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

Commencement: April 2019

Expected Date of Completion: April 2020

Funded by: Data Catalyst Institute (Rs. 100 lakh)

There has been an explosion of data flows that have created new markets, improved existing markets, disrupted businesses, and simultaneously created new business models, and delivered new monopolies and, of course, new politics. Digital information carried over pipes and air waves are unlike any previous resource – it is mined, refined, valued, bought and sold in ways that are

challenging traditional market principles of pricing and property rights among others. It changes the rules for markets and perhaps demands a new approach from regulators.

Many economists are of the view that the task of government is to take necessary steps to ensure that all impediments to the proper functioning of markets are removed, i.e., regulation ought to be minimal. On the other hand, there are those who support a more active role for public policy since market failures can be pervasive. The key to effective government intervention, therefore, lies not in demonstrating the existence of market failures but rather in identifying the nature of the intervention that would make it worthwhile. For the data economy, this is vital and perhaps more complicated. One of the chief tasks in this research programme will be to understand the functioning of markets in the data economy, the associated size and the conduct of firms therein. Transparency and trust (or lack thereof) will be crucial attributes underlying the analysis.

Under this study, a total of six discussion papers on identified themes will be produced. These are (i) Data in the Digital Economy: Concepts and Value(s), (ii) Minors in the Digital Economy and Challenges in Age Verification, (iii) Regulatory Burden to Small and Medium Businesses due to Data Localisation Policies, (iv) Identification and Authentication in India's Fin-Tech Ecosystem, (v) Privacy Regulation in Action: Stakeholder Roles and Responsibilities and (vi) Data in the Digital Economy: India's Role in Emerging Global Regimes, Framework for New Economics of the Data Driven Economy. Compiling the analysis from the six papers, a comprehensive research report on 'New Economics for the Data Economy' will be prepared. It will assimilate the analysis from the discussion papers and provide new thinking on sustainable solutions to regulate data in the digital economy.

5.5 India's Platform Economy and Emerging Regulatory Challenges

Project Leader: *Rajat Kathuria*

Research Team: *Mansi Kedia and Sonal Dua*

Commencement: April 2019

Expected Date of Completion: December 2019

Funded by: Indian Institute of Management (IIM), Ahmedabad (Rs. 34.96 lakh)

The platform economy has undoubtedly become an engine for growth and development in India. Apart from the immediate benefits of such efficiency, platformisation creates a wide range of business opportunities. India's potential to deepen platformisation makes it opportune to systematically analyse its role in economic growth and job creation. However, the benefits of platformisation must also be viewed alongside the concerns it raises on the disruption of traditional businesses and the likelihood of anti-competitive behaviour. Two-sided platforms are often seen to violate principles of marginal pricing, when they set zero cost or even pay users to enter platforms in an attempt to trigger network effects.

The study aims to conduct an extensive survey across the country to understand the effects of digital platforms on consumer welfare as part of a larger attempt to understand the effects of platformisation on the Indian economy. The consumer survey will be supplemented by secondary data and estimates that will describe the performance of various digital platforms and its contribution to the growth of the Indian economy, using publicly available data on company financial records, measures of digital economy share of GDP, etc.

The study will develop extensive case studies based on fieldwork and available secondary data sources to understand the economic and regulatory challenges raised by disruptive digital platforms.

Furthermore, a secondary comparative analysis of the nature and capacity of global regulatory regimes and best practices will be undertaken to assess India's regulatory capacity and infer potential measures that regulatory agencies in India can take to match the challenges raised by digital platforms.

5.6 Growth Dividends of Digital Communication: The Case for India

Project Leader: *Rajat Kathuria*

Research Team: *Mansi Kedia, Richa Sekhani and Ujjwal Krishna*

Commencement: November 2018

Expected Date of Completion: December 2019

Funded by: Broadband India Forum (Rs 31.9 lakh)

Since 2009, there has been a massive change in the quality and nature of telecom investments as well as the rate of investment across regions and states. Rudimentary voice systems have given way to innovative data-based applications that drive efficiencies in the economy. Arguably, emerging markets like India stand to gain much more from these innovations because communication technologies add more value in the face of existing constraints. For India, the potential role of new technologies is now an integral part of the country's development strategy with innovations, both public and private, centred on ICT.

In the first phase, this study examined the changing magnitude of the effects of telecommunications infrastructure on aggregate economic output for India, taking advantage of the sub-continental size of the country and considerable state level variation. To carry out the empirical investigation, the study relied on a data set that covered 19 LSAs (licensed service areas) over the period 2000-2017. The empirical framework explicitly accounted for the endogeneity between telecommunication infrastructure and economic output. Besides the quantitative assessment of the effects, the study also examined the manner in which communication technologies have transformed the way individuals, businesses and governments function and interact. These have been illustrated by use cases that range across sectors and complex economic and social problems.

The second phase of the study will estimate the effects of digital infrastructure in the Asia-Pacific region with special focus on South and East Asia. The study will isolate growth dividends from digital infrastructure within these regions using econometric techniques similar to that in Phase 1. The econometric analysis will be complemented by case studies that will demonstrate the impact of telecom by sectors of economic importance to Asian economies. The case studies will reflect on use cases across countries in South and East Asia including Japan, Taiwan and Korea. The case studies will also examine the possibilities of cross-country co-operation in the development of digital infrastructure.

5.7 Broadband Readiness Index

Project Leader: *Rajat Kathuria*

Research Team: *Mansi Kedia, Richa Sekhani and Kaushambi Bagchi*

Commencement: June 2019

Expected Date of Completion: December 2019

Funded by: Department of Telecom (Rs. 88.55 lakh)

With over two decades of commercial access to the Internet, India has come a long way from dial-up connections to super-fast broadband speeds, at least in some urban pockets. Despite massive up scaling of digital networks and services on a global scale, India's performance is discouraging. Slow and delayed

infrastructure development is a challenge that India's digital economy is grappling with. Statistics at the country-level do not do justice to the accomplishments of each state. The performance of states varies with respect to digital access, affordability and usability. In fact, there exist state specific challenges. For example, conflict states like Jammu and Kashmir are constrained by several political and security limitations. There are other terrain and infrastructure specific challenges such as those faced by states in the North East. The outcomes are reflected in the subscribership levels of each state. State governments are deeply involved in the process of network deployment and proliferation of digital services.

Conceptualised in the National Digital Communications Policy 2018, the Broadband Readiness Index proposes to create a state-level index appraising the status of the underlying infrastructure, policy regimes and investment climate that reflect the digital environment and its related factors at the state-level. Such an exercise will provide useful insights into strategic choices made by states to optimise policy and the consequent investment allocations in ICT programmes. In the spirit of competitive federalism, the study will also be useful for states to cross learn and jointly participate in achieving the overall objective of digital inclusion and development in India.

5.8 The Wonder that is Telecom

Project Leader: *Rajat Kathuria*

Research Team: *Mansi Kedia, Gangesh Sreekumar Varma, Kaushambi Bagchi, Richa Sekhani, Sashank Kapilavai and Ujjwal Krishna*

Commencement: April 2014

Expected Date of Completion: December 2019

Funded by: ICRIER

The story of Indian telecom's extraordinary growth, controversies and impact has remained a subject of constant media, public and academic attention for nearly a decade. At the centre of this narrative is the mobile phone, with 1.18 billion connections as on March 2018. The mobile phone has been the fulcrum on which telecom surged in India. The future holds promise but that cannot be assumed, especially since disruptive technologies need an enabling environment to flourish. ICRIER's extensive work in this evolving area since 2008 is being analytically compiled into a unique narrative that will serve as a one-stop reference for those interested in the history, economics and politics of the telecom sector in India. This report will serve as ICRIER's first flagship publication. It will provide a wealth of data and rigorous statistical analysis on the impact of telecom, state of competition, state of institutions, spectrum and licensing policies, etc. It will also bring focus to contemporary topics such as network neutrality, data localisation, data privacy and protection.

ICRIER organised an International Conference on Telecommunications in April 2014 to gather insights from stakeholders on how they saw telecom advance with reference to innovation, technological progress, government policy, international trade strategy and operator intent in India, and to the extent possible, in a global context. The conference served as the starting point for the ICRIER's first flagship publication "The Wonder That is Telecom." The recently released draft National Digital Communications Policy (NDCP) 2018 expands the scope of what has been conventionally classified as telecom and for good reason. India's development goals such as smart cities, direct benefits transfers (DBT) and financial inclusion, to name a few, are now inextricably linked to the telecom sector. Achieving 'broadband for all' at a minimum of 50 Mbps is a pre-requisite emphasised in the new policy that seeks to harness emerging technologies such as 5G, artificial intelligence and the Internet of Things (IoT).

5.9 The Role of Standards in Diffusion of Emerging Technologies: Internet of Things (IoT)

Project Leader: *Rajat Kathuria*

Research Team: *Mansi Kedia and Richa Sekhani*

Commencement: April 2019

Expected Date of Completion: September 2019

Funded by: Department of Scientific and Industrial Research (DSIR) (Rs. 19.2 lakh)

Given the rapid rise of Internet of things (IoT) and its widened application across sectors, careful implementation of interoperable standards is necessary. Standardisation is necessary to enable the deployment of interoperable, secure, high quality IoT applications in India. However, while standardisation is critical, its economic consequences are not straightforward and can generate costs and benefits to the industry. Researchers have found that governance frameworks around standard setting processes can play a role in the rate of commercialisation, incentives to engage in R&D, etc. The success of the upcoming IoT industry will depend on the co-ordinated deployment of several IPRs. This study will add another lever to the decision making toolkit and design the most suitable governance framework that helps India achieve the speed and thoroughness of implementing IoT applications in India.

The analysis will be based on in-depth stakeholder interactions and secondary data analysis on the number of standards developed, time to market, etc.

5.10 The Economics of Data Localisation in India

Project Leader: *Rajat Kathuria*

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

Commencement: July 2018

Expected Date of Completion: September 2019

Funded by: Internet and Mobile Association of India (IAMAI) (Rs. 57.78 lakh)

‘Datafication’ is at the core of the global digital economy. With enormous amounts of data at their disposal, businesses are now equipped to capture value from analytics. Personal data is being collected and analysed to better understand preferences of customers and their willingness to pay. The importance of data has also risen in the ranks as an input to global trade and commerce, affecting not only the information technology sector, but also traditional industries. However, the dynamism of the data economy is not without challenges. Burgeoning volumes of data, its evolving nature and utility have brought fresh policy challenges to the fore. The vacuum of an implementable international framework, coupled with the nature of the Internet and data to disregard geographical and sovereign boundaries, and stringent measures regulating the flow of data have taken the form of localisation across several countries. This report borrows from recent literature on data localisation to provide a granular view on the economic implications of existing and proposed localisation measures adopted by India. The study follows a three-pronged approach: (i) an econometric estimation measuring the impact of cross border data flows on India’s total trade, (ii) in-depth case studies with domestic and global companies to determine implications of localisation, and (iii) an enterprise survey to see the broader impact of localisation on businesses operating in and engaging with India.

The study finds that cross border data flows have a significant impact on international trade. The case studies reveal the mixed effects of localisation. Established multi-national companies with global delivery models are likely to be most affected by localisation. The study is not a blanket assessment on the need for data localisation. However, it does bring evidence on the economic implications of such policies in India.

5.11 SATCOM in India: Opportunities for Enhanced Economic Growth

Project Leader: *Rajat Kathuria*

Research Team: *Mansi Kedia, Prateek Kukreja and Ujjwal Krishna*

Commencement: September 2018

Expected Date of Completion: September 2019

Funded by: Broadband India Forum (Rs. 17.9 lakh)

Satellite communication technology is growing rapidly. India's share in the global satellite ecosystem is relatively small. India lags behind several countries in the adoption and implementation of cutting edge satellite technologies. It is alleged that the performance of India's satellite industry is due to government overregulation and the restricted participation of foreign companies. However, as the application of satellite communication technologies is becoming more pervasive, there could be reconsideration with respect to deregulation of the sector.

Market projections find that India's demand for satellite broadband is likely to be high and use cases are likely to increase. However, the current tariffs in India are significantly higher than that in other countries. The comparison of policy architectures and regulatory interventions that govern satellite communications between India and other countries presents a case for reforming the regulatory framework towards unrestricted 'open skies'. Developing countries such as India with sizeable infrastructural deficits can realise both quantitative and qualitative improvements in their economic growth and quality of life by unleashing the innovative and efficient capacities of the private sector in a crucial sector such as satellite communications. This study illustrates existing as well as promising potential use cases for satellite communications in India and argues for satellites complementing terrestrial communications capabilities to extend connectivity to the most challenging geographical and topological terrains of the country. For this growth to be unleashed, policymakers must reconsider the gradual liberalisation and adoption of open skies principles.

5.12 Implications of Artificial Intelligence for the Indian Economy

Project Leader: *Rajat Kathuria*

Research Team: *Mansi Kedia and Sashank Kapilavai*

Commencement: November 2018

Expected Date of Completion: September 2019

Funded by: Google and National Association of Software and Services Companies (NASSCOM) (Rs. 51 lakh)

General purpose technologies (GPTs) such as artificial intelligence (AI) spur innovational complementarities that are widely dispersed, and require co-ordination across the state, private actors

and a range of institutions to realise potential gains. The impact and use of AI, specifically machine learning (ML)-driven AI spawns multiple sectors in society. Policy action, therefore, must recognise the range of uses across sectors and the potential impact of such technological improvements.

The study has adopted a two-pronged approach: (a) an econometric estimation to assess the benefits of AI, including its implications on total factor productivity, using data on Indian firms in the manufacturing and services sector for the period 2007 to 2017 and (b) a micro-level analysis using case study illustrations that capture the organisational and firm-level response to the availability of the technology. The study finds that AI has a positive and significant impact on total factor productivity growth for firms in India. The estimate is marginally higher for services sector firms. The research also captures the role of institutions that allows for responsible diffusion of AI, recommending the use of industrial policy to facilitate its appropriate adoption and facilitate its ethical and non-discriminatory application.

5.13 **An Analysis of Competition and Regulatory Information in India's Cable and Broadcasting Sector**

Project Leader: *Rajat Kathuria*

Research Team: *Mansi Kedia and Richa Sekhani*

Commencement: November 2017

Date of Completion: March 2019

Funded by: Tata Sky (Rs. 35.36 lakh)

Technological advancements in television and broadcasting allowed consumers to access better picture and sound quality, along with other value added features. In 2016, TRAI produced two consultation papers arguing for significant changes in the packaging and tariff structure applicable to the sector. This regulatory intervention was motivated by a desire to do away with perceived malpractices in channel pricing, and to make processes more uniform and transparent, enhancing consumer welfare. The order generated mixed reactions. Respondents supporting the order have upheld this as a means to improve transparency and create a level playing field for all stakeholders. On the other hand, critics find the order excessive, greatly limiting the ability of broadcasters and distributors to respond to market needs.

The study conducted a deeper analysis of the market structure to identify the market failure, if any, and subsequently, identified the optimal approach to regulatory intervention. Recent literature, though scant, has focused on the welfare impact of regulatory interventions in the cable broadcasting sector, such as mandating a la carte pricing, setting price ceilings for bundles, etc. This literature also focused on the bargaining dynamics between upstream players (broadcasters) and downstream players (DTH service providers, cable operators) and its consequences on the tariff structure. These theoretical and empirical frameworks have been used to gauge the need for regulation in this sector and evaluate the consequences of existing regulations.

5.14 Health of the Nation – India

Editors: Ali Mehdi and Irudaya Rajan

Commencement: June 2017

Expected Date of Completion: December 2019

Funded by: ICRIER

The India Health Report aims to bring together a number of leading experts to analyse some of the most complex challenges facing India's health system. The report is categorised into five broad themes – prioritising health, burden of disease and disability, structural determinants of health, health sector determinants and resources and health sector regulation. Under the first theme, there are chapters on right to health, health equity and responsibility for health. The second theme includes chapters on health transition, burden of disease and disability. Chapters within the third theme discuss factors responsible for the current status of health, ranging from the economic, social, spatial and the environmental. The fourth theme includes chapters on India's health policy frameworks, major sectors influencing health policy in India, health sector financing, private sector in health, India's private hospitals and a case study of the public health system in Uttar Pradesh. Finally, the fifth theme has chapters on regulation of medicines, clinical research, health insurance, medical ethics and corruption in India's health care systems. Among the contributors are leading academics and experts on India's health system, including N. R. Madhava Menon, Founder-Director, National Law School of India University, Bengaluru; Sujatha Rao, Former Secretary, Ministry of Health and Family Welfare, Government of India; Leela Visaria, Honorary Professor, Gujarat Institute of Development Research; Roger Jeffery, Professor, University of Edinburgh; Santosh Mehrotra, Professor, Jawaharlal Nehru University; Rama Baru, Professor, Jawaharlal Nehru University; Somil Nagpal, World Bank, Cambodia; Smita Srinivas, Director, Technological Change Lab, Columbia University, and Kirk Smith, Professor, University of California. The volume is being published by the Oxford University Press.

6. Skill Development, Entrepreneurship and Jobs

6.1 “Samvaad” A Dialogue on Globalisation, Equity and Jobs

Project Co-ordinators: Sanjay Pulipaka and Tanu M. Goyal

Commencement: September 2017

Expected Date of Completion: August 2020

Funded by: Ford Foundation (Rs. 48 lakh)

Samvaad is conceived as a dialogue forum that takes a problem-solving approach by first identifying a broad issue and then exploring solutions through discussion. Under the aegis of this project, ICRIER has launched a quarterly roundtable discussion on globalisation, equity and jobs. Each roundtable will have participants including central and state-level government officers as well as academics, journalists and other relevant stakeholders. At the end of each dialogue, an issue brief will be prepared. The first Samvaad was held on December 7, 2017, on the topic “Revamping the Statistical Architecture for Robust Data on Jobs in India – A Dialogue on India's Employment Data”. This year, the focus is on the impact of technology on capital, labour and power dynamics across the globe.

6.2 The Challenge of Productive Employment Creation in India

Project Leader: *Radhicka Kapoor*

Research Team: *Surbhi Ghai and Serene Vaid*

Commencement: November 2016

Date of Completion: September 2018

Funded by: Ford Foundation (Rs. 93 lakh)

As India stands at the cusp of a demographic dividend, the maximisation of employment and not just maximisation of GDP needs to take centre stage. There is an urgent need to create an environment that is conducive to the attainment of full and productive employment and decent work for all as a foundation for sustainable development. It is widely acknowledged that India has been far from successful in creating such employment opportunities. In the given context, it is imperative to understand where jobs will come from in the future, where existing jobs are located in the economy and whether these jobs are indeed productive/good jobs. The key objective of the study is to understand the drivers of output growth and employment growth in a way that informs policy. More specifically, it examines whether certain sectors and types of firms hold the key to job creation. What has been the record of these sectors and firms in contributing to output growth and job creation so far? To the extent that their track record has been lacking, what holds these firms back from creating good jobs? Additionally, using data from the Annual Survey of Industries, the study examines variations in the performance of the manufacturing sector across Indian states to identify the role of state level regulatory factors in explaining this heterogeneity. Understanding these questions is essential for the policy debate to rest on strong conceptual foundations.

While such an analysis is imperative to understand where and what kind of jobs have been created in a country, any study on employment in India would be incomplete without a discussion on the nature of available employment statistics. Employment statistics are a key input in designing macroeconomic policies and need to be reliably sourced, accurate and timely for policy responses to be meaningful and to validate outcomes of the policy decisions taken. However, the reliability and timeliness of employment statistics in India leave much to be desired. Real time data is missing and, unlike in the US economy, where employment statistics can be tracked minutely through official data, there are very few data points to rely on in the case of India. In the absence of frequently updated data, policy planners have to extrapolate old data such as the five-year cycle for employment data from the NSSO. The government needs to focus on improving the measurement of employment and wages even as it works towards improving the ease of doing business and enhancing India's manufacturing and employment capability. An important part of this study, therefore, was to discuss the shortfalls in employment statistics and examine alternative data sources to give a better sense of real time changes in labour markets. The study has been completed and published as an ICRIER working paper.

6.3 Programme on Global Competitiveness of the Indian Economy

Project Co-ordinator: *Radhicka Kapoor*

Research Team: *Deb Kusum Das, Amrita Goldar, Sajal Jain, Viraj Sawant, Neha Gupta, Prateek Kukreja and Kumar Abhishek*

Commencement: March 2017

Expected Date of Completion: February 2020

Funded by: IDFC Foundation (Rs. 150 lakh)

A third of India's population still lives in extreme poverty – possibly the highest incidence outside sub-Saharan Africa – and many people still lack access to basic services and opportunities such as sanitation, healthcare, and quality schooling. Improving the living standards of the Indian population will not only require acceleration in the growth rate but also an improvement in the economy's competitiveness in order to put growth on a more stable footing. However, despite an improvement in India's performance in key drivers of competitiveness over the last decade, significant challenges, stemming from factors such as a narrow manufacturing base, the predominance of agriculture as a source of employment, fiscal constraints, infrastructural deficiencies and low digital connectivity, remain. Addressing these challenges is imperative, given the enormous gains to be made from improving competitiveness. In particular, this will help rebalance the economy and move the country up the value chain to ensure more solid and stable growth; this, in turn, could result in more employment opportunities for the country's rapidly growing population. Over the course of this project, three studies will be undertaken to provide key insights on how to improve the competitiveness of the Indian economy. These studies will look at the issue of global competitiveness through the lens of job and livelihood creation. Work on two studies has commenced.

6.3.1 *A Study of Firm Life Cycle Dynamics and Drivers of Employment Growth in India's Manufacturing Sector*

Radhicka Kapoor, Surbhi Ghai and Serene Vaid

Ongoing

A striking feature of India's manufacturing landscape is the dominance of very small firms. A disaggregated look at the firm size distribution in India, where we include both formal and informal firms, shows that an overwhelming majority of enterprises in the manufacturing sector have less than 10 workers. Not only are mid-sized firms missing in the data, but large firms are missing too. Over 95% of the firms employ less than 10 workers over the decade. In fact, the distribution of firm size has not changed much over the years. Given this backdrop, it is imperative to understand what inhibits small firms from expanding, becoming more productive and creating more jobs. This paper will attempt to examine firm-level life cycle dynamics of plants in the manufacturing sector and identify what has held back firms in the manufacturing sector from expanding and what has depressed their productivity. The primary objective of this study is to understand how to accelerate job creation by enhancing the industrial competitiveness of Indian firms, particularly small, medium, micro and medium-sized enterprises. The study begins with an analysis of the dispersion of productivity across firms of different sizes. Thereafter, it examines the production structure and productivity of Indian firms using plant level micro-data, and identify the set of distortions that depress productivity in the manufacturing sector in India's economy at different levels.

6.3.2 *Embodied Jobs in the Renewable Power Sector and its Competitiveness Links*

Amrita Goldar, Sajal Jain and Viraj Sawant

Ongoing

The study examines two aspects of the renewable energy sector – its impact on livelihoods and its impact on competitiveness. The concerned impact is analysed by employing the social accounting matrix (SAM) methodology, framed on the national input-output (IO) table. The various sectors in the IO table are broken down to incorporate the RE components and facilitate the construction of a social accounting matrix for the study. The revival of manufacturing industry and increasing its share in the overall GDP and exports are critical to the growth and creation of employment in India. Backward and forward employment multipliers are looked into to study the employment effects of increased renewable energy generation. To analyse the impact of renewable energy (RE) on competitiveness, the focus of the study is on high value manufacturing (HVM) industries. There are two approaches employed to identify HVMs, viz., ‘outcome related dimensions’ and ‘enabling dimensions’. Outcome related dimensions take into consideration value added of three types – financial, social, and strategic. The other approach of ‘enabling dimensions’ consists of the skill level of labour, technological intensity, capital intensity, process flexibility, etc.

These theoretical parameters have been used to identify the HVMs in the states under observation (Gujarat, Tamil Nadu and Maharashtra). On the basis of past literature, HVMs are defined as those that create more than just financial value, by delivering value for one or more of their stakeholders through higher capability, innovation, higher standards and eventually, by contributing to a sustainable society. It thus becomes important that focused policies are designed to develop HVM industries. Understanding this link will emphasise the importance of RE in contributing to India’s lagging manufacturing sector and on the overall competitiveness of the economy.

To build the competitiveness model at the firm level, specific case studies have been selected. High energy consuming industrial clusters were identified in each of the three states studied. All three states boast of a naturally rich and accommodating energy landscape, aiding the process of a faster switch to renewable alternatives. Extensive fieldwork in the three states was conducted to test and validate the developed methodology. This involved meeting not just industrial stakeholders but also the electricity regulatory and development authorities. While the econometric model developed as part of the study will be applied to a database of Indian firms (ASI), qualitative insights gathered during the state-level surveys is being used to enrich the analysis and results.

6.3.3 *Domestic Value Added and Foreign Content in India’s Exports and its Impact on Export Competitiveness, Global Value Chains and Job Creation*

Deb Kusum Das, Neha Gupta, Prateek Kukreja and Kumar Abhishek

Ongoing

The study aims to examine India’s export competitiveness and linkages to global value chains (GVCs), and find ways to create more productive jobs in exporting firms. It looks at three different dimensions, each characterising a different aspect of Indian exports, and resultant job creation. The first focuses on identifying India’s key intermediate products for exports in selected markets to achieve competitiveness and capture a greater share in world trade. The methodologies of ‘Competitiveness

Analysis' and 'Comparative-Cost Analysis' based on export unit values have been employed. This has culminated in ICRIER's Working Paper titled "Climbing up India's Manufacturing Export ladder: How Competitive are Intermediate Goods?" The second aspect of the study looks at the nature of the labour regime and its impact on exporting firms. In particular, using information from a panel of firms covering the period 2008-2015, the study seeks to understand whether there is a relationship between jobs and export intensity and whether the nature of labour market regimes affect jobs and export intensity, especially in terms of the employment of direct workers and contract workers. The third dimension of the study involves estimating foreign and domestic value added content in India's exports as well as quantifying employment in each exporting sector by the skill level of workers. India's official input-output tables for 2003-04 and 2007-08 by the CSO and for 2013-14 by Singh and Saluja (2016) have been used to estimate domestic and foreign value added shares. Employment data has been extracted using various rounds of the NSSO survey on employment and unemployment, which has been combined with the input-output estimates to arrive at the information on the type of jobs (in terms of the level of education) supported by exports of various sectors provided in the official Input-Output tables of India.

7. Asian Economic Integration with Focus on South Asia

7.1 Facilitating India's Act East Policy: Gap Analysis in Infrastructure at Land Customs Stations in the North Eastern Region of India

Project Leader: Nisha Taneja

Research Team: Sanjana Joshi, Pankaj Vashisht, Samridhi Bimal and Loknath Acharya

Commencement: November 2018

Expected Date of Completion: July 2020

Funded by: Department for International Development (DFID) (Rs. 306 lakh)

Improved connectivity between the north-eastern states of India with neighbouring countries is imperative for strengthening economic co-operation and developing strategic relationships as envisaged in the 'Act East Policy'. Well-functioning land customs stations (LCS) and integrated check posts (ICPs) in the north-eastern region are the cornerstones for building strong economic ties with neighbouring countries. The objective of the project is to identify the gaps in the hard and soft infrastructure at LCSs and ICPs in the north-eastern region of India. This is also one of the key objectives of the National Trade Facilitation Action Plan and a part of the agenda of the Ministry of Development of the North-eastern Region. The project will examine trade flows through the existing LCSs in the north-eastern region and assess whether the state of infrastructure is adequate for handling the flows. Hard infrastructural gaps related to warehousing, scanning equipment, weighbridge, cold storage, etc., and soft infrastructural gaps related to transport protocols, banking and adoption of information technology driven systems, etc., will be identified. The project will also assess the quality of roads, rails and waterway transportation around the LCSs.

An inception workshop was organised at Guwahati, Assam, in January 2019 where discussions were held with experts and stakeholders from northeast India.

7.2 India-Myanmar Trade and Connectivity: Phase II

Project Leader: *Nisha Taneja*

Research Team: *Sanjana Joshi, Pankaj Vashisht, Samridhi Bimal, Loknath Acharya, Sakshi Garg and Anmol Nagpal*

Commencement: December 2018

Expected Date of Completion: May 2020

Funded by: Department for International Development (Rs. 273 lakh)

ICRIER's recently concluded study on India-Myanmar cross-border trade and connectivity (Phase-I) indicated that there has been a significant increase in informal trade even though the Indian Government had taken measures in 2015 to normalise cross-border trade between India and Myanmar. The barter trade that was allowed earlier has been converted rapidly to informal trade, and formal trade, which was low even prior to 2015, has now become negligible after the Indian Government introduced measures to normalise border trade with Myanmar. The objective of Phase II of the project is to examine how impediments in formal trade can be addressed to increase trade and how informal trade can be shifted to formal channels through corrective and adaptive measures.

The project will identify major cross-border trading points for informal trade, estimate the quantum of India's informal trade with Myanmar, understand institutional arrangements supporting informal trade and identify the inadequacies of formal channels. Policy measures based on this analysis will be suggested to enable the shift of informal trade to formal trade and to make formal channels more attractive for cross-border trade.

An inception workshop was organised at Imphal, Manipur, in February 2019 to hold discussions with experts and stakeholders of the north eastern region. Another inception workshop was organised at Yangon, Myanmar, in March 2019, where discussions were held with experts and stakeholders from Myanmar.

7.3 East Asia Research Programme

Project Leader: *Sanjay Pulipaka*

Research Team: *Saranya Sircar*

Commencement: March 2017

Expected Date of Completion: March 2020

Funded by: Tata Trusts (Rs. 44.48 lakh)

As part of the East Asia Research Programme, ICRIER has initiated the 'Asian Values and Foreign Policy' project that aims to examine whether there is validity in the concept of 'Asian values' and its implications for the human rights agenda as well as for foreign policies. Under this initiative, the book "Values in Foreign Policy: Investigating Ideals and Interests" was published in March 2019. The foreword is written by Robert Kaplan and the contributors are from foreign policy experts from across the globe. In addition, ICRIER organised an international conference on "Values in Foreign Policy: Interests and Ideals". The conference delved into the relationship between espoused national values and actual foreign policy interests and policies. The discussion agenda was structured to explore the effect of enlightenment, colonialism, modernity and post-modernity in determining contemporary value systems in foreign policy and to analyse the legacy of religion, civilisation, culture and history on the policies of leading countries today.

The East Asia Research Programme also continued its role as a forum for scholars to reflect on political and security issues in the East Asia region. This year, the programme organised an international conference on “The Indo-Pacific: Political, Security and Economic Dimensions”, in collaboration with the Nehru Memorial Museum Library (NMML) and the Japan Foundation, New Delhi. Indian, Japanese and South Korean scholars participated in the conference, presenting papers on various traditional and non-traditional security issues, including themes of regional balance of power, security architecture and economic features in the Indo-Pacific region.

8. Multilateral Trade Negotiations and FTAs

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

Project Leader: *Pankaj Vashisht*

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

Commencement: November 2016

Expected Date of Completion: December 2020

Funded by: Oxford Policy Management (Rs. 40 lakh)

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

8.2 Regional Comprehensive Economic Partnership (RCEP) Study on Goods and Services

Project Leader: *Saon Ray*

Research Team: *Anwarul Hoda, Arpita Mukherjee, Durgesh Kumar Rai, Smita Miglani and Kuntala Bandyopadhyay*

Commencement: March 2019

Expected Date of Completion: August 2019

Funded by: Department of Commerce, Ministry of Commerce and Industry, Government of India (Rs. 19.4 lakh)

The Regional Comprehensive Economic Partnership (RCEP), a mega FTA involves 16 countries – 10 ASEAN Members (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam) and their 6 FTA Partners (India, Australia, China, Japan, South Korea

and New Zealand). During the 2nd RCEP Leaders' Summit held in November 2018 at Singapore, the leaders acknowledged the substantial progress made in the negotiations, which includes the conclusion of seven chapters relating to economic and technical co-operation; small and medium enterprises; customs procedures and trade facilitation; government procurement; institutional provisions; standards, technical regulations and conformity assessment procedures (STRACAP); and sanitary and phytosanitary (SPS) requirements. However, the negotiations are still going on over market access in goods and services. It is against this background that the Department of Commerce, Government of India, has commissioned a comprehensive study on goods and services to understand the possible gains and losses for the country in the RCEP.

8.3 WTO and Trade Policy

Project Leader: *Anwarul Hoda*

Research Team: *Durgesh K. Rai*

Commencement: August 2009

Expected Date of Completion: Ongoing

Funded by: ICRIER

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

8.3.1 *Goods Study for India's Participation in Regional Comprehensive Economic Partnership (RCEP) Negotiations*

Anwarul Hoda & Durgesh K. Rai

Ongoing

The Regional Comprehensive Economic Partnership (RCEP) is a regional free trade area centred around ASEAN and includes the ten ASEAN member states and six other nations that have existing free trade agreements (FTAs) with ASEAN, namely, Australia, China, India, Japan, Republic of Korea and New Zealand. The RCEP negotiations were launched in 2012 and India has been participating in the negotiations since then.

In order to assist the Department of Commerce in the Government of India in the RCEP negotiations, ICRIER is conducting a study that will enable the government to formulate tariff offers and requests. With regard to offers, the objective is to gauge the level of sensitivity in domestic industry and determine the extent to which tariff elimination, reduction and exclusion will be consistent with India's interest. Where elimination or reduction is found feasible, the appropriate staging will be determined. The study also includes an analysis of existing goods offers of other participating countries, preparation

of request lists that may be submitted by India to the participating countries and an examination of India's tariff commitments in existing FTAs with ASEAN, Japan and Korea. Input from stakeholder consultations is the main element of the study.

8.3.2 *Agreement on Fishery Subsidy*

Anwarul Hoda

Ongoing

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

8.3.3 *Tariff Negotiations and Renegotiations under the GATT and the WTO: Procedures and Practices (Second edition)*

Anwarul Hoda

Completed

In response to a request received from the WTO Secretariat, work was undertaken to revise the above work, with a view to bringing it up to date with developments since the first edition was published in 2001 by the WTO Secretariat.

The publication describes the procedure and practices as they have evolved since the GATT was established in 1947. It contains an analytical account of tariff negotiations in successive rounds of multilateral trade negotiations, as well as of those held in the context of accession to the GATT or the WTO and in bilateral and plurilateral negotiations. It also gives an account of renegotiations, which is allowed in the rules and outlines the technical aspects, such as rectification, consolidation and implementation of the harmonised system.

The revised study updates the work, taking into account the progress in all areas up to the end of 2017. The new developments of significance captured in this edition are the ITA Expansion Agreement; accessions of a number of new members to the WTO, including two major trading nations, China and Russia; tariff negotiations in agriculture and non-agricultural market access under the Doha Development Agenda; renegotiations in the context of the successive enlargements of the European Union; and the implementation of changes in the WTO members' schedule of commitments owing to periodic revisions of the harmonised system. The Cambridge University Press published the second edition in December 2018.

8.3.4 *Where is the US Trade Policy Headed Under the Trump Administration?*

Anwarul Hoda

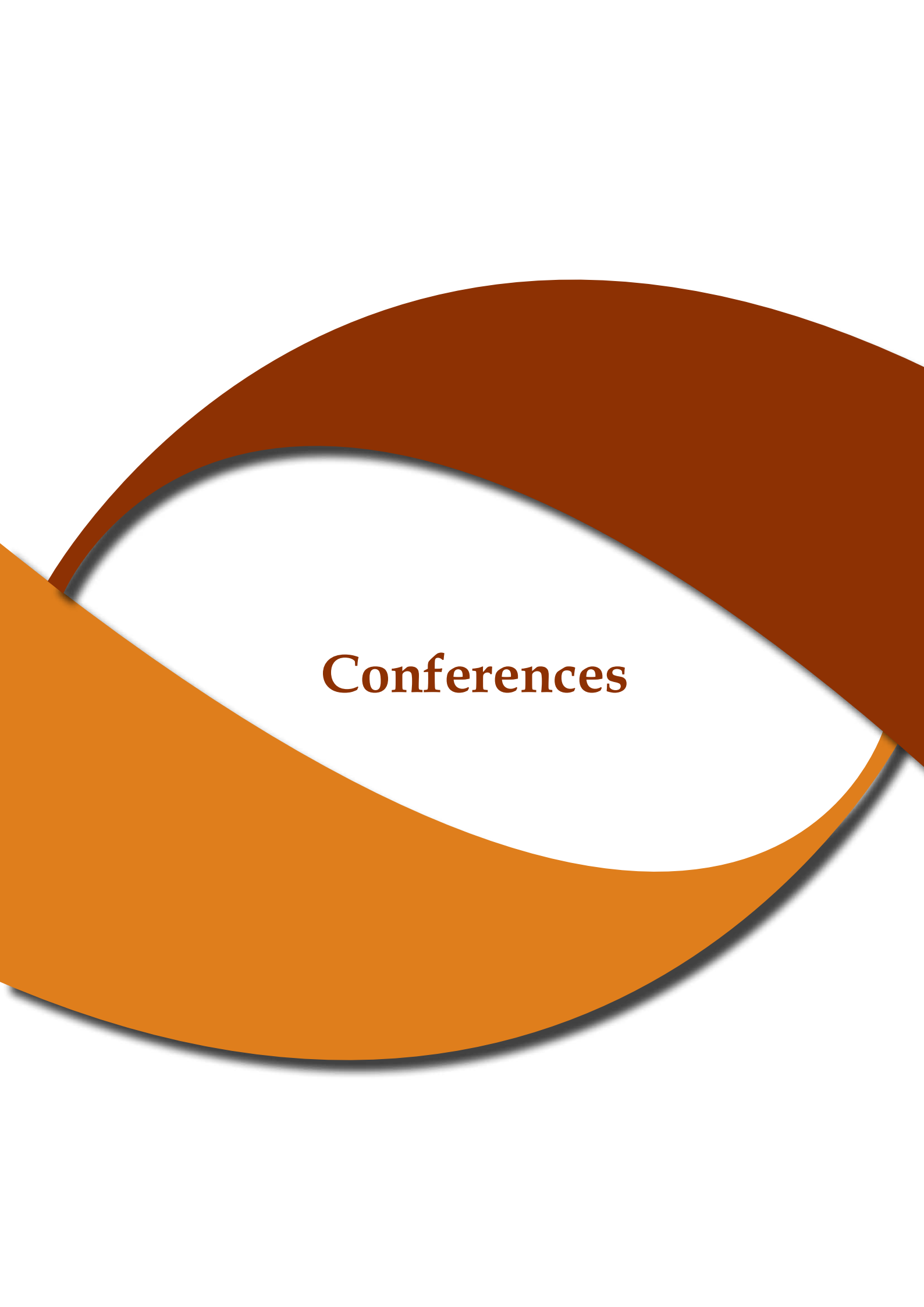
Completed

After the inauguration of the Trump Presidency in January 2017, the US has taken several trade policy initiatives that have challenged the multilateral trading system and created an environment of uncertainty in world trade. This study was undertaken to understand the motivations underlying these trade policy actions of the US Administration that seem to undercut the multilateral trade order.

The study finds that in maintaining a protectionist approach in trade policy, President Trump has shown continuity from the anti-globalisation stance adopted by him during the electoral campaign. The tariffs imposed by the US on steel and aluminium under Section 232 of the US Trade Expansion Act (1962) have disrupted world trade and triggered a chain of WTO disputes. The investigation under the same provision on automobiles and auto components has caused uncertainty for supply chains. At the same time, no overall advantage is discernible for US industry. The real objective appears to be to intimidate trading partners into granting concessions during bilateral trade negotiations. Indeed, in dealing with partner nations, President Trump has declared a preference for bilateral agreements over multi-party ones. In bilateral negotiations, it is easier for the US to wrest concessions from trading partners lacking comparable economic clout. However, it is not certain that the US will succeed in equal measure in securing concessions in bilateral negotiations with bigger trading nations like the European Union (EU) and Japan.

The obstruction of the process of appointment of WTO's Appellate Body members was initially thought to be linked to the procedural improvements sought by the US in the working of the Appellate Body. But since the US has shown no inclination to engage in negotiations to resolve the issues, it seems that there is a deeper design to take back dispute settlement procedures to the ineffective and inefficient system that existed in the GATT era in which bilateralism prevailed. The use of Section 301 of the US Trade Act 1974 for retaliation against China without authorisation in the WTO has been particularly disruptive as it has instigated a trade war and generated fears of a worldwide recession if it continues for a long time.

The study concludes with the observation that the major trade policy actions of the Trump Administration have created ambivalence about the US commitment to the rules-based multilateral trading system.



Conferences

Visions for India in 2030

April 16, 2019



L to R: Natalie Toms, Rajat Kathuria and Sanjeev Sanyal at the conference on *Visions for India in 2030*

The objective of this conference, organised by ICRIER in collaboration with the British High Commission on April 16, 2019, at New Delhi, was to discuss India's growth potential and the policy strategies needed to respond to challenges. The keynote address was delivered by Sanjeev Sanyal, Principal Economic Adviser, Ministry of Finance, Government of India. Mr. Sanyal noted that contemporary economic policies are affected by continuous changes that can result in several visions for or outcomes in the future. According to him, in the last few years, the biggest focus of the NDA government was to restore macroeconomic stability in the economy. The effort has been to clean up the banking system, control inflation and create a rule-based framework for governance. According to Mr. Sanyal, the focus now needs to shift to select problems and select groups – from macro to micro solutions. Mr. Sanyal also pointed out that India was approaching a demographic peak and by 2030, it is expected to move into the second stage of the demographic transition, which requires a rethink on the approach to basic public services. He further noted that the ability to enforce contracts will be India's biggest constraint going forward and, therefore, reforming the judicial system with measures such as doubling the number of judges and setting up more courts across the country is imperative. Elaborating on the agrarian crisis, Mr. Sanyal said that the traditional 'calorie-oriented' approach with focus on production needs to shift to increasing farmers' incomes.

This keynote address was followed by a panel discussion. The discussion was chaired by Surjit Bhalla, Managing Director, Oxus Investments Private Limited. The panellists were Ila Patnaik, Professor, National Institute of Public Finance and Policy (NIPFP), Ajay Vir Jakhar, Chairman, Bharat Krishak Samaj, and Sindhushree Khullar, IAS (Retd.) and former CEO, NITI Aayog. Dr. Patnaik highlighted the need to reform two key aspects of the financial sector – to build well-functioning, disaster-resilient and environment-friendly infrastructure and improve access to formal credit for small and medium-sized enterprises. Mr. Jakhar emphasised the critical importance of agricultural reforms and noted that a subsidy-driven agricultural sector is not sustainable.

According to him, rationalising input subsidies such as on fertilisers and electricity is required. He felt that greater dividends would accrue from infrastructure improvement and agriculture research. Ms. Khullar focused on the sustainable development goals (SDGs) and the overall framework within which the outcomes can be measured. She highlighted the need to focus on a bottom-up approach and the need for an inclusive governance structure, rebuilding the institutional framework when required, and building partnerships with the private sector and civil society.

Future of the Digital Economy: Cross Currents in Emerging Regimes

March 25, 2019



The host of internet policy issues facing India formed the discussion agenda of this conference organised by ICRIER and the Data Catalyst Institute. The key note address was delivered by Aruna Sundararajan, Chairman DCC & Secretary (T), Department of Telecommunications, Ministry of Communications, Government of India. Ms. Sundararajan highlighted the leap frog development and adoption of digital technologies in India. At the same time, she noted the complex dilemmas that India now faces. According to Ms. Sundararajan, the key reasons India has more at stake in its digital future are the current infrastructural deficit, the enormous appetite for data and digital technologies, and the significant impact that digital technologies have on the growth and development of the economy. She stressed the importance of digital technologies as a great leveller and their important role, particularly in financial inclusion. Ms. Sundararajan also underlined the importance of addressing tough questions on jobs, business models that undermine privacy, and finally, the security of the entire ecosystem.

The key note address was followed by a panel discussion on the future of the digital economy. The discussion was moderated by Rajat Kathuria, Director & CE, ICRIER, and the panellists included Ankhi Das, Public Policy Director, India, South and Central Asia, Facebook, Asoke Kumar Mukerji, Former Permanent Representative of India to the UN, Rajan S. Mathews, Director General, Cellular Operators Association of India, and Sanjeev

Bikchandani, Co-Founder and Executive Vice Chairman, Info-Edge. The panel's deliberations focused on international co-operation, global and regional trends, and the potential for a digital Silk Road initiative that is aligned with the vision of the Asian Century. The panellists also noted that the impact of technology and artificial intelligence on jobs is not always negative and discussed the need to revisit certain policies relating to telecommunications infrastructure, issues of intellectual property, and participation in the development of standards.

In a special address, Gopalakrishnan S., Joint Secretary, Ministry of Electronics and Information Technology, Government of India, dwelt on the foundations of privacy in the digital economy and highlighted the efforts the government had taken to develop a framework for data protection. He pointed out that a complex effort is required to strike the right balance between nurturing the digital economy while simultaneously ensuring that the privacy of users is not compromised and that the free flow of data, economic growth and innovation are not undermined.

The other discussion sessions focused on specific issues such as data localisation and encryption and the challenges of identity and authentication in the digital economy. The speakers in the panel on data security included Madan M. Oberoi, Special Commissioner of Police (Special & Tech Cell), Delhi Police, Mudit Kapoor, Associate Professor, Indian Statistical Institute, Ritesh Kumar Singh, Founder and Chief Economist, Indonomics Consulting Pvt. Ltd., and Shahana Chatterji, Partner, Shardul Amarchand Mangaldas & Co. The session was moderated by Deepak Maheshwari, Director Government Affairs, Symantec. The panel discussion on identity and authentication in the digital economy was moderated by Prasanto K. Roy, Senior Director, FTI Consulting and the panellists included Apar Gupta, Executive Director, Internet Freedom Foundation, Smitha Krishna Prasad, Associate Director, Centre for Communication Governance, National Law University, Delhi, Vaibhav Kakkar, Partner, L& L Partners Law Offices and Wriju Ray, Chief Business Officer, IDfy.

Values in Foreign Policy: Interests and Ideals

March 1-2, 2019



L to R: Dhara Snowden, Sanjay Pulipaka, Pavan K. Varma and H. K. Dua at the conference on *Values in Foreign Policy: Interests and Ideals*

The International Conference on “Values in Foreign Policy: Interests and Ideals” was organised by ICRIER with support from Tata Trusts on March 1-2, 2019, at the India Habitat Centre, New Delhi. The conference examined the relationship between espoused national values and actual foreign policy interests and policies. The discussion agenda was structured to explore the effect of enlightenment, colonialism, modernity and post-modernity in determining contemporary value systems in foreign policy and to analyse the legacy of religion, civilisation, culture and history on the policies of leading countries today.

In his keynote address, Ram Madhav, National General Secretary of the Bharatiya Janata Party, reflected on texts such as Arthashastra by Chanakya, Shanti Parva of the Mahabharata, Art of War by Sun Tzu and the Prince by Machiavelli and evaluated the principles that guide India’s foreign relations. A special address by Peter Burleigh, former Ambassador, USA, focussed on nationalism, populism, regional values and universal values in shaping foreign policies of nations. Author, diplomat and former Member of Parliament, Pavan K.



Ram Madhav at the conference on *Values in Foreign Policy: Interests and Ideals*

Varma, provided a historical analysis of the evolution of India’s foreign policy and the value systems that have guided its formulation. Krishnan Srinivasan, former Foreign Secretary, Government of India, pointed out the tensions between liberal universal values and local interpretations of universality.

Other notable speakers at the conference included H. K. Dua, former Member of Parliament, India, Fredrik Erixon, Founder Director, European Centre for International Political Economy (ECIPE), James Mayall, Emeritus Professor of International Relations, Cambridge, Wang Yiwei, Jean Monnet, Professor and Director, Institute of International Affairs, Renmin University, Beijing, Zeenat Rous, Founder, Clovelly Lectures, Britain, Tadashi Anno, Associate Professor and Director, Institute of International Relations, Sophia University, Japan, Dewi Fortuna Anwar, Professor, Centre for Political Studies, Institute of Sciences, Indonesia, Iftekhar Ahmed Chowdhury, former Ambassador, Bangladesh, Kate Sullivan de Estrada, Associate Professor and Director, South Asian Studies, Oxford, and Maroof Raza, Strategic Affairs Expert, Times Now.

From Global Co-operation to Building Consensus: Views from G20 Countries

October 11-12, 2018



L to R: Rajat Kathuria, Amitabh Kant, Isher Judge Ahluwalia and Sanjeev Sanyal at the inaugural session of 10th G20 conference *From Global Co-operation to Building Consensus: Views from G20 Countries*

Since 2009, ICRIER has been organising an annual international conference prior to the G20 Summit, bringing together academics and key policy makers from G20 countries to deliberate on pressing and challenging issues of economic co-ordination and sustainable development. The 10th Annual International G20 Conference was organised by ICRIER on the theme “From Global Co-operation to Building Consensus: Views from G20 Countries” in the context of the G20 Summit in Buenos Aires, Argentina on October 11-12, 2018.

In her welcome address, Isher Judge Ahluwalia, Chairperson, ICRIER, highlighted ICRIER’s ongoing research on issues of concern to G20 countries, which could be the focus of collective policy action. Congratulating ICRIER ((via video) on the tenth conference, Shri Suresh Prabhu, then Union Minister of Commerce and Industry and India’s G20 Sherpa, greatly appreciated this initiative and noted the valuable inputs provided by ICRIER over the years for the government’s G20 negotiations. He expressed concern at the growing protectionist tendencies in many countries, stating that free trade and global economic growth were inextricably linked, with a slowdown in global trade immediately and adversely affecting economic growth. The inaugural address at the conference was delivered by Amitabh Kant, CEO, NITI Aayog, Government of India. Mr. Kant noted that there was urgent need to address the threat to employment due to technological advancement. According to him, the conjunction of the prospect of loss in employment due to automation and a young demography looking for jobs might be the biggest challenge that India faces today. If this is not adequately addressed in time, it could have disastrous repercussions on the country’s future generations.

The conference discussions were divided into the following sessions – Evaluating Global Financial Architecture and Regulatory Practices: Progress and the Way Forward; Future of Work; Trade, Investment and the Multilateral Process; Role of Technology for Mitigating Climate Change; Financing Infrastructure for Sustainable Development; Sustainable Food Future; and Looking Ahead: Views from Current and Upcoming Presidencies.



Montek Singh Ahluwalia and Usha Thorat at the 10th G20 conference from *Global Co-operation to Building Consensus: Views from G20 Countries*

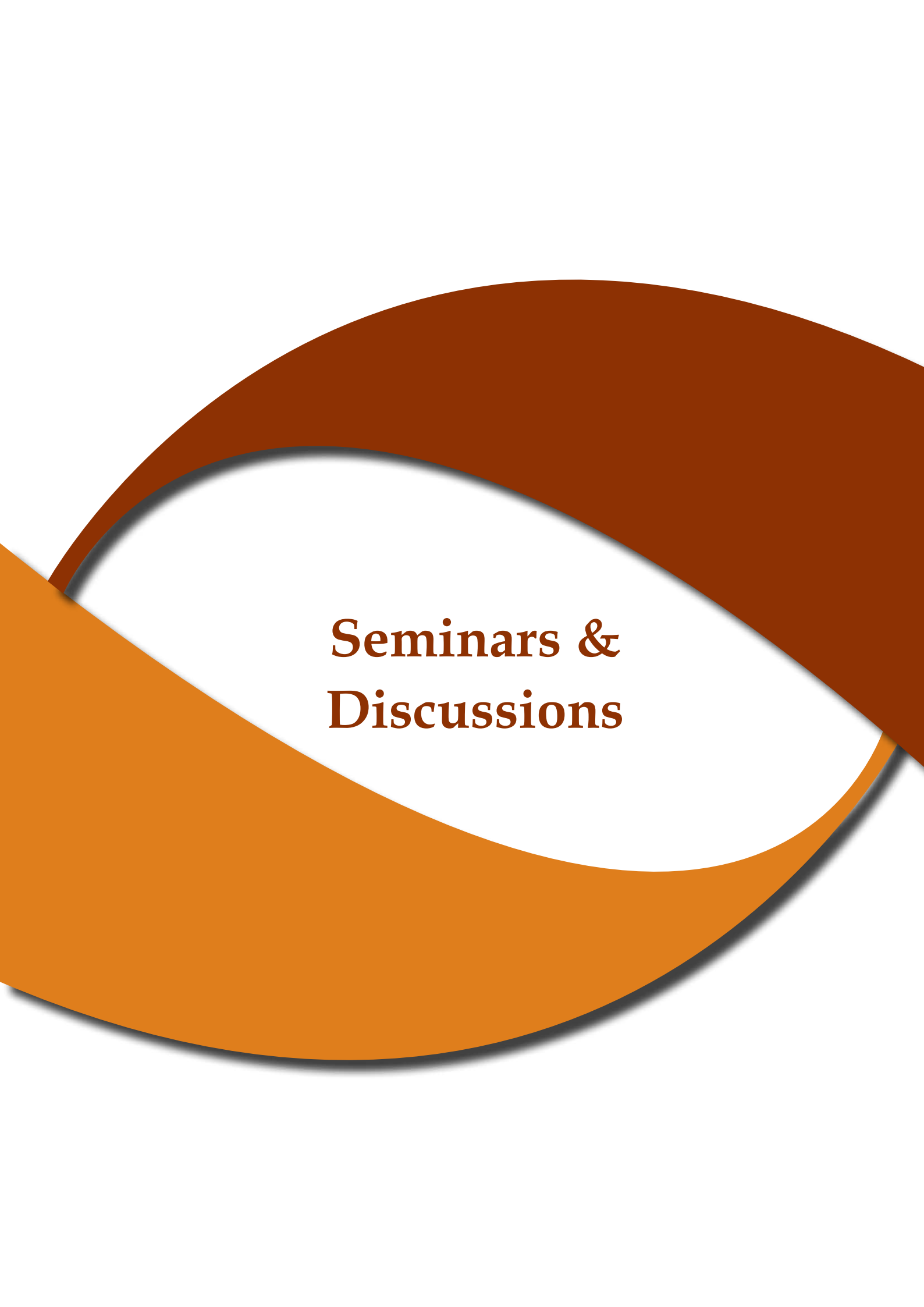
The session on the global financial architecture and regulatory practices highlighted the need to put in place a better regulatory framework to deal with the risks stemming from financial fragility and emerging threats to international financial stability. The session on the future of work noted that jobs are central to the G20 agenda. The issues of importance that were flagged in this context included the structural transformation in the job market, the impact of technological change on job creation and displacement, social protection and gender inequality and the changing nature of informality in the labour market. The session on trade, investment and the multilateral process discussed the implications of protectionism on global trade and investments and deliberated on measures to avoid a further decline in global trade volumes. The session on technology and climate change focused on the importance of technologies, transfer of technology and technological co-operation to mitigate the effects of climate change and the barriers to adopting innovative technologies.

The session on financing infrastructure for sustainable development dwelt on the instruments and mechanisms that can be scaled in G20 countries in this regard. The session on sustainable food future stressed the need to preserve agricultural lands, increase agricultural productivity and adopt sustainable production methods, and the role of public-private partnerships in meeting future food requirements. The final session noted the progress made thus far by the G20 forum and sought to identify the challenges that could be taken up by upcoming presidencies.

A special dinner address by Usha Thorat, Former Deputy Governor, Reserve Bank of India, discussed the pros and cons of crypto currencies and the challenges that India faces in accepting such modes of exchange. The session was chaired by Montek Singh Ahluwalia, Former Deputy Chairman of the Planning Commission, Government of India.

Notable speakers at the conference included Sanjeev Sanyal, Principal Economic Adviser, Ministry of Finance, Government of India, Anup Wadhawan, Commerce Secretary, Ministry of Commerce and Industry, Government of India, Daniel Chuburu, Ambassador, Embassy of the Argentine Republic in India, Saud Mohammed A. Al-Sati, Ambassador of the Kingdom of Saudi Arabia to the Republic of India, Hideki Asari, Deputy Chief

of Mission, Embassy of Japan in India, Imraan Valodia, Dean, Faculty of Commerce, Law & Management, University of Witwatersrand, South Africa, Ashima Goyal, Professor, Indira Gandhi Institute of Development Research (IGIDR), Alok Sheel, former Secretary, Prime Minister's Economic Advisory Council, Andreas Bauer, IMF Senior Resident Representative in India, Amartya Lahiri, Director, Centre for Advanced Financial Research and Learning (CAFRAL), Manoj Pant, Director, Indian Institute of Foreign Trade, Bustanul Arifin, Professor, University of Lampung (UNILA), Indonesia, Purnamita Dasgupta, Chair in Environmental Economics and Head, Environmental and Resource Economics Unit, Institute of Economic Growth, Ulka Kelkar, Director, Climate Policy, World Resources Institute (WRI) India, Sin dhushree Khullar, Retd. IAS, Ex-CEO Niti Aayog, Sebastian Morris, Professor, Indian Institute of Management, Ahmadabad, Kumar V Pratap, Joint Secretary (Infrastructure Policy, Finance, and Energy), Ministry of Finance, Government of India, Ashok Gulati, Infosys Chair Professor for Agriculture, ICRIER, Anwarul Hoda, Chair Professor, ICRIER's Trade Policy and WTO Research Programme, and Radhicka Kapoor, Senior Fellow, ICRIER.



Seminars & Discussions

Facilitating Trade through Promoting Ease of Doing Business in India's Food Sector – Streamlining Imports and Reducing Compliance Burden

May 29, 2019



Participants at the Discussion on Facilitating Trade through Promoting Ease of Doing Business in India's Food Sector – Streamlining Imports and Reducing the Compliance Burden

A presentation and discussion session on Facilitating Trade through Promoting Ease of Doing Business in India's Food Sector – Streamlining Imports and Reducing Compliance Burden was organised by ICRIER on May 29, 2019, at New Delhi. The findings and recommendations of the four studies conducted by ICRIER for the Food Safety and Standards Authority of India (FSSAI) in its endeavour to streamline the process of food imports in India and reduce the compliance burden for companies to facilitate trade and the ease of doing business were presented at this session.

In her introductory remarks, Natalie Toms, Economic Counsellor, British High Commission, noted that trade and investments are areas of mutual interest for both India and the UK. She highlighted the success of the capacity building initiative as part of the collaboration between the Foreign and Commonwealth Office (FCO), UK Government, and the Food Safety and Standards Authority of India (FSSAI, India) to improve the ease of doing business and hoped that there would be more such knowledge partnerships in the coming years. In her remarks Suneeti Toteja, Director (FFRC/Imports), FSSAI, appreciated the efforts of the ICRIER research team in bringing out a comprehensive report covering the entire food import ecosystem. She stated that FSSAI has already initiated implementation of the key recommendations.

This was followed by presentations on "Streamlining Food Imports for Trade Facilitation and Ease of Doing Business in India" and "Streamlining Food Safety Compliance Ecosystem in

India". The two IT manuals complementing the two studies were also presented. Recommended solutions to enhance the ease of doing business, reduce the compliance burden and procedural barriers, and streamline the food import process in India were discussed in detail by the participants.

Universal Health Coverage

May 10, 2019

This stakeholder consultation was organised by ICRIER as part of the study on Universal Health Coverage. The study is part of ICRIER's engagement with the Department of Economic Affairs (Ministry of Finance), Government of India. The objective of the consultation was to provide a comprehensive analysis of the issue of universal health coverage and recommend India's stance on the issue at the G20 summit in Osaka.

The recommendations of the study were presented by Ali Mehdi, Senior Fellow and Project Leader, Health Policy Initiative, ICRIER. The distinguished participants included Daniel Chuburu, Ambassador of the Argentine Republic to India, Kenichi Ide, First Secretary, Embassy of Japan, Preetha Rajaraman, Health Attaché, U.S. Department of Health & Human Services, Chandrakant Lahariya, National Professional Officer, World Health Organization, Owen Smith, Senior Economist, World Bank, Sanjiv Kumar, Director, International Institute of Health Management Research, Heena Dhawan, Senior Officer on Special Duty (OSD) to CEO, National Health Authority (NHA), S. Rajesh, Director (Health), NITI Aayog and Parveen Kumar, Director (G-20 Finance and OECD), Ministry of Finance, Government of India.

The participants agreed that there exist conceptual ambiguities in the term 'universal health coverage' that need to be addressed. With regard to the financing aspect of universal health coverage, some participants noted that although insurance is the most cost-effective way for national governments to protect populations against catastrophic health care expenditures, there should be special mechanisms to address high-risk, high-frequency cases in the public health care system. The participants emphasised that linking health with the broader development discourse is important from the perspective of human capital formation, which is integral to creating a healthier and more productive workforce. It was highlighted that outcome impact evaluations of health interventions – in terms of their contribution to human capital, individual and industrial productivity and economic growth – are currently missing, and it is important for national governments to develop mechanisms for conducting such evaluations. It was suggested that since certain countries are dealing with challenges posed by an ageing population, the G20 member states should formulate guidelines on inter-country exchange of health workers.

Society 5.0 and Artificial Intelligence with a Human Face

May 10, 2019

The stakeholder consultation on the topic Society 5.0 and Artificial Intelligence with a Human Face was organised by ICRIER as part of its deliberations on AI and data sharing frameworks to formulate India's position on this issue at the G-20 Summit, held in Japan this year. Numerous stakeholders representing the private sector, academia, national and international non-governmental organisations, alongside representatives from the Department of Economic Affairs and the Ministry of External Affairs attended and contributed to the discussion.

The discussion began with opening remarks delivered by Rajat Kathuria, Director and CE, ICRIER, highlighting the disruptive nature of AI-related technologies. He emphasised the need for societies to be resilient and convert AI related challenges into developmental opportunities. The findings of the research conducted by ICRIER were presented by Richa Sekhani, Researcher, ICRIER. Her presentation began with a description of



Participants at the Stakeholders' Consultation on Society 5.0 and Artificial Intelligence with a Human Face

the relationship between social and technological evolution and went on to highlight how, acknowledging the growth impact of AI, various G20 countries have or are in the process of devising national AI-based strategies, combined with significant participation from the private sector. The presentation highlighted AI's potential for good but also noted the challenges facing the implementation of AI-based solutions, and the various policy solutions currently being implemented to tackle such challenges. The presentation ended with broad questions for stakeholders relating to the role of AI in achieving SDGs, the challenges of adopting and implementing AI, the way forward and the scope for collaboration among G20 countries.

The participants acknowledged the role of the state in developing AI for good but also discussed the key areas where the government has a role in developing the AI ecosystem. Some drew attention to the challenges of regulating algorithms that drive AI, noting how algorithms are protected by proprietary laws, which hinder an understanding of the social implications of the AI in use. The participants agreed that regulating algorithms is difficult given the 'Black Box' nature of AI. The discussion also devoted attention to the importance of developing state and private sector capacity to facilitate fair and transparent use of AI in India's AI-based ecosystem. Acknowledging the centrality of data in running AI-based applications, the participants discussed the challenging trade-off between data privacy and AI related innovation. They stressed the importance of data flows and the implications of legislations such as data localisation on the availability of data to India's AI-based ecosystem.

Current Trade Issues for Developing Countries

May 9, 2019

A roundtable discussion on current trade issues faced by developing countries was organised by ICRIER on May 9, 2019. The discussion was moderated by Anwarul Hoda, Chair Professor, ICRIER's Trade Policy and WTO Research Programme, and focused on the trade related issues that were likely to be discussed at the World Trade Organization (WTO) mini-ministerial in New Delhi on May 13-14, 2019. The focus was on issues relating to negotiations in e-commerce, developing country status at the WTO, proposals on transparency, crisis



Panellists at the discussion on *Current Trade Issues for Developing Countries*

at the appellate body, fishery subsidies and the use of security exception by the United States to raise tariffs on steel and aluminium.

Financing Resilience against Natural Disasters

May 3, 2019

A consultation meeting with relevant stakeholders was organised by ICRIER as part of the study on Financing Resilience against Natural Disasters. The consultation was moderated by Rajat Kathuria, Director and CE, ICRIER and was attended by representatives from the Ministry of Finance, Government of India, National Disaster Management Authority (NDMA), World Bank, Confederation of Indian Industries (CII), PricewaterhouseCoopers and several disaster management experts.



Panellists at the stakeholders' consultation on *Financing Resilience against Natural Disasters*

Presenting the findings of the ICRIER study, Saon Ray, Senior Fellow, ICRIER, highlighted the increasing incidence of natural disasters and the significant cost borne by countries across the globe. She also touched upon the current global approach towards disaster risk financing, the existing framework of risk financing in India and the experience of Japan in this regard. She concluded with some suggestions on the way forward.

The presentation by Kamal Kishore, Member, NDMA, dwelt on the current trends and provided some insights from both global and Indian experiences. He pointed out that there is absence of a predictable financing programme for mitigation and recovery. The presentation by Siraj Hussain, Senior Visiting Fellow, ICRIER, detailed the crop insurance programme in India and emphasised the importance of crop insurance in Indian efforts to improve disaster resilience. The participants suggested that it would be extremely useful to examine the experiences of countries like Sri Lanka, Japan and Mexico in mitigation and recovery. It was also suggested that the potential for alternative arrangements like catastrophe bonds and insurance-linked securities should be analysed.

Strategic Initiatives Shaping US-China Relations

April 2, 2019

A talk on the strategic initiatives that are shaping US-China relations was delivered by Rafiq Dossani, Director, RAND Centre for Asia Pacific Policy, at ICRIER in April this year. Dr. Dossani started by reviewing the history of US-China relations since the latter's admission to the WTO and discussed how trade between the two countries has grown during the last 18 years. He then dwelt on how the dialogue between the two countries has differed in the Obama and Trump presidencies. He pointed out that under President Trump, there has been a marked shift from co-operation to confrontation with regard to US interactions with China. According to Dr. Dossani, if the trade war between the two countries continues, there are likely to be several stages and several consequences. He noted that a first-stage impact assessment of the US-China trade war does not support US claims of a win and Chinese businesses are likely to lose less overall than American businesses.

Climate Change, Demographic Pressures and Global Sustainability

April 1, 2019

The seminar on "Climate Change, Demographic Pressures and Global Sustainability" was delivered by Alok Bhargava, Professor, School of Public Policy, University of Maryland. The session was chaired by Amrita Goldar, Fellow, ICRIER. Dr. Bhargava started by emphasising the need for broader approaches to formulating policies to mitigate the effects of climate change, especially in the contexts of agriculture, and population, health and migration. He outlined the paradoxes in the SDGs and noted that the recommendations fail to recognise the inter-connections between the goals and the pressures exerted by population growth. According to him, rapid population growth in many developing countries hampers the attainment of sub-goals such as "ending hunger and food insecurity", "improving education quality", "providing adequate sanitation", and "achieving productive employment".

Dr. Bhargava pointed out that with growing population, the demand for food in India will go up, exacerbating pressures on the already stressed agriculture system due to climate change. Presenting evidence on "unwanted" fertility from India, he discussed the rates of unwanted children in the states of Uttar Pradesh, Bihar, Rajasthan and Madhya Pradesh in India and its impact on water depth in wells. Thus, in Dr. Bhargava's opinion, the

benefits of healthcare and family planning services to reduce fertility were equally important. He also discussed the migration to OECD countries from developing countries. In the discussion that followed, participants raised concerns over the modelling technique used in the paper. The issue of climate refugees, for example, the migration from Bangladesh to India, also found mention. Dr. Bhargava explained that the models used in the paper may not be comprehensive due to lack of data.

India-Japan Partnership for Achieving Sustainable Development Goals (SDGs), March 15, 2019

In collaboration with the Embassy of Japan, New Delhi, ICRIER organised an international seminar on “India-Japan Partnership for Achieving Sustainable Development Goals” (SDGs) at New Delhi in March 2019. The objective of the seminar was to discuss ways in which India and Japan can co-operate to achieve SDGs in the areas of health, hygiene, and sanitation and environment. It brought together key stakeholders from both countries to share views on how their co-operation can be further strengthened to realise the SDGs in India.



L to R: Rajat Kathuria, Rajeev Kumar and Kenji Hiramatsu at the seminar on India-Japan Partnership for Achieving Sustainable Development Goals (SDGs)

In his opening remarks, the Ambassador of Japan to India, Kenji Hiramatsu, reiterated Japan’s commitment, as G20 President and the host of the TICAD VII (Tokyo International Conference on African Development) in 2019, to work towards realising a society where no one is left behind in line with the philosophy of human security. Ambassador Hiramatsu also presented an overview of Japan’s public and private efforts in India in the fields of healthcare, WASH (water, sanitation, and hygiene), and the environment. The inaugural address was delivered by Rajiv Kumar, Vice Chairman, NITI Aayog, Government of India. Dr. Kumar highlighted how the Indian government is proactively mainstreaming SDGs in its development agenda, with special focus on 115 aspirational districts to achieve SDGs. It is also trying to develop convergence across central and state schemes as well as across various governmental ministries and departments. He noted that India was the first country to bring out a detailed SDG Report in 2018 and has been invited to present it at a high-level meeting at the United Nations in New York later this year.

The seminar featured several eminent speakers including Henk Bekedam, WHO Representative to India; Alok Kumar, Adviser (Health), NITI Aayog; Randeep Guleria, Director, All India Institute of Medical Sciences; Ali Mehdi, Senior Fellow, ICRIER; Katsuo Matsumoto, Chief Representative, Japan International Co-operation Agency; Miki Nagashima, Board Member, Malaria No More Japan; Nicolas Osbert, Chief – Water, Sanitation, Hygiene (WASH), UNICEF India; Parameswaran Iyer, Secretary, Ministry of Drinking Water and Sanitation, Government of India; Lalit Kumar, Adviser, Sulabh International Social Service Organisation; Kotaro Katsuki, Director, Global Issues Co-operation Division, International Co-operation Bureau, Ministry of Foreign Affairs, Japan; Mohit Jain, Director – Technical Support, LIXIL India Private Limited; Saon Ray, Senior Fellow, ICRIER; Meeta Keswani Mehra, Chairperson and Professor of Economics, Centre for International Trade and Development, Jawaharlal Nehru University; Kaushik Deb, Research Fellow, Markets and Industrial Development, King Abdullah Petroleum Studies and Research Centre, Riyadh; Mamoru Kondo, Deputy General Manager, Business and Product Developing Centre, Environment Business Headquarters, Hitachi Zosen Corporation, and Toshizo Maeda, Principal Researcher and Deputy Director, Kansai Research Centre, Institute for Global Environmental Strategies, Japan.

Asia 2025: Exploring Implications for China, India and Japan

February 13, 2019

A discussion on the report “Asia in 2025: Development Prospects and Challenges for Middle Income Countries” was initiated by Ganeshan Wignaraja, Executive Director, Lakshman Kadirgamar Institute of International Relations and Strategic Studies, Colombo. Dr. Wignaraja is one of the authors of the report, published by the Overseas Development Institute (ODI) that has examined the macroeconomic outlook for 46 developing countries and Japan, Australia and New Zealand and its main drivers, with a focus on the prospects of the region’s middle income countries (MICs).

According to Dr. Wignaraja, three ‘mega trends’, risks and opportunities are likely to influence the course of the region’s economic development up to 2025, particularly of recently graduated middle income countries: (i) the performance of China-centred global value chains (GVCs), (ii) the likely impact of the Belt and Road Initiative (BRI) and (iii) the persistence of pockets of poverty and vulnerability amid prosperity. He pointed out that China-centred GVCs are slowing and opportunities for industrial latecomers in Southeast Asia and South Asia could stem from (i) multinational corporations exploring alternative regional locations for labour-intensive segments of GVC manufacturing, (ii) China’s deepening industrialisation and the growing local roots of its GVCs and (iii) GVC related services as a new form of trade. To realise these GVC opportunities, latecomers need to improve their business environments and firms should adjust their business strategies. The ambitious BRI has the potential to deepen economic and political ties and spread prosperity to a larger number of countries than before. But several risks resulting from the BRI – such as those related to debt sustainability, environment and governance standards, financial stability and political relations – will require careful management at the global and regional levels.

Dr. Wignaraja concluded by suggesting that development partners should not move from an aid relationship to no relationship at all as many vulnerabilities loom large in many countries. Instead, development partners need to respond to the specific vulnerabilities and opportunities of the countries in question. The recommendations include supporting latecomers to join GVCs by building a market-friendly business environment, helping with macroeconomic management, especially management of debt obligations, and developing legal, regulatory

and governance frameworks along with supporting projects tackling vulnerability to income shocks, persistent pockets of poverty, rising within-country inequality, and sub-national conflict and fragility.

Commenting on the presentation, Rajeev Kher, former Commerce Secretary, Government of India, highlighted the issue of trade protectionism as well as the growing consequences of technology on poverty and inequality. In his remarks, Anwarul Hoda, Professor, ICRIER, stressed the need for latecomers to learn from China on GVCs and try to replicate the process. Mr. Hoda also pointed out that trade facilitation should be of utmost importance and efficient and reliable infrastructure should not be restricted to ports but must be expanded to the development of internal infrastructure such as roads, railways, SEZs.

Economic Resilience in a Changing Climate: Tales of Adaptation from Four Indian Cities

January 4, 2019



L to R: Amrita Goldar, Isher Judge Ahluwalia and Meenu Tewari at the seminar on *Economic Resilience in a Changing Climate: Tales of Adaptation from Four Indian Cities*

The major findings of ICRIER's project on the economic competitiveness of cities in an era of climate change were disseminated at this seminar. In her welcome address, Isher Judge Ahluwalia, Chairperson ICRIER, emphasised the interconnectivity between climate change and the economy and noted that the top most priority of existing and emergent cities should be to adapt to the risks of climate change. In her presentation, Meenu Tewari, Associate Professor, University of North Carolina, stated that the objective of this project 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 study explored how everyday development decisions, if made in more climate aware and innovative ways, can foster both climate resilience and inclusive urban growth. The study used mixed methods to draw insights on how cities adapt to climate risks, based on a comparative case analysis of four rapidly growing secondary cities in India, namely Surat, Kochi, Pune and Ludhiana. Highlighting the case of Surat, Dr. Tewari pointed out that differences in climate consciousness between gradual and sudden onset impacts can shape adaptive responses

in deep ways and suggested that cities should unbundle and leverage existing complementarities between provision of urban services and climate resilience to lower costs and generate additional benefits.

The presentation was followed by a panel discussion on 'Climate Adaptation in India: Insights for Public Action', moderated by Dr. Tewari. The panellists included Usha P. Raghupathi, Professor (Retd.), National Institute of Urban Affairs (NIUA), Amit Prothi, Head of India National Strategy at 100 Resilient Cities, and G.K. Bhat, Chairman, Taru Leading Edge Pvt. Ltd. The panellists highlighted in particular the lack of data and information dissemination as key constraints in informed climate actions and stressed the need for synergy between different organisations as well as real time monitoring to improve climate change adaptation practices. Further, the need to evolve long-term solutions and not just coping mechanisms was emphasised by the participants.

Rising Income Inequality: Its Implications for World Security

November 15, 2018

This interactive session with Augusto Lopez-Claros, Senior Fellow, Edmund Walsh School of Foreign Service, Georgetown University, was organised by ICRIER in association with the PHD Chamber of Commerce and Industry. Dr Lopez-Claros presented different metrics to assess the recent evolution of inequality between countries and within countries and reviewed some of the problems created by widening income disparities, both for policymakers and, more generally, for social cohesion and sustainable economic development. He illustrated the extent of income inequality between the developed and developing world, and highlighted the limitations of conventional poverty line estimates used for policy and programming. Dr Lopez-Claros suggested that potential non-traditional remedies for global inequality call for a progressive taxation regime and the discontinuance of energy subsidies that disproportionately benefit higher income groups, exacerbating inequality and global warming, and entrepreneurship-oriented and business-friendly regulatory reform, which is linked to lower levels of income inequality. He also stressed the importance of addressing gender wage gaps by reducing discrimination against women embedded in the law, and incentivising women to join the labour market.

India's Multilingual Internet and the Road to ICANN63

October 10, 2018

The Internet Corporation for Assigned Names and Numbers (ICANN) is among the key global internet governance institutions responsible for the co-ordination and management of the domain name system (DNS). In preparation for the ICANN63 meeting in Spain, ICRIER organised two panel discussions that highlighted the challenges and opportunities in building a multilingual internet in India and the substantive issues to be deliberated at ICANN63. Speaking at the event, Rajat Kathuria, Director and Chief Executive, ICRIER, highlighted ICRIER's growing involvement in the internet policy ecosystem that began with a research on the impact of telecommunications and mobile, and subsequently, the internet. He noted that though India adopted the mobile first approach, it has struggled with the rural-urban digital divide because an environment where access to the internet can be provided in local languages is poorly developed.

The first discussion on the challenges and opportunities in building a multilingual internet in India was moderated by Samiran Gupta, Head of India, ICANN. The key speakers included Ashish Modi, Country Head,



L to R: Mithun Das, Sarika Gulyani, Samiran Gupta, Ashish Modi and Ritu Srivastava at the discussion on *India's Multilingual Internet and the Road to ICANN63*

Corporate Affairs, Data Xgen Technologies, Ritu Srivastava, General Manager Research, Digital Empowerment Foundation, Sarika Gulyani, Director and Head ICT, Digital Economy & FICCI-ILIA Division, and Mithun Das, Vice President Sales, Reverie Technology. The panel noted the importance of preserving languages and cultures in an English dominated internet ecosystem and highlighted the immense business opportunity in developing linguistic content for the nearly 335 million users of Indic languages. At the same time, the challenges in indexing regional language content, online discoverability, and standardisation faced by many creators of regional language content were underlined by the panellists.

This was followed by a focused discussion on the substantive issues expected to be deliberated at ICANN63. The discussion was moderated by Govind, Chair, ISOC-Delhi; key speakers included Rahul Gosain, Director, MEITY, Government of India, Amrita Choudhury, Director, CCAOI, and Jay Paudyal, Consultant, Neo-Brahmi Generation Panel, ICANN. The participants dwelt on the issue of new generic top level domains (New gTLDs) and discussed the opportunity in this context for local languages as well as the challenges of prohibitive costs and lack of awareness. The importance of the Whois database and the impact of the General Data Protection Regulation and other privacy legislations were also discussed. The panel highlighted the difficulty in developing ICANN policy, which has drawn support from all stakeholders in the process and complies with the laws of various jurisdictions.

Future of Work

September 4, 2018

As part of ICRIER's wider research programme and engagement on G20 issues, a stakeholder consultation on the Future of Work was organised in September 2018. The main presentation was delivered by Radhicka Kapoor, Senior Fellow, ICRIER, and the two lead discussants were Ajit Ghose, Visiting Professor, Institute for Human Development (IHD), and Srinivasan Iyer, Programme Officer, Ford Foundation.

The presentation by Radhicka Kapoor focussed on the various contours of the 'Future of Work' challenge. Starting with an overview of the history of work, Dr. Kapoor dwelt on the characteristics of the four industrial revolutions. She pointed out that, in recent decades, the workplace has been transformed by globalisation, changing power dynamics, and new and emerging technologies, including artificial intelligence, robotics, and big data. These changes are playing an increasingly important role in shaping the jobs of the future, by shifting jobs between sectors, transforming the kinds of tasks that are done in existing jobs, and changing how people connect to work. However, these changes do not affect people equally, with some workers bearing the brunt of these challenges disproportionately, exacerbating overall inequality. Moreover, according to Dr. Kapoor, the implications are also different across countries and the way the future of work is going to pan out across countries will depend on their history, culture, demography, politics, and social and economic development. She concluded by noting that governments, through investment in human capital, social protection systems, tax and expenditure policies and investment in digital infrastructure, can, to a great extent, help to deal with this difficult transition. The ensuing discussion highlighted the need to analyse comprehensively the drivers of the fourth industrial revolution and the wider dynamics that distinguish it from earlier technological breakthroughs.

Celebrating One Year of the Justice K.S. Puttaswamy v. Union of India Judgment

August 24, 2018



Speakers of the seminar on *Celebrating One Year of the Justice K. S. Puttaswamy v. Union of India Judgment*

This seminar, co-hosted by ICRIER and the Centre for Communication Governance, National Law University, Delhi, commemorated the first anniversary of the Supreme Court of India judgment in the Justice K.S. Puttaswamy v. Union of India case, popularly known as the Privacy Judgment.

In her opening remarks, Usha Ramanathan, well known privacy advocate, noted that the judgment has become the foundation for public discourse and policy debates on privacy as the most significant legal consequence of

the judgment was the proclamation of the right to privacy as a fundamental right by the Supreme Court. Ms. Ramanathan cautioned against the whittling down of this right by narratives of innovation and efficiency by different stakeholders.

The first panel discussion at this seminar focused on data protection for a free and fair digital economy, highlighting key issues such as data localisation and the economics of privacy. The discussion was moderated by Mansi Kedia, Consultant, ICRIER, and the key speakers were Nehaa Chaudhari, Public Policy Head, TRA Law, Malavika Raghavan, Project Head, Dvara Research, Madhulika Srikumar, Associate Fellow, Observer Research Foundation and Smriti Parsheera, Technology Policy Researcher, NIPFP. The panel emphasised that the focus of privacy debates should not remain confined to issues of protection of consumers from companies but also from the state.

The second panel was moderated by Apurva Vishwanath, Special Correspondent, The Print and key speakers were Kritika Bhardwaj, Lawyer, Supreme Court of India, Shweta Mohandas, Policy Officer, Centre for Internet & Society India, Smitha K. Prasad, Civil Liberties Lead, Centre for Communication Governance, National Law University, Delhi, and Ujjwala Uppaluri, Lawyer, Supreme Court of India. The panellists dwelt on the guidelines set forth in the Supreme Court judgment to determine what could constitute permissible restrictions to the right to privacy. They discussed the impact that the judgment has already had, and will continue to have, on several cases before the courts, including the challenge against section 377 of the IPC, the recognition of marital rape and others. The discussion also touched upon the data protection bill, the Digital Information Security in Health Care Bill, and other policy frameworks such as the e-commerce policy that will affect the protection of the right to informational privacy.

The Future of Australia- India Economic Relationship

August 8, 2018



L to R: Rajat Kathuria, Harinder Sidhu and Chandrajit Banerjee at the release of the report
An India Economic Strategy to 2035: Navigating from Potential to Delivery

A special lecture was delivered by Harinder Sidhu, Australia's High Commissioner to India, on the occasion of the release of the report *An India Economic Strategy to 2035: Navigating from Potential to Delivery*. In

his welcome remarks Rajat Kathuria, Director & Chief executive, ICRIER, spoke about the current economic, trade and investment relationship between India and Australia and the recent reform measures that have been implemented to make India a favoured investment destination.

Ms. Sidhu began by stating that The India Economic Strategy report was commissioned by Prime Minister Turnbull during his visit to India in April 2017 and the reason for this was because India matters to Australia. According to her, a key conclusion of the strategy is that there is no market over the next 20 years that offers more opportunity to Australia. Ms. Sidhu noted that while the bilateral relationship is doing well, it will need a clear and focussed strategy to get closer to its full potential. She stressed that Australia remains committed to concluding a high-quality FTA with India; however, there is also need to chart a course to bring India into the top tier of Australia's economic partners. To this end, Ms. Sidhu highlighted the ambitious goals put forward by the strategy – lift India into Australia's top three export markets; make India the third largest destination in Asia for Australian outward investment; and bring India into the inner circle of Australia's strategic partnerships, with people-to-people ties as close as any in Asia.

Taxing the Digital Economy: Challenges for India and G20

July 16, 2018

The proliferation of global digital businesses has encouraged an evaluation of the applicability of existing international taxation principles to the evolving digital ecosystem. In the absence of an international consensus, several countries including India have adopted unilateral measures based on the OECD BEPS recommendations (2015). The issues pertaining to taxation measures adopted by various countries including India with regard to the digital economy were the focus of discussion at this stakeholder consultation.

A key issue that generated a great deal of debate was the role of user participation in value creation for the digital economy. Some participants stressed that measures like significant economic presence (SEP) can be challenged internationally under the aegis of double taxation avoidance agreements while many others felt that, in the absence of any multilateral consensus, SEP could only be a long term solution. On the other hand, measures like the equalisation levy were seen as useful short-term solutions. The role of data and users in value creation was also discussed in detail. It was pointed out that the theory of value creation has historically been driven by supply-side perspectives. However, a more comprehensive understanding of demand side considerations is necessary as consumers, especially in digital businesses, are not only arbiters of value but also, by definition, its co-creators. Hence, the jurisdiction where consumers use the goods and services should have some taxation right over business profits. Another important discussion in the valuing of data was whether it should be treated as labour or a capital input. The consultation concluded with participants stressing the need to revisit taxation principles and measurement of profit. This would require an in-depth review of the characterisation of income, including transfer pricing rules where necessary.

Emerging Challenges for Emerging Market Economies

July 13, 2018

A seminar on the macro-economic challenges for emerging market economies was delivered by Poonam Gupta, Lead Economist, World Bank. The session was chaired by Jaimini Bhagwati, Reserve Bank of India Chair Professor, ICRIER. Discussing the volatility of global capital flows, Dr. Gupta referred to the concept of 'sudden

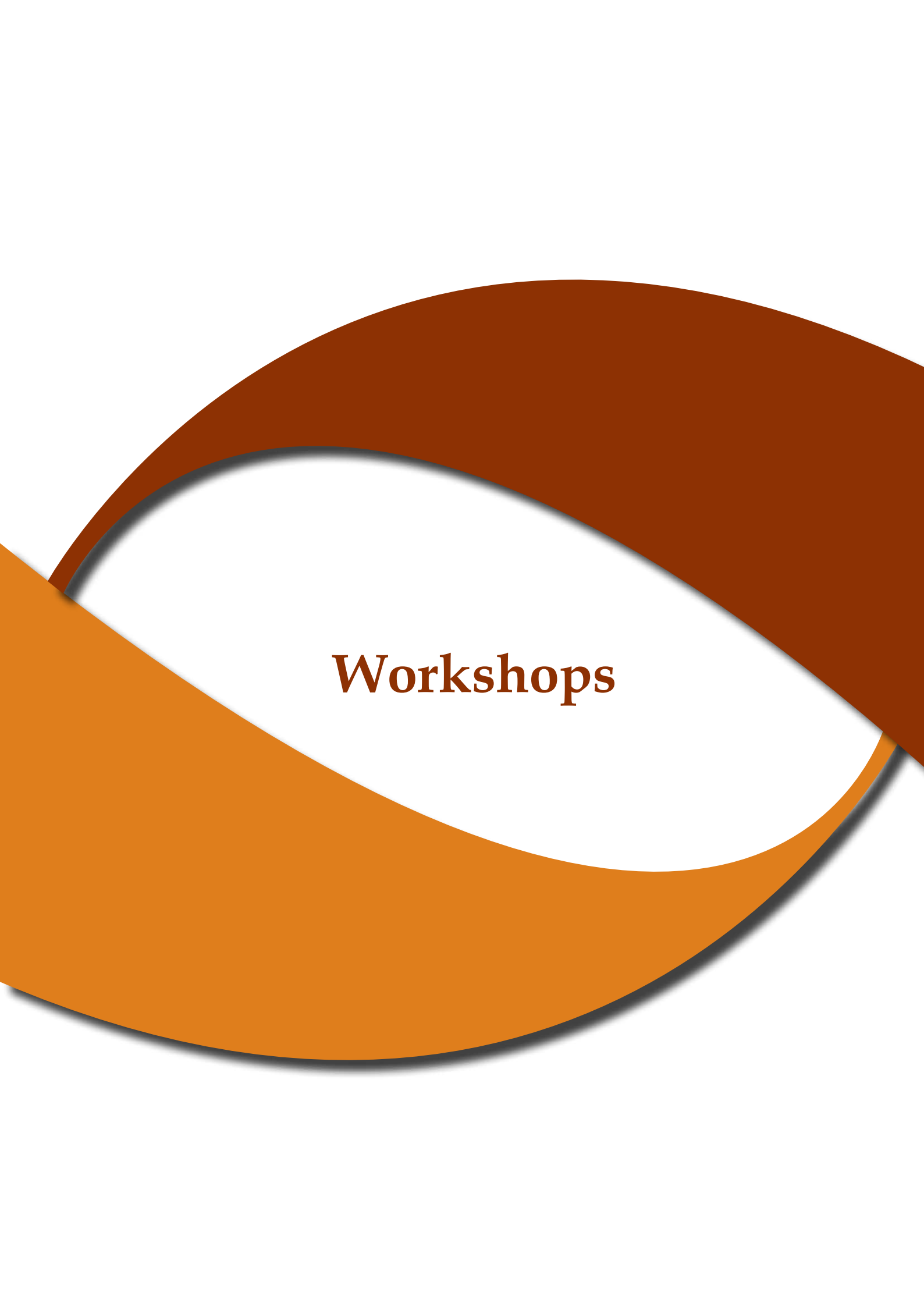
stops' when capital inflows dry up abruptly and noted that the recent reversal of capital flows to emerging markets pointed to the continuing relevance of the sudden stop problem. The features of these events/sudden stops include decline in stock prices, depreciation of exchange rates, increase in bond yields, deceleration in GDP growth, decline in investment growth, etc.

Analysing the sudden stops in capital flows to emerging markets since 1991, Dr. Gupta suggested that the frequency and duration of sudden stops have remained largely unchanged, but that the relative importance of different factors in their incidence has changed. In particular, global factors appear to have become more important relative to country-specific characteristics and policies. At the same time, stronger fiscal positions, more flexible exchange rates, deeper financial markets and less foreign currency mismatches have not insulated emerging markets from sudden stops. Dr. Gupta concluded by stating that emerging economies need to decide on the optimal degree and mode of integration with the global economy, insulate their economies from volatility, and devise nimble policy tools and safety nets. Some possible options, according to her, could be to attempt to limit exposure to capital flows and external shocks at the border through the application of capital inflow taxes and regulations, reducing the volume and volatility of capital movements, invest further in reforms designed to enhance the flexibility of policy response to capital flow surges and stops, and arrange financial insurance against sudden stops such as credit lines with the IMF, with regional arrangements like the Chiang Mai Initiative and with individual national partners.

Antimicrobial Resistance (AMR) Surveillance

July 6, 2018

A stakeholder consultation was organised by ICRIER on July 6, 2018, to discuss the findings of the ongoing research on 'Surveillance as an Important Aspect of Discussion in G20 Health Agenda'. The consultation was attended by representatives from the National Centre for Disease Control, Ministry of Health and Family Welfare, Government of India; World Health Organization (India and SEARO) and Centres for Disease Control and Prevention (CDC) India office as well as academics, scholars and representatives from industry and civil society. The key findings of the study were presented by Ali Mehdi, Senior Fellow, ICRIER. A major recommendation of the study is that information technology and artificial intelligence have great potential to strengthen AMR surveillance in India and internationally. An extensive and stimulating discussion on the technical and scientific feasibility of the proposed solutions followed this presentation.



Workshops

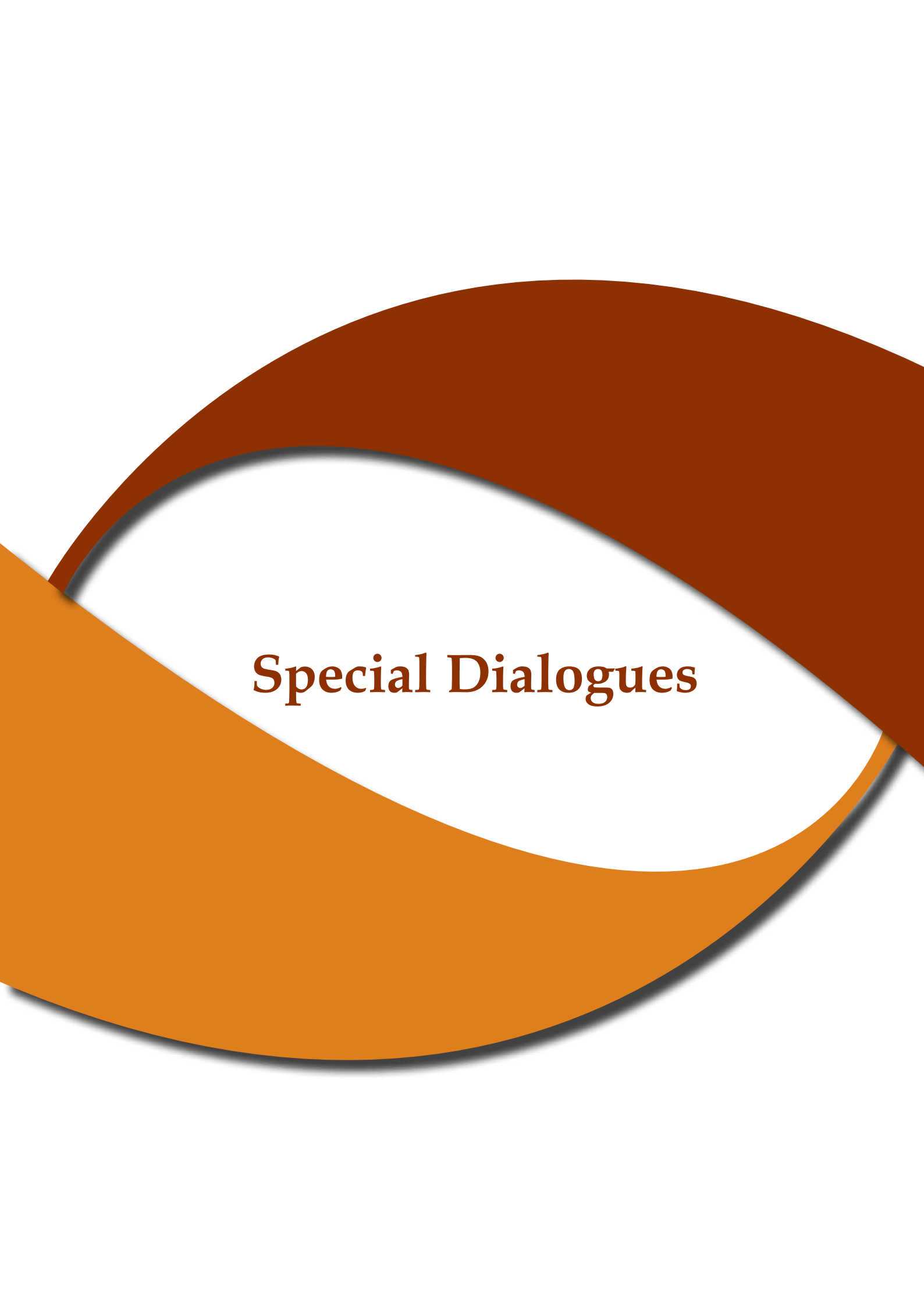
India-ASEAN Economic Relationship and Implications for Regional Comprehensive Economic Partnership (RCEP)

January 16, 2019

From the start of the negotiations of the Regional Comprehensive Economic Partnership (RCEP), there has been uncertainty as to whether or not India will be part of the mega-trade agreement between the 10 ASEAN countries and its six free-trade agreement partners – Australia, New Zealand, Japan, China, South Korea and India. In particular, several sections of domestic industry in India are severely opposed to the country joining RCEP. In this context, ICRIER organised a workshop to assess and discuss India's opportunities and challenges in the upcoming RCEP negotiations.

In his opening remarks, Rajiv Kher, former Commerce Secretary, Government of India, said that the RCEP is a must for India as this is the only chance of securing a rules-based framework with China. Mr. Kher also noted that India has not seen any major trade reform since 1991 and has paid little attention to getting integrated with global value chains. Thus, in his opinion, joining RCEP would provide the impetus to India to move to a higher trajectory of industry and trade-related reforms. The Chief RCEP negotiator for India and Joint Secretary, Ministry of Commerce and Industry, Dammu Ravi echoed Mr. Kher's remarks and confirmed that India is indeed going to be a part of the RCEP. He pointed out that eventually RCEP would lead to quality investments and result in standards, logistics and services reform in the country. Weighing on the politico-strategic benefits, Anurag Bhushan, Joint Secretary (ASEAN ML), Ministry of External Affairs, stated that India aims to sign a deal that would be beneficial, equitable and balanced for all participating countries and industries.

The presentation by Prabir De, Professor, Research and Information System for Developing Countries (RIS), focused on non-tariff measures (NTMs) in ASEAN-India trade. Dr. De pointed out that both ASEAN and India impose an almost equal number of NTMs against each other; 70 per cent of India's exports are affected by NTMs imposed by ASEAN. Therefore, he called for more transparency in the NTM regulations and emphasised the need to harmonise standards and technical regulations. The presentation by Pralok Gupta, Associate Professor, Indian Institute for Foreign Trade (IIFT), discussed the opportunities for and challenges facing India-ASEAN trade in services. Dr. Gupta said that given the enormous amount of cross country investments between India-ASEAN, there is a lot of to gain from the RCEP. In terms of challenges, he pointed out that while each of the four modes in the services agreement has its unique issues, the biggest issue facing services negotiations in RCEP is the lack of public data on trade in services. He strongly emphasised that without any services trade data, it will not be possible either to conduct research or have a negotiating strategy with regard to the potential benefits and costs of free trade in services.



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

Challenges of Mobility in Delhi

May 14, 2019

The 29th conversation on 'Challenges of Mobility in Delhi' was initiated by Geetam Tiwari, MoUD Chair Professor for Transport Planning at the Department of Civil Engineering, IIT Delhi. The session was moderated by Isher Judge Ahluwalia, Chairperson, ICRIER.

According to Dr. Tiwari, the existing modal share in Indian cities is in favour of non-motorised transport (NMT) and public transport. However, given the hostile conditions for public transport and increasing risk to

pedestrians and cyclists, the use of personal motorised vehicle is increasing. This trend is accompanied with the rise in traffic crashes and deteriorating air quality in cities. Thus, from the point of view of sustainable transport, it is necessary to promote bicycle use, especially as Delhi offers favourable conditions for bicycle use in terms of mixed land use and relatively high proportion of short trip lengths. Dr. Tiwari noted that in India, the economically weaker section of society typically locates itself very close to work opportunities, with squatter settlements near the place of work of the urban poor being major trip generators and high-income households being major trip attractors for the bicycle-borne urban working class.

This is particularly so as the city of Delhi has one of the largest road networks in India but the attractiveness of buses has fallen over the years. The priority given to construction of new road and flyover infrastructure to ease traffic congestion has spurred growth of private vehicles. Adding to this is the middle-class aspiration of owning a car. Frequent traffic jams across Delhi due to an increase in the number of personal vehicles further reduce the attractiveness of buses as the time taken by them increases due to the absence of dedicated bus corridors. In this setting, it is critical to identify areas for dedicated bus corridors and make bus services more reliable, convenient, attractive and efficient by reforming the bus system. The influx of intermediary public transport (IPT) like auto rickshaws, e-ricks and cycle rickshaws have also added to congestion on roads as some of them are non-registered and flout traffic and parking norms.

Dr. Tiwari concluded by stating that a sustainable transport system requires that the Delhi government plans for an integrated public transport system and does not shy away from a fight with the private vehicle lobby. The higher modal share of NMT gives hope that a transition to public transport is possible if services are made easily accessible, comfortable, efficient and attractive. Efforts to improve inter-modality are needed and the use of IT solutions can help achieve these to a great extent.

Engaging Communities for Improving Our Cities

March 19, 2019

The 28th conversation on 'Engaging Communities for Improving Our Cities' was initiated by Atul Goyal, one of the founder members of United Residents Joint Action (URJA) and its current President and moderated by Isher Judge Ahluwalia, Chairperson, ICRIER. URJA, set up in 2005, is the apex body of resident welfare associations (RWAs) in Delhi. It gathers, analyses, and disseminates information and aggregates public opinion to demand efficient delivery of civic amenities, health services, security, clean air and water to residents of Delhi through an accountable, efficient and responsive government. URJA connects with 2500 RWAs across Delhi and is closely networked with several NGOs of the city.

Mr. Goyal noted that cities today function way beyond their carrying capacity and the problem is further exacerbated by the lack of interaction between residents and policy makers. This non-congruence between the policy establishment and the resident, lack of transparency in the disbursement of funds to resident welfare associations and the poor resource base of RWAs in terms of human resource, funds and functionaries were the key reasons for the disconnect between residents and the government. This leads to poor implementation of the construction of infrastructure, poor service delivery and inequality in service delivery to residents.

The recommendations of URJA in this regard were highlighted by Mr. Goyal. These include: (i) formation of ward committees to manage funds for the upkeep and development of local infrastructure, (ii) regulations

governing the registration of RWAs to prevent multiplicity of associations and (iii) creation of a cell in the mayor's office where RWAs can directly participate in the governance structure. According to Mr. Goyal, an active and aware RWA is best placed to assist the government to solve issues like open waste dumping, parking management and maintenance of parks among others.

Civil Society Challenges: The Road Ahead

January 21, 2019

The 27th conversation on 'Civil Society Challenges: The Road Ahead' was initiated by Reena Ramachandran, Member, Foundation for Restoration of National Values and IC Centre for Governance. The session was moderated by Isher Judge Ahluwalia, Chairperson ICRIER.

Dr. Ramachandran discussed the challenges faced by civil society in contemporary urban India and how it can address these challenges, by drawing upon her experience as the President of the Resident Welfare Association, Saket H-Block, New Delhi. According to her, the Resident Welfare Associations (RWAs) are an integral part of today's urban civil society. While political parties seek to engage with RWAs, the various agencies which are responsible for the actual provision of urban services rarely engage with RWAs. RWAs also face a dearth of funds to undertake welfare measures at the local community level. This is primarily due to selective distribution of funds by the local government. There is lack of consultation and communication between RWAs and the local government. Further, the lack of a community spirit also hampers the functioning of RWAs. While the Societies Registration Act 1860 enables the creation of civil society bodies such as RWAs, there is no mechanism to monitor their operation.

Dr. Ramachandran also discussed how these challenges were addressed in H Block Saket through active engagement – within the local community, between the community and agencies such as the local police, PWD and others. Initiatives such as health camps, property tax camp and Aadhar registration camp along with cultural events on festivals such as Diwali and Christmas led to greater community engagement. The RWA also actively engaged with the local police and South Delhi Municipal Corporation on a regular basis and through events such as recognising the services of the local policemen and participation in cleanliness drives among others. Attention to proper and transparent utilisation of available funds and proper maintenance of RWA accounts were also highlighted by Dr. Ramachandran as being crucial for building trust among residents and public agencies in the RWA and its proper functioning.

Challenges of National Capital Region

November 19, 2018

The 26th conversation on 'Challenges of National Capital Region' was led by Bhure Lal, Chairman, Environment Pollution (Prevention & Control) Authority for the National Capital Region. The session was moderated by Isher Judge Ahluwalia, Chairperson, ICRIER. As chairman of the statutory body constituted by the central government in 1998 following a Supreme Court order to control air pollution, Dr. Lal is widely known for spearheading the campaign for the switchover of public vehicles from diesel to compressed natural gas (CNG) as a cleaner fuel in 2002, amid strong opposition from the auto industry.

In his remarks, Dr. Lal said that if air pollution in Delhi is to be controlled, the emphasis has to be on public transport. Citing the 2018 Emission Inventory of Delhi, released by the Ministry of Earth Sciences, according to which there has been a 40 per cent increase in vehicular pollution between 2010 and 2018 in Delhi and its adjoining areas, he noted that currently about 42 per cent of the air pollution is due to vehicles. The other key contributors to air pollution in the national capital are illegal construction and open burning of plastic waste.

Dr. Lal pointed out that the public bus strength remains woefully short of current needs. Delhi requires a fleet of around 15,000 buses; there are only 5,000 available currently. Moreover, while efforts are being made to procure more buses to improve the state of public transport, Delhi-NCR simply does not have the space for parking depots as several plots of land allotted by the Delhi Development Authority (DDA) are under litigation. Regarding the growing problem of waste burning in the open, Dr. Lal pointed out that the key issue was the taking over of agricultural locations by industries. Giving the examples of Burari, Mundka, Tikri and Ghevra, he said that these places were all known for agriculture, but they have been converted into industrial godowns where plastic and rubber waste is openly burnt.

In his concluding remarks Dr. Lal stressed that people are not willing to give up comfort and that is why a change in mindset as well as tough action was needed. These range from taking down illegal constructions, placing a cap on the number of private vehicles, and introducing vertical parking for the public bus fleet.

Solutions to Save Delhi from Getting Flooded Even with Little Rain

September 17, 2018

The 25th conversation on ‘Solutions to Save Delhi from Getting Flooded Even with Little Rain’ featured A. K. Gosain, Professor, Department of Civil Engineering, Indian Institute of Technology Delhi (IITD). Dr. Gosain is an eminent water resource expert and is well known for the application of Geographic Information Systems (GIS) in water resources management. He led the IITD team that submitted the Drainage Master Plan to prevent frequent drowning of parts of Delhi during the monsoon season to the city government in August 2018.

According to Dr. Gosain, Delhi’s monsoon woes can be solved using a technical approach and the capital can be saved from getting flooded even with little rain. Explaining the IITD team’s approach to the problem, he highlighted the following – scientific analysis of the storm water drainage system; deployment of models to simulate the floods in the national capital region of Delhi; capturing the drainage infrastructure; validating the model using flooding hotspots; analysing to check technical aspects of drains and their conveyance performance and generating scenarios to reduce flooding in a sequential manner for ease of implementation.

He added that taking care of the existing storm water drains with supportive measures was the only way to tackle the flood situation, as Delhi’s drains cannot be reconstructed. Pointing out that storm water drainage is not only a factor of natural drainage but also land use which affects runoff coefficients, Dr. Gosain gave the example of the rising resort to concrete paving due to which there is an increase in surface water runoff. This requires wider drains to absorb the excess water, which, however, is not possible since there is no land available for widening. Concrete paving has also hampered the soil types underneath it due to which water cannot penetrate into ground affecting groundwater levels.

Dr. Gosain emphasised that GIS can be a great tool to minimise the extent of flooding by identifying areas that need technical corrections and areas where widening of drains can be done with quantified volumes of water that can be channelized. He illustrated this through an earlier GIS framework on storm water drainage in the Delhi region, which had found that the slopes of the drains were adverse in some areas, that the drains were carrying sewage and also needed de-silting. In conclusion, Dr. Gosain stressed the need for effective and regular de-silting of storm water drains as well as rainwater harvesting to prevent flooding in urban areas even with little rain.

Conserving our Natural Heritage in Urban Centres

July 25, 2018

The 24th conversation on 'Conserving our Natural Heritage in Urban Centres' was led by C. R. Babu, Professor Emeritus, Centre of Environmental Management of Degraded Ecosystems (CEMDE), University of Delhi, and moderated by Isher Judge Ahluwalia, Chairperson, ICRIER.

Dr. Babu is widely known for his leadership of a team of scientists, which has been developing a network of biodiversity parks in Delhi through an innovative approach – ecological assemblages of species that form self-sustaining communities on degraded/barren landscapes. These parks are the first of their kind in India and perhaps in the world, and serve as ecological models for conservation of natural heritage in urban landscapes. Two of these – the Yamuna Biodiversity Park and the Aravalli Biodiversity Park – are fully functional and serve as nature reserves with more than three thousand species of plants and animals. The parks also generate a wide range of ecological services – (i) enriching human microbiome, which is critical for preventing health risks and reducing the public health burden, (ii) serving as effective filters for point and nonpoint sources of air pollution, (iii) recharging ground water, (iv) impounding flood waters and preventing surface run off, (v) buffering local weather and contributing to the climate resilience of the city, (vi) serving as an instrument to promote environmental education among students of schools, colleges and universities and the public, (vii) providing recreation to the public and (viii) preserving the vanishing gene pools of plants, animals and microbes.

In this session, Dr. Babu spoke about (i) the environmental crises threatening human survival and the biosphere; (ii) water crisis that may result in mass migrations in many countries including India; and (iii) the loss of natural heritage (living resources and their habitats) or biodiversity, which is critical for generating a wide range of ecological services that are essential for human well-being. He pointed out that rapid urbanisation has led to the loss of natural heritage in urban centres and cautioned that, unless these issues are addressed with urgency, the natural heritage in many cities may be completely wiped out. A key issue highlighted by Dr. Babu was recycling of waste water, particularly sewage. Elaborating on this, he highlighted the example of converting waste water into clean water at the Neela Hauz Bio-diversity Park with the help of a 'constructed wetland system'.

India-China



Delegates of 3rd China-India Dialogue on Climate Change

In March 2017, ICRIER, in collaboration with Tsinghua University and New Climate Economy (NCE), the flagship initiative of the Global Commission on the Economy and Climate, initiated an India-China dialogue around the challenges and opportunities for climate action that will boost economic growth and inclusive development in the two countries. The 1st dialogue was convened at Tsinghua University in Beijing on March 16-17, 2017 and the Chinese and Indian delegations were headed respectively by Liu Yuanhua, Chairman of the Chinese National Expert Committee on Climate Change and Shyam Saran, Former Indian Foreign Secretary. The 2nd dialogue was organised by ICRIER in New Delhi on January 28-30, 2018.

This year the 3rd dialogue was held in Beijing from March 21-23, 2019. The Indian delegation was led by Naina Lal Kidwai, Chair of Sustainability Council and Member Global Commission on the Economy and Climate. The other members included Rajat Kathuria, Director & CE, ICRIER; Arunabha Ghosh, CEO, Council on Energy, Environment and Water (CEEW), New Delhi; Krishan Dhawan, CEO, Shakti Foundation; Navroz Dubash, Professor, Centre for Policy Research; Om Prakash Agarwal, CEO, World Resources Institute (WRI), New Delhi; Rangan Banerjee, Head, Department of Energy Science and Engineering, IIT; R R Rashmi, Fellow TERI and Shashi Shekhar, former Secretary, Ministry of Water Resources, Government of India.

The Chinese delegation was led by Liu Yanhua, Chairman of National Expert Committee on Climate Change and other members included He Jiankun, Vice Chairman National Expert Committee on Climate Change; Zhou Dadi, Professor and Former Director General, Energy Research Institute of National Development and Reform Commission; Wang Yi, Deputy Director, Institute of Science and Development, Chinese Academy of Sciences; Pan Jiahua, Director, Institute of Urban and Environment Studies, Chinese Academy of Social Studies; Lin Erda, Professor, Chinese Academy of Agriculture Science; Xu Jianchu, Professor, Kunming Botany Institute, Chinese Academy of Science; Chao Qingchen, Deputy Director, National Climate Change Center, China Meteorological

Administration; Xu Huaqing, Director, Department of Strategy, National Center for Climate Change Strategy and International Cooperation; and Teng Fei, Professor, Institute of Energy, Environment, and Economy, Tsinghua University.

The discussions at the dialogue were divided into four sessions - 'Envisaging Cities of the Future', 'Approaches to Energy and Economic Transition-Demand Side', 'Approaches to Energy and Economic Transition-Supply Side' and 'Food & Land Use'. Experiences of both countries in the aforementioned areas were presented by the participants. Common challenges for India and China such as unplanned urban peripheries, rise in the number of private vehicles, lack of affordable housing, and occurrence of floods etc. were highlighted and collaborative opportunity in enhancing energy efficiency was discussed at length.

India-Japan



Speakers and participants of 9th ICRIER-PRI Workshop on
Global Economic Trends and India-Japan Economic Partnership

ICRIER has been at the forefront of efforts to improve mutual understanding between India and Japan since 2007 and has gradually emerged as a key centre for regular dialogues 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 9th ICRIER-PRI Workshop on the theme Global Economic Trends and India-Japan Economic Partnership was organised on March 8, 2019, in New Delhi. The delegation from Japan was led by KOBE Harumi, Councillor & Vice President, PRI. The discussions at the workshop were structured into three sessions: (1) Progress in

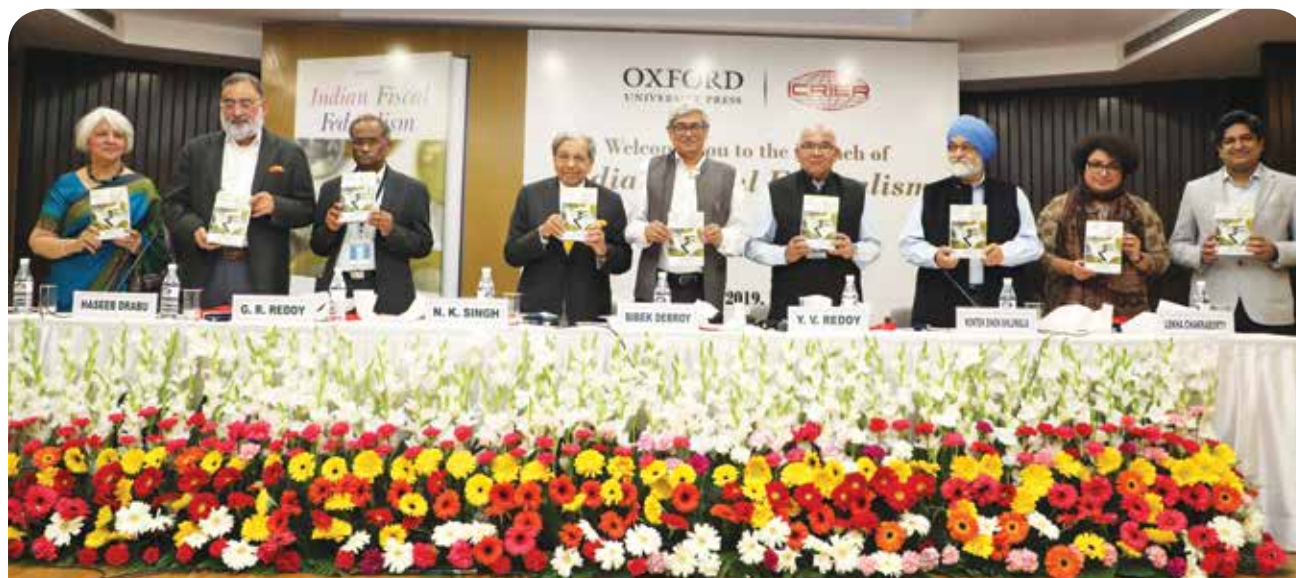
Infrastructure Development and Ease of Doing Business in India (2) Indian and Japanese Perspectives on New Financial Technologies and (3) Japan's G20 Presidency and Potential Areas for India-Japan Co-operation.

The first session on "Progress in Infrastructure Development and Ease of Doing Business in India" was chaired by Manoj Pant, Director, Indian Institute of Foreign Trade (IIFT). The key speakers were Takashi Tsuchiya, Deputy Director General, Japan External Trade Organization (JETRO), New Delhi, and Anil Padmanabhan, Managing Editor, Mint. The lead discussants were Hayashidani Ichiro, Chief Representative, Japan Bank for International Co-operation (JBIC), New Delhi, Takayoshi Tange, Senior Representative/Deputy Chief Representative, Japan International Co-operation Agency (JICA) India Office, and Sanjana Joshi, Senior Consultant, ICRIER. The theme of the second session was "Indian and Japanese Perspectives on New Financial Technologies"; it was chaired by Rajat Kathuria, Director & CE, ICRIER. The key speakers were Akira Tokutsu, Associate Professor, Tohoku University, Japan, and Saon Ray, Senior Fellow, ICRIER. The lead discussants were Prasanto Roy, Senior Director, FTI Consulting, and Daisuke Maeda, MD, AEON Credit Service India Pvt. Ltd. The third session on "Japan's G20 Presidency and Potential Areas for India-Japan Co-operation" was chaired by Sachin Chaturvedi, Director General, Research and Information System for Developing Countries (RIS). The key speakers were Naoyuki Yoshino, Dean, ADBI, and K. E. Seetha Ram, Senior Consulting Specialist, Capacity Building and Training Department, ADBI (via video), Alok Sheel, RBI Chair Professor, ICRIER and former Joint Secretary, Department of Economic Affairs, Ministry of Finance, and Deepa Wadhwa, Former Indian Ambassador to Japan.

**Books
&
Reports Releases**

Book - *Indian Fiscal Federalism*

March 28, 2019



Authors and panellists with Chief Guest, N. K. Singh, Chairman, Fifteenth Finance Commission, at the release of the book "*Indian Fiscal Federalism*"

The book launch of "*Indian Fiscal Federalism*", authored by Y. V. Reddy, former Governor, Reserve Bank of India, and G. R. Reddy, Adviser (Finance), Government of Telangana, was organised by ICRIER in partnership with Oxford University Press at India International Centre, New Delhi. The book, likening fiscal federalism to a game between the union and states, and among states themselves, lays bare the complex rules of play. It examines the pivotal role of Finance Commissions and assesses momentous events since 2014, such as the replacement of the Planning Commission by NITI Aayog and the emergence of the GST Council. It offers a historical perspective on fiscal federalism, in particular the interplay and overlap of institutional mechanisms. In doing so, it examines persistent as well as immediate concerns and offers a way forward.

Speaking at the event, N. K. Singh, Chairman, 15th Finance Commission, lauded the publication as an 'outstanding attempt'. Mr. Singh agreed with the authors that fiscal federalism is a dynamic process. Dwelling on the catch 22 situation created by Article 282 of the Indian Constitution and the Seventh Schedule, he noted that Article 282 was originally not expected to be an overarching provision but an extraordinary one to be used very sparingly. According to Mr. Singh, the misuse of the Article 282 created a dichotomy in the functioning of the Finance Commission as envisaged in Article 280. A wider debate is needed to resolve this contradiction.

The book launch was followed by an insightful panel discussion moderated by Bibek Debroy, Chairman, Prime Minister's Economic Advisory Council; the distinguished panellists included Montek Singh Ahluwalia, Former Deputy Chairman of the Planning Commission, Government of India, Haseeb Drabu, former Finance Minister of Jammu and Kashmir, and Lekha Chakraborty, Associate Professor, NIPFP.

Report - *An Analysis of Competition and Regulatory Intervention in India's Television Distribution and Broadcasting Services*

March 18, 2019



Authors and panellists at the release of the report "*An Analysis of Competition and Regulatory Intervention in India's Television Distribution and Broadcasting Services*"

The report "*An Analysis of Competition and Regulatory Intervention in India's Television Distribution and Broadcasting Services*", released on March 18, 2019, is authored by Rajat Kathuria, Mansi Kedia and Richa Sekhani. In the context of the digital transformation of the television (TV) industry in India, the report provides an overview of the industry, including its evolution and the nature and level of competition. It finds that India is the second largest television market in the world and is adequately competitive in the direct to home (DTH) sub-segment. Competition in cable TV services, however, is not uniform across the country. The report also presents a critical evaluation of the Telecommunication Services Tariff Order, 2017, of the Telecom Regulatory Authority of India (TRAI) that has been presented as an attempt to address alleged malpractices adopted by broadcasters and distribution platform operators (DPOs). The authors recommend a 'light touch regulatory approach' that may naturally nudge the industry towards an optimal equilibrium. They emphasise that regulators must place trust in the industry to achieve its maximum potential.

The special address on the occasion was delivered by Shubhashis Gangopadhyay, Research Director, India Development Foundation. He provided an academic perspective on the need for and the benefit of price bundling in a competitive market. Dr. Gangopadhyay concluded by stating that "we ought to trust markets more than we do".

The panel discussion following the special address was moderated by Mansi Kedia, Consultant, ICRIER. The key speakers were Anit Gupta, Head of strategy and Insights, Clear Insights Consulting, Geeta Gouri, former Member, Competition Commission of India, Roop Sharma, President, Cable Operators Federation of India, and Rohan Arora, Principal Consultant, Shardul Amarchand Mangaldas & Co.

Book - *Supporting Indian Farms the Smart Way*

September 18, 2018



Authors and Panellists at the release of the book "*Supporting Indian Farms the Smart Way*"

The book "*Supporting Indian Farms the Smart Way*" by Ashok Gulati, Marco Ferroni and Yuan Zhou (Eds.) was released on September 18, 2018, by Shri Arun Jaitley, Hon'ble Union Minister of Finance, Government of India.

A recent ICRIER-OECD study (2018) has found that Indian farmers are being net taxed, which is captured through a negative producer support estimate (PSE). This book recognises this negative PSE, but focuses on rising input subsidies, be it fertilisers, power, irrigation, credit, insurance, etc. It also looks at investments in agriculture, especially public investments. It notes with concern that public investment has been declining, while input subsidies are rising in Indian agriculture. But marginal returns on investments in terms of agricultural growth and poverty alleviation are much higher than that of input subsidies. Based on the analyses and review of policies, the book provides recommendations to rationalise subsidies and help India achieve higher growth of agricultural GDP and faster poverty reduction while ensuring judicious use of precious resources like soil and water.

In his keynote speech, Shri Arun Jaitley emphasised that subsidies and investments have been the eternal choice of Indian policymakers. According to him, India needs a good blend of investments and subsidies in its agriculture policy. Noting that unlike in the past, India is no longer in a state of inadequacy of resources, he pointed out that today there are no severe constraints on resources to invest in rural areas, be it roads, water (irrigation), sanitation, and even housing. Mr. Jaitley agreed with the clear message of the book that including agricultural research and development (R&D) and quality education in the list of rural investments would pay off handsomely in terms of reducing poverty and pushing agricultural growth at a much faster pace than has been the case so far.

In his special remarks, Sanjeev Sanyal, Principal Economic Advisor, Ministry of Finance, Government of India, said that the last time India "re-looked" at the agriculture sector was in the 1960s to produce more calories, which

still remains the central theme of our agriculture policy. He said that a radical rethink is needed as producing more and more calories cannot be a focus since population growth is slowing down. Further, according to Mr. Sanyal, issues like climate change, sustainability and resilience of our agriculture should be factored in our discussions. A review of the main findings was provided by Suresh Pal, Director, ICAR-National Institute of Agricultural Economics and Policy Research, and Sunil Jain, Managing Editor, The Financial Express.

Report - *Effects of Consumer Finance on Financial Inclusion in India*

August 10, 2018



Authors and Panellists at the release of the report "*Effects of Consumer Finance on Financial Inclusion in India*"

Ensuring quality access to formal financial services in a country of 1.3 billion people has always been a challenge for the Indian government. Despite having been a priority on the policy agenda for decades, the goal of universal financial inclusion is yet to be achieved. The report "*Effect of Consumer Finance on Financial Inclusion in India*", notes the importance of access to credit especially for the poor and the unbanked.

On the occasion of the release of this report on August 10, 2018, the key findings of the study undertaken by ICRIER were presented by Saon Ray, Senior Fellow, ICRIER. Dr. Ray stated that an important part of this study was a survey across five cities – Bangalore, Bhopal, Delhi, Kolkata, and Mumbai – to understand people's perceptions towards credits and loans, particularly in the consumer finance segment. Middle-income and lower-income group respondents (defined as those with a monthly household income of Rs. 25000 and above and monthly household income of Rs. 25000 and below respectively) were included in the survey. The central message of the report is that non-banking financial companies (NBFCs) can play a large role in expanding the reach of the formal financial system, and consumer credit, an emerging loan segment in both the banking and NBFC sectors, can be a potential tool to increase engagement between the poor and the banking and financial sector. Easy and affordable credit would also reduce their dependence on non-institutional agencies and improve their household consumption and cash flow. At the same time, the report highlights the importance of financial literacy in achieving greater financial inclusion in the country.

This was followed by a panel discussion on “Credit and Financial Inclusion”. The panellists were Saibal Paul, Associate Director, Sa-Dhan, Tamal Bandhopadhyay, Advisor, Strategy, Bandhan Bank & Consulting Editor, Mint, Raman Aggarwal, Chairman, Finance Industry Development Council (FIDC), and Alok Pandey, Professor, Lal Bahadur Shastri Institute of Management.

Report - *Agricultural Policies in India*

July 5, 2018



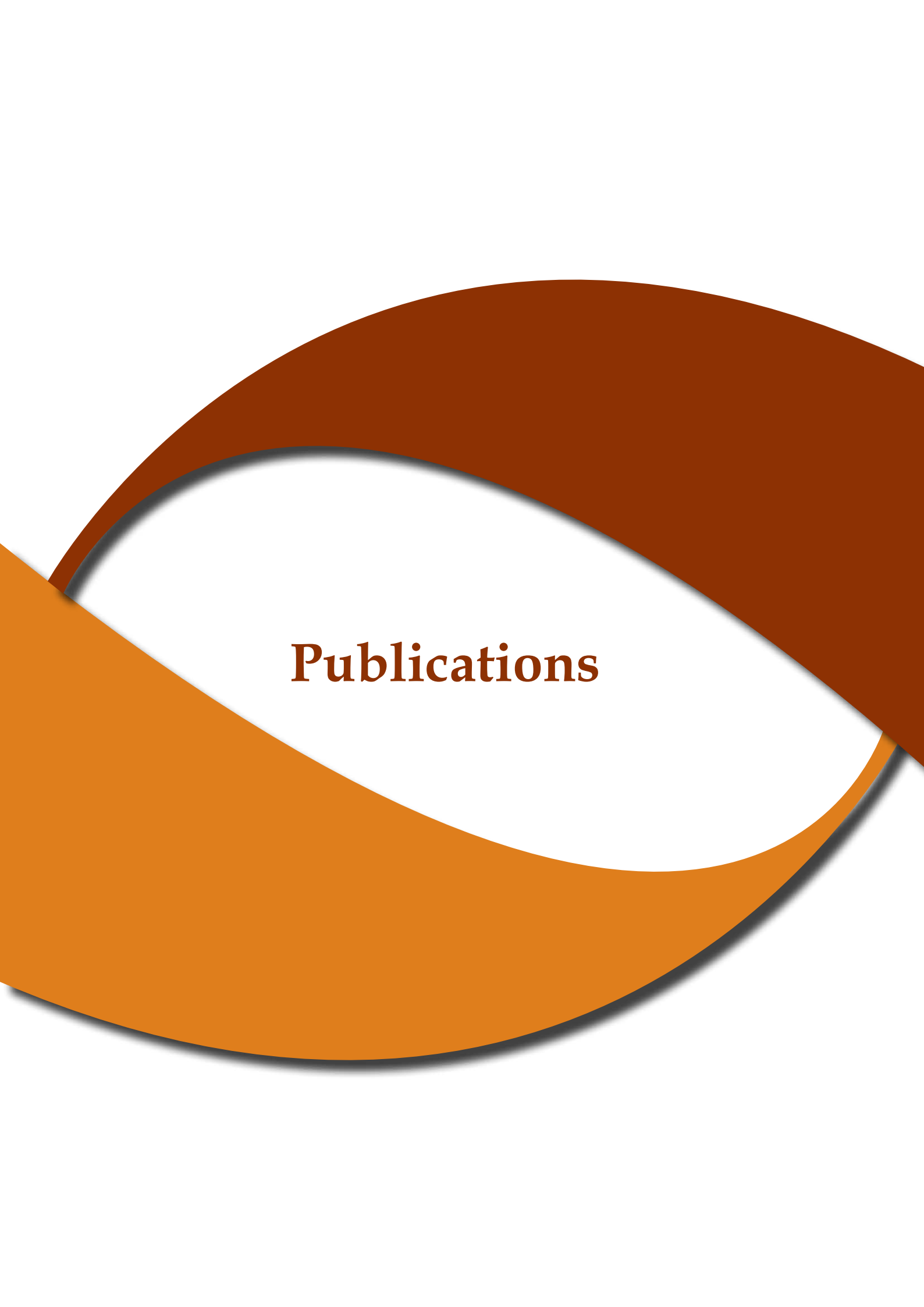
Authors and Panellists at the release of the report “Agricultural Policies in India”

The report, “Agricultural Policies in India”, prepared jointly by ICRIER and the Trade and Agricultural Directorate, Organisation for Economic Co-operation and Development (OECD), was released by Rita Teotia, Secretary, Department of Commerce, Government of India, on July 5, 2018, at New Delhi. The report assesses the performance of agricultural and food policy in India and calculates a set of policy indicators providing a comprehensive picture of agricultural support.

It finds that government intervention in India is providing both negative and positive support to agriculture, with market and trade interventions often depressing prices, while subsidies to fertilisers, water, power and other inputs incentivise their use. This, according to the report, reveals the inherent difficulty in attempting to secure remunerative prices and higher incomes for farmers, while at the same time keeping food prices low for consumers. The report also points to policy-induced pressures on natural resources such as water and soil. Detailed recommendations that have the potential to improve farmers’ welfare, reduce environmental damage, alleviate some of the pressure on scarce resources, better prepare the sector for climate change, improve food and nutrition security for the poor, improve domestic market functioning and position India to participate more fully in agro-food global value chains are offered.

Speaking on the occasion, Ken Ash, Director, Trade and Agricultural Directorate, OECD, introduced the report as a ‘deep dive’ into Indian agriculture in such a way as to allow cross-country comparison. The methodology used in the report was explained by Carmel Cahill, Deputy Director, Trade and Agricultural Directorate, OECD.

The key recommendations were presented by Ashok Gulati, Infosys Chair Professor for Agriculture, ICRIER. He stated that only by shifting scarce budgetary resources to investments that will increase resilience and sustainability while allowing better functioning markets to determine farmers' remuneration to a much greater degree can the potential of the sector to contribute to growth and jobs be fully realised. Special remarks on the report were provided by Jalaj Shrivastava, Additional Secretary, Department of Agriculture, Co-operation and Farmers' welfare, Government of India, and Anup Wadhawan, Secretary Designate, Department of Commerce, Government of India.



Publications

Books



20 Years of G20: From Global Co-operation to Building Consensus

Edited by Rajat Kathuria and Prateek Kukreja
Springer, 2019

Tariff Negotiations and Renegotiations under the GATT and the WTO

Edited by Anwarul Hoda
2nd edition, Cambridge University Press, 2019



Supporting Indian Farms the Smart Way

Edited by Ashok Gulati, Marco Ferroni and Yuan Zhou
Academic Foundation, 2018

Low Carbon Pathways for Growth in India

Edited by Rajat Kathuria, Saon Ray and Kuntala Bandyopadhyay
Springer, 2018



Reports

Evaluating Spectrum Auctions in India

By Rajat Kathuria, Mansi Kedia, Richa Sekhani and Kaushambi Bagchi

ICRIER and BIF, April 2019



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

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

ICRIER, March 2019



India's Development Assistance and Connectivity Projects in Nepal

By Sanjay Pulipaka, Akshaya Sree N. R., M. Harshini,

Deepalakshmi V. R. and Krishi Korrapati

ICRIER and OXFAM, December 2018



Growth Dividends of Digital Communications

By Rajat Kathuria, Mansi Kedia, Richa Sekhani and Ujjwal Krishna

ICRIER and BIF, December 2018



Reports



India's Development Assistance to Nepal: Case of the Education Sector

By Tanu M. Goyal

ICRIER and OXFAM, November 2018

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

By Arpita Mukherjee, Souvik Dutta, Tanu M. Goyal,

Ankita Marwaha and Avantika Kapoor

ICRIER and Academic Foundation, October 2018



Effect of Consumer Finance on Financial Inclusion in India

By Saon Ray, Smita Miglani and Sandeep Paul

ICRIER, August 2018

Agricultural Policies in India

By Ashok Gulati, (et al)

ICRIER and OECD, July 2018



Working Papers

- WP No. 380** Rajat Kathuria, Mansi Kedia and Richa Sekhani, "A Study of the Financial Health of the Telecom Sector", June 2019
- WP No. 379** Anwarul Hoda and Durgesh K. Rai, "Totalisation/Portability of Social Security Benefits: Imperatives for Global Action", June 2019
- WP No. 378** Nisha Taneja, Tin Htoo Naing, Sanjana Joshi, Thiyam Bharat Singh, Samridhi Bimal, Sakshi Garg, Riya Roy and Manali Sharma, "India-Myanmar Border Trade", June 2019
- WP No. 377** Tanu M. Goyal, "The Role and Changing Paradigm of India's Assistance to Nepal: Case of the Education Sector", June 2019
- WP No. 376** Saon Ray, "What Explains India's Poor Performance in Garments Exports: Evidence from Five Clusters", May 2019
- WP No. 375** Suresh Chand Aggarwal, Divya Satija and Shuheeb Khan, "Inclusive Growth in India - Learning from Best Practices of Selected Countries", May 2019
- WP No. 374** Seema Sharma, Arnab Bose, Himanshu Shekhar and Rohit Pathania, "Strategy for Financial Inclusion of Informal Economy Workers", May 2019
- WP No. 373** Amrita Goldar, Meenu Tewari and Flavy Sen, "Burden of Disease and Climate Interactions: An Illustrative Study of Surat City, India", April 2019
- WP No. 372** Anirudh Shingal and Malte Ehrlich, "Trade Effects of Standards Harmonization in the EU: Improved Access for Non-EU Partners", April 2019
- WP No. 371** Deb Kusum Das and Neha Gupta, "Climbing up India's Manufacturing Export Ladder: How Competitive are Intermediate Goods?" April 2019
- WP No. 370** Saon Ray, Smita Miglani and Sandeep Paul, "The Probability of Getting a Loan: Evidence from Indian Cities", February 2019
- WP No. 369** Radhicka Kapoor and P. P. Krishnapriya, "Explaining the Contractualisation of India's Workforce", January 2019
- WP No. 368** Surbhi Ghai, "The Anomaly of Women's Work and Education in India", December 2018
- WP No. 367** Saon Ray, Smita Miglani and Sandeep Paul, "The Growing Importance of Consumer Finance for Financial Inclusion in India", December 2018
- WP No. 366** Saon Ray, Sandeep Paul and Smita Miglani, "Innovation, Efficiency and Inclusion: Integration of Digital Technologies in the Indian Microfinance Sector", October 2018
- WP No. 365** Arpita Mukherjee, Anusree Paul, Angana Parashar Sarma and Soham Sinha, "Trade, Trade Agreements and Subsidies: The Case of the Indian Apparel", October 2018

- WP No. 364** Prateek Kukreja, "Skill Mismatch and Returns to Education in Manufacturing: A Case of India's Textile and Clothing Industry", September 2018
- WP No. 363** Nisha Taneja, Samridhi Bimal and Varsha Sivaram, "Emerging Trends in India-Pakistan Trade", August 2018
- WP No. 362** Arpita Mukherjee, Avantika Kapoor and Angana Parashar Sarma, "High-Skilled Labour Mobility in an Era of Protectionism: Foreign Start-ups and India", July 2018
- WP No. 361** Anwarul Hoda, "Land Use and Land Acquisition Laws in India", July 2018

Acknowledgements

ICRIER acknowledges the financial support received in 2018-19 from the following organisations for conducting research studies and organising seminars/workshops/conferences:

- Asian Development Bank Institute (ADBI)
- Australian High Commission
- Bill & Melinda Gates Foundation (BMGF)
- Data Catalyst Institute
- Department for International Development (DFID), United Kingdom
- Department of Economic Affairs (DEA), Ministry of Finance, Government of India
- Department of Scientific and Industrial Research (DSIR), Ministry of Science & Technology, Government of India
- Department of Foreign Affairs & Trade (DFAT), Australia
- Ecorys Research and Consulting
- Embassy of Japan, New Delhi
- ESCAP (South and South-West Asia)
- European Business & Technology Centre
- Facebook India Online Services (P) Ltd.
- Fifteenth Finance Commission of India
- Ford Foundation
- Foreign & Commonwealth Office (FCO), United Kingdom
- Google India (P) Ltd.
- Home Credit India Finance (P) Ltd.
- Hudco : Covered Bond System
- IDFC Foundation
- Indian Council of Social Science Research
- International Labour Organization (ILO)
- Indian Institute of Management, Ahmadabad (IIMA)
- International Monetary Fund (IMF)
- Internet & Mobile Association of India (IAMAI)
- Internet Protocol Television Society
- Ministry of Commerce and Industry, Government of India
- Ministry of Electronics and Information Technology (MeitY), Government of India
- Ministry of Environment, Forest & Climate Change, Government of India
- Ministry of Urban Development, Government of India
- Monsanto Holdings (P) Ltd
- National Bank for Agriculture and Rural Development (NABARD)
- NASSCOM
- National Internet Exchange of India (NIXI)
- NCDEX Investor (Clients) Protection Fund Trust
- Nilekani Philanthropies
- Organization for Economic Co-Operation and Development (OECD)
- Oxfam India
- Oxford Policy Management
- PepsiCo India Holdings (P) Ltd.
- Price Waterhouse Coopers (P) Ltd.
- Qualcomm Incorporated
- Saudi Secretariat
- Shakti Sustainable Energy Foundation
- Tata Education and Development Trust
- Tata Sky Ltd.
- United States Institute of Peace (USIP)
- World Resources Institute (WRI)
- ZEF, University of Bonn

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Dr. Bharat R. Sharma
Mr. Pravesh Sharma

Senior Fellows

Dr. Radhicka Kapoor
Dr. Ali Mehdi
Dr. Saon Ray
Dr. Anirudh Shingal
Dr. Pankaj Vashishta

Senior Consultants

Mr. Sandip Das
Ms. Sanjana Joshi
Ms. Shweta Saini

Fellows

Dr. Amrita Goldar
Dr. Neha Gupta
Dr. Debarpita Roy
Dr. Durgesh K. Roy

In-house Consultants

Ms. Chavi Asrani
Ms. Kaushambi Bagchi
Ms. Samridhi Bimal
Ms. Tanu M. Goyal
Ms. Mansi Kedia Jaju
Mr. Abhinav Jain
Ms. Ritika Juneja
Ms. Divya Satija
Mr. Shubham Sharma
Ms. Saranya Sircar
Mr. Gangesh Sreekumar Varma
Mr. Harsh Wardhan

Research Associates

Mr. Loknath Acharya
Ms. Kuntala Bandyopadhyay
Ms. Pritha Banerjee
Dr. Tirtha Chatterjee
Ms. Divya Chaudhry

Ms. Sonal Dua
Ms. Shyma Jose
Mr. Prateek Kukreja
Ms. Smita Miglani
Ms. Isha Suri
Ms. Priyanka Tomar

Research Assistants

Ms. Akshaya Aggarwal
Ms. Diya Dasgupta
Ms. Sakshi Garg
Ms. Sakshi Gupta
Ms. Sajal Jain
Ms. Samridhi Jain
Ms. Varsha Jain
Mr. Ayush Khare
Ms. Kriti Khurana
Mr. Ujjwal Krishna
Ms. Shreya Mangla
Ms. Manisha Mukherjee
Mr. Anmol Nagpal
Ms. Angana Parashar Sarma
Mr. Viraj Mangesh Sawant
Ms. Richa Sekhani
Ms. Vasundhara Thakur

Administration

Secretary

Ms. Geetha Nair

Senior Manager (Admin & Events)

Mr. Manmeet Ahuja

IT Manager

Mr. Raj Kumar Shahi

Senior Accounts Executive

Mr. Prabhat Kumar

Accounts Executive

Mr. Rishi Kumar

Account Assistant

Mr. Ram Kumar

Library cum Doc. Officer

Ms. Chhaya Singh

Private Secretaries

Mr. Rahul Arora
Ms. Hilda Kathuria (Consultant)
Mr. Anu Mohandas
Ms. Priti Rajput
Mr. Rajinder Singh Rawat
Mr. M. Janardhan Reddy

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 (Consultant)

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

Suresh Chand Aggarwal

Professor

Department of Business Economics

University of Delhi, India

Brahma Chauhan

Founder, Rocket Flyer Technology Private Limited

Gurgaon, India

Deb Kusum Das

Associate Professor

Department of Economics, University of Delhi

India

Kavery Ganguly

Independent Consultant

Mumbai, India

Sindhushree Khullar

Former CEO, NITI Aayog

Government of India

New Delhi, India

Tin Htoo Naing

Director

Center for Economy, Environment and Society

Myanmar

Shravani Prakash

Founder, TelleNomics

Bengaluru, India

Sanjay Pulipaka

Senior Fellow

Nehru Memorial Museum & Library (NMML)

New Delhi, India

Irudaya Rajan

Professor, Centre for Development Studies

Thiruvananthapuram

Kerala, India

Ranjana Roy

Independent Consultant

Uruguay

Himanshu Shekhar

Independent Consultant

Bengaluru, India

The graphic features two large, overlapping, curved shapes. The top shape is a dark brown color, and the bottom shape is a lighter orange-brown color. They overlap in the center, creating a white space where the text is located. The shapes have a slight shadow effect, giving them a three-dimensional appearance.

Faculty Activities

DIRECTOR & CHIEF EXECUTIVE

RAJAT KATHURIA**Appointed**

- Member of 'CII Economic Affairs Council', since 2017
- Member of the 'Confederation of India Industry (CII) Committee on International Trade Policy and Exports', since June 2016
- Member of the 'Implementation Committee for Intended Nationally Determined Contribution (INDC)', Ministry of Environment, Forest and Climate Change, Climate Change Division, since June 2016
- Member of the 'Advisory Council of ASSOCHAM', since August 2015
- Member of 'Task Force on Service Sector Export', Department of Commerce, Ministry of Commerce and Industry, since 2014

International Conferences/Seminars/Workshops

- Chair, session on 'India's Employment Challenges' at the conference on 'Jobs and Development', Washington DC, June 6-7, 2019
- Speaker, session on 'Understanding online Employment in India' at the conference on 'Jobs & Development', Washington DC, June 6-7, 2019
- Panellist, session on 'Challenges for the Global Trading System: An Asia-Pacific Perspective' in 'T20 Summit', Tokyo, May 26-27, 2019
- Speaker, 1.5 track roundtable, 'The Strategic Opportunity of RCEP: Domestic Choices and Global Uncertainty' at Australian National University, Melbourne, April 30, 2019
- Speaker, 'Digital Trade, WTO Reform, Trade and Investment for Sustainable and Inclusive Growth' at 'High-Level T20-G20 roundtable', organised by Research Institute of Economy, Trade and Industry (RIETI), Tokyo, April 9, 2019
- Speaker, session on 'Economics of the Energy Transition for China and India' at the '2019 China-India Dialogue', Beijing, March 21-23, 2019
- Presented final report titled 'Emerging Challenges for G20 Countries', Saudi Secretariat, Riyadh, March 11, 2019
- Panellist, session on 'Trade and Investment Policy', at 'Foreign Policy amidst Uncertainty' workshop, organised by School of International Studies, Nanyang Technological University, Singapore, February 27-28, 2019
- Speaker, session on 'The Australian Financial Review (AFR) India Business Summit 2018', organised by Department of Foreign Affairs and Trade (DFAT), Sydney, November 22, 2018
- Participant (by invitation only), roundtable discussion on 'Inter- sub Regional Consultation of Draft RCI Operational Plan (2019-2030)', organised by ADB, Bangkok, October 29, 2018
- Speaker, session on 'Accelerating Future Outcomes: Trade, Investment & Services', at 'Sri Lanka Economic Summit 2018', organised by The Ceylon Chamber of Commerce, Colombo, September 14, 2018
- Speaker, session on 'Emerging India in a Changing Global Economy: Challenges and Opportunities', at International Symposium on 'Looking at India from the South Pacific', organised by New Zealand India Research Institute, Wellington, August 27, 2018

National Conferences/Seminars/Workshops

- Panellist, session on 'Power Panel: Macroeconomic Agenda', 58th SKOCH summit, organised by Constitution Club of India, New Delhi, June 29, 2019
- Speaker, session on 'India's Emerging Political Economy Posturing and how it would Impact Businesses', Knowledge Series at Ola Mobility Institute, Gurugram, June 28, 2019
- Inaugural address, session on 'Shaping India-China Co-operation on Energy Transformation Transitioning to a Clean and Just Future for Society', jointly organised by Friedrich Ebert Stiftung and ICRIER, New Delhi, June 21-22, 2019
- Keynote Speaker, session on 'Asian Development Integration Partnership: Vision for a Shared Future', organised by Confederation of Young Leaders (CYL), New Delhi, June 20, 2019
- Speaker, session on 'Accelerating India's Economic Growth', at 'Fifth Quarterly Economists' Huddle', organised by NITI Aayog, New Delhi, June 18, 2019
- Discussant, 'Policies and Culture to retain Women in Sustainability', organised by Council on Energy, Environment and Water (CEEW), New Delhi, June 4, 2019
- Concluding Remarks and the Way Forward, 11th Annual International G20 Conference on 'Global Co-operation for Inclusive Growth: Views from G20 Countries', organised by ICRIER, New Delhi, May 30-31, 2019
- Panellist, session on 'Regulatory Frameworks for the Digital Economy', at a workshop on 'Unleashing the Potential of the National Digital Communications Policy 2018', organised by IIM, Ahmedabad, New Delhi, May 17, 2019
- Chair, session on 'Contrasting Patterns of Development: Case Studies of Selected States – Tamil Nadu, Kerala and Gujarat', at 'Growth and Regional Development in India: Recent Experiences and Emerging Perspectives' conference, organised by Institute for Human Development (IHD), New Delhi, May 13-14, 2019
- Discussant, 'The Third Pillar: How Markets and the State Leave the Community Behind' book discussion, India International Centre, New Delhi, April 26, 2019
- Special Address, conference on 'Vision for India: 2030', organised by ICRIER and British High Commission, New Delhi, April 16, 2019
- Speaker, conference on 'OTT: A Win-Win for All', organised by Broadband India Forum in collaboration with Department of Telecommunication, MeitY, NITI Aayog and Department of Science & Technology, New Delhi, April 5, 2019
- Chief Guest at the Convocation Ceremony at Pathways School, Noida, April 4, 2019
- Speaker, '18th Telecom Leadership Forum on Digital Disruption & Consolidation', New Delhi, March 13, 2019
- Speaker, session on 'Japan's G20 Presidency and Potential Areas for India-Japan Co-operation', at 9th ICRIER-PRI workshop on 'Global Economic Trends and India-Japan Economic Partnership', organised by ICRIER, New Delhi, March 8, 2019
- Panellist, 'Women Participation at the Shop Floor', at Industrial & Employee Relations Summit', organised by CII, New Delhi, February 26, 2019
- Speaker, 'Power Panel: The Economics of Inclusion', at '56th Skoch Summit', Constitution Club of India, New Delhi, February 25, 2019

- Panellist, panel discussion on 'Future of the Digital Economy' at the 'Future of the Digital Economy: Cross Currents in Emerging Regimes' conference, organised by ICRIER and Data Catalyst, New Delhi, March 25, 2019
- Panellist, session on 'Labour Reforms & Employment', at the conference on 'Future of Employment: Challenges and Opportunities (FECO 2019)', organised by Symbiosis School of Economics, Pune, February 20-22, 2019
- Speaker, session on 'Re-Imagining the Leadership Landscape', at conference on 'Leading a World where Uncertainty is the only Certainty - Talent Agility 2025', organised by Talentnomics, New Delhi, February 15, 2019
- Fireside chat at MindRush Rebrain or Rot, organised by Business Today, 2019, New Delhi, February 14, 2019
- Inaugural Address, 'India - Telecom 2019', organised by TEPC, Telecom India and DOT, New Delhi, February 12, 2019
- Speaker, session on 'Technology, Innovation and Industrial Upgrading', at '3rd India-China Think-Tank Forum', New Delhi, December 20-21, 2018
- Speaker, session on 'Synergy between Make in India, Invest India, Start-up India, Skill India and FDI Sector Challenges and Opportunities', at seminar on 'FDI in Telecom Sector: The Way Ahead', New Delhi, September 25, 2018
- Speaker, session on 'Is De-globalisation the New World Order?' at '53rd Skoch Summit', organised by Constitution Club of India, New Delhi, September 19, 2018

Publications

Books/Reports/Chapters in Books

- Book, "20 Years of G20", with Prateek Kukreja, Singapore: Springer, 2019
- Report, "Evaluating Spectrum Auctions in India", with Mansi Kedia, Richa Sekhani and Kaushambi Bagchi, ICRIER, April 2019
- Report, "An Analysis of Competition and Regulatory Intervention in India's Television Distribution and Broadcasting Services", with Mansi Kedia and Richa Sekhani, ICRIER, March 2019
- Report, "Growth Dividends of Digital Communications: The Case for India", with Mansi Kedia, Richa Sekhani and Ujjwal Krishna, ICRIER and BIF, December 2018

Working Papers

- "A Study of the Financial Health of the Telecom Sector", with Mansi Kedia and Richa Sekhani, ICRIER, working paper no. 380, June 2019

PROFESSORS

ASHOK GULATI

Appointed

- Director on the Board of Directors of National Commodity and Derivatives Exchange (NCDEX), since 2018
- Panel Member of the MaMo Montpellier Panel, a group of international agriculture experts, since 2018
- Director on the Central Board of Directors of Reserve Bank of India (RBI) appointed by the Government of India, since March 2017

- Director on the Board of Directors of the National Bank for Agriculture and Rural Development (NABARD), since 2017
- Co-Chair of the Task Force for G-20 on “Ending Hunger in Sustainable Agriculture” (Chair – Joachim von Broun), since 2017
- Member of the Madhya Pradesh Chief Minister’s Task Force for Agriculture, since 2016
- Member of the Rajasthan Chief Minister’s Task Force for Agriculture, since 2016
- Member of the CII Expert Group on Economy, since 2016

International Conferences/Seminars/Workshops

- Speaker, policy seminar on ‘Who Will Feed India? The Political Economy of India’ , jointly organised by IFPRI and the Center for the Advanced Study of India (CASI), Washington, USA, March 22, 2019
- Speaker in the session on ‘Dietary Diversity and Nutritious Foods at the Global Food Security Symposium 2019’, organised by the Chicago Council on Global Affairs, Washington DC, USA, March 20-21, 2019
- Lecture, Nand & Jeet Khemka Distinguished Lectures on “Who Will Feed India? Political Economy of Agriculture Policies and its Implications”, organised by the Center for the Advanced Study of India (CASI), The Trustees of the University of Pennsylvania, Pennsylvania, USA, March 17-22, 2019
- Panellist, session on ‘Indian Policy Developments’, at the 2018 IFA Strategic Forum, organised by the International Fertilizer Association and Kingenta Ecological Engineering Group Co. Ltd, Beijing, China, November 11-14, 2018
- Panellist, session on ‘Economics of Next Generation Innovations in Food and Agriculture’ and another session on ‘Quality, Integrity, Ethics and Making an Impact through Agricultural Economics Research’, at the 30th International Conference of Agricultural Economists, organised by the International Association of Agricultural Economists (IAAE), Vancouver, Canada, July 28-August 2, 2018
- Panellist, in ISAS Book launch and panel discussion ‘Seven Decades of Independent India: Ideas and Reflections’, jointly organised by the National University of Singapore and Institute of South Asian Studies, Singapore, June 26 – July 2, 2018

National Conferences/Seminars/Workshops

- Panellist, session on ‘Focus 2019: Why we Marched | Red alert: Farm Crisis. The Issue Driving Election 2019 and What can be done - A Death Foretold | Beyond the Waiver’ at the ‘India Today Conclave 2019’, organised by India Today, New Delhi, March 1-2, 2019
- Lecture, ‘Policies and Institutions for Agricultural Transformation’, at ‘ XIV Agricultural Science Congress: Innovations for Agricultural Transformation’, jointly organised by the National Academy of Agricultural Sciences (NAAS), Indian Council for Agricultural Research (ICAR) and Indian Agriculture Research Institute (IARI), Delhi, February 22, 2019
- Keynote address, at ‘Krusha Odisha’ event organised by the Department of Agriculture Farmers’ Empowerment, Government of Odisha and Confederation of Indian Industry (CII), Bhubaneswar, Odisha, January 15, 2019
- Keynote address, session on ‘Challenges and Solutions in Technology Adoption in Agriculture’ at the Bengaluru Tech Summit, 2018, organised by the Government of Karnataka, Bengaluru, November 29, 2018
- Speaker and panellist at the book launch event on ‘Farmers under Modi Rule: Double Income or Double Jeopardy?’ organised by the Swaraj India, New Delhi, November 26, 2018

- Keynote address, session of '14th Annual Conference of Uttarakhand & Uttar Pradesh Economics Association (UPUEA)', organised by the UPUEA, Lucknow, Uttar Pradesh, October 29, 2018
- Presented on 'Connecting Farmers to Value Chain for Ensuring Farmer Prosperity' at the workshop 'Food Systems Dialogue', organised by the Bharat Krishak Samaj, New Delhi, October 25, 2018
- Chair, session on 'Sustainable Food Future', in the '10th Annual International G20 Conference', organised by ICRIER, New Delhi, October 11-12, 2018
- Presented on 'Supporting Indian Farms the Smart Way', at the book launch event, jointly organised by ICRIER, Syngenta Foundation and Academic Foundation, New Delhi, September 18, 2018
- Keynote address, session on 'India's Sugar Tiger' at the 'Kingsman Asia Sugar Conference', organised by the Indian Sugar Mills Association (ISMA), New Delhi, September 5-6, 2018
- Speaker, at seminar on 'Collectivisation and Market Linkages – Farmers' Producers Organisations (FPOs)', organised by NABARD, Mumbai, July 12, 2018
- Presentation on 'Agricultural Policies in India' in the OECD-ICRIER Report launch event, jointly organised by OECD and ICRIER, New Delhi, July 5, 2018

Publications

Books/Reports/Chapters in Books

- Book, "Supporting Indian Farms the Smart Way", co-edited with Marco Ferroni and Yuan Zhou, New Delhi: Academic Foundation, September, 2018
- Chapter, "Food and Agriculture Policies in India: Evolution and Performance", co-authored with Shweta Saini. In Timothy Josling (ed.) Handbook of International Food and Agricultural Policies, Singapore: World Scientific, Vol. I, pages 247-268, 2018
- Chapter, "Towards Sustainable, Productive and Profitable Agriculture", co-authored with Gayathri Mohan. In Rai, Vinod and Amitendu Palit (ed.) Seven Decades of Independent India: Ideas and Reflections, New Delhi: Penguin Viking, India, pages 66-78, 2018

Paper in Refereed Journals

- "Innovations and Revolutions in Indian Agriculture: A Review", co-authored with Ritika Juneja. In *Journal of Agricultural Science and Technology*, Vol. 8 (7), (Serial Number 71), pages 473-482, March 2019

ANWARUL HODA

International Conferences/Seminars/Workshops

- Discussant at the panel discussion on 'Revitalising The WTO', jointly organised by Centre for Trade and Investment Law (CTIL), Indian Institute of Foreign Trade (IIFT) and International Law Institute, New Delhi, January 12, 2019

National Conferences/Seminars/Workshops

- Presented the paper on "Current Trade Issues for Developing Countries" in a Roundtable Discussion organised by ICRIER, New Delhi, May 9, 2019
- Chair, the jury meeting of 'ICC's Annual Logistics Excellence Awards', organised by Indian Chamber of Commerce (ICC), New Delhi, February 16, 2019
- Discussant, seminar on 'Asia 2025: Exploring Implications for China, India and Japan', organised by ICRIER, New Delhi, February 13, 2019

- Welcome Address at the launch of World Bank regional report 'In the Dark: How Much do Power Sector Distortions Cost South Asia?' organised by ICRIER, New Delhi, December 19, 2018
- Presentation on the final report of 'Inclusion of Totalisation Agreement in the G20 Agenda', of ICRIER-PwC-DfID Project in the Ministry of Finance, Government of India, New Delhi, October 24, 2018
- Chair, session on 'Trade, Investment and the Multilateral Process: Whither Global Order?' at the ICRIER's 10th Annual International G20 Conference on 'From Global Co-operation to Building Consensus: Views from G20 Countries', organised by ICRIER, New Delhi, October 11, 2018
- Presentation, release of the OECD Report 'Agricultural Policies in India', jointly organised by ICRIER and OECD, New Delhi, July 5, 2018

Publications

Books/Reports/Chapters in Books

- Chapter, "Where is the US Trade Policy Headed under the Trump Administration?" In Kathuria, Rajat and Prateek Kukreja (ed.), 20 Years of G20: From Global Co-operation to Building Consensus, Singapore: Springer, pages 81-92, April 2019
- Book, "Tariff Negotiations and Renegotiations under the GATT and the WTO: Procedures and Practices", 2nd edition, Cambridge: Cambridge University Press, December 2018

Working Papers

- "Totalisation/Portability of Social Security Benefits: Imperatives for Global Action", co-authored with Durgesh Kumar Rai, ICRIER, working paper no. 379, June 2019
- "Land use and Land Acquisition laws in India", ICRIER, working paper no. 361, July 2018

ARPITA MUKHERJEE

Appointed

- Member, Expert Committee for the Development of the Business Service Price Index (BSPI), Ministry of Commerce and Industry, Government of India, since February 2018
- Member of the Board, Asian Institute of Transport Development, since April 2017
- Appointed in the Panel of Experts for Indian Union Public Service Commission (UPSC) evaluations, since June 2016
- Member of the Associated Chambers of Commerce of India (ASSOCHAM) Direct Selling Task Force since April 2017
- Member of the Editorial Board of the journals:
  - Journal of Economic Science Research (JESR) published by Bilingual Publishing CO., Singapore, since October 2018
  - Finance Forum, published by Pisco Med Publishing Pte. Ltd., Singapore since May 2018
  - Journal of International Commerce, Economics and Policy, published by World Scientific Publishing, Singapore, since February 2014
  - Journal International Review of Public Administration (IRPA), published by Taylor and Francis Group, Korea, since January 2014

International Conferences/Seminars/Workshops

- Panellist at the conference on 'Legal Challenges to New Business Frontiers in E-Commerce and Trade', jointly organised by Vesalius College, Germany, and National Law School of India University (NLSIU), Centre of International Trade Law (CITL), Ministry of Commerce, Bangalore, May 7, 2019
- Presentation on 'Value Chains in India and Linkages with Critical SDGs: The Case of Agro-processing Sector', at the panel discussion on 'Value Chains in India and Linkages with Critical SDGs' in the Progress Project Inception Meeting, jointly organised by Centre for Responsible Business (CRB), Aston Business School and International Development Research Centre (IDRC), Canada, New Delhi, April 9, 2019
- Speaker, session on 'Promoting Investment and Trade in SEZs', at the 'Global Economic Zones (GEZ) Expo 2019', jointly organised by Export Promotion Council for EOUs and SEZs (EPCES) and Wbf International Centre Services (WICS), New Delhi, March 28, 2019
- Panellist, discussion on 'Importance of Services in Supporting Agriculture and Manufacturing Sectors', at the 8th Global Economic Summit on 'Services: Enabler of Growth for Trade and Industry', jointly organised by MVIRDC World Trade Centre, Mumbai and All India Association of Industries (AIAI), Mumbai, March 7, 2019
- Speaker, at the roundtable discussion on 'Food and Agriculture', organised by The Consulate General of the Kingdom of the Netherlands and World Benchmark Alliance (WBA), Mumbai, March 7, 2019
- Presentation on 'The Drivers of Indian Trade and International Investment', at 'The Future of UK-India Trade and Cross Border Investment in a Changing Global Environment' workshop, jointly organised by Indian Council of Social Science Research (ICSSR) in collaboration with Economic and Social Research Council (ESRC), UK; and UK Research and Innovation (UKRI), New Delhi, March 5, 2019
- Made presentations and conducted interactive meetings with policy makers and industry in the UK for 'Facilitating Trade through Promoting Ease of Doing Business in India's Food Sector – Streamlining Imports and Reducing Compliance Burden' of Foreign and Commonwealth Office (FCO), British High Commission, New Delhi, January 24 – February 1, 2019
- Panellist, discussion on 'How Prime Minister Modi's UK Visit will Reinvigorate UK-India Relations', organised by UK India Business Council (UKIBC), New Delhi, May 2, 2018

National Conferences/Seminars/Workshops

- Presentations of the Outputs (1A, 1B and 1C) of the study 'Facilitating Trade through Promoting Ease of Doing Business in India's Food Sector – Streamlining Imports and Reducing Compliance Burden', organised by ICRIER, New Delhi, May 29, 2019
- Moderated a session on 'Services Sector', at the closed door session on 'Stakeholder Consultation on RCEP with Eastern/North Eastern India Industry Members in the Key Sectors of their Business Interest in the RCEP Countries', organised by Indian Chamber of Commerce (ICC), Kolkata, April 11, 2019
- Keynote Speaker and presenter on 'E-Commerce, Services and Trade', at the 'International Conference on International Trade Law', organised by Centre of WTO Studies, Indian Institute of Foreign Trade (IIFT) and Law Centre - 1, Faculty of Law, University of Delhi, New Delhi, February 23, 2019
- Presentation on 'Emerging Business Opportunities from India-ASEAN Partnership: Ways to Unleash the Potentials', at the 'Kolkata Dialogue 2018 – Indo-ASEAN Partnership: Ensuring Peace and Prosperity in the Indo-Pacific Region & Beyond', organised by Indian Chamber of Commerce (ICC), Kolkata, November 29, 2018
- Presentation on 'Data Handbook: Ayurveda Industry Market Size, Strength and Way Forward', at the 2nd CII Ayurveda Industry Conclave 'Vision 2022: Roadmap to Achieving Three Times Growth in Market Size', organised Confederation of Indian Industry (CII), New Delhi, November 2, 2018

- Panellist, discussion on 'Skill Formation and Employability', at the 45th annual convention of the Department of Business Economics, South Campus, University of Delhi, October 27, 2018
- Panellist, discussion on 'Free Trade Agreements: A Successful Strategy for Regional Comprehensive Economic Partnership (RCEP)?' organised by Delhi Policy Group (DPG), New Delhi, October 4, 2018
- Presentation on 'Emerging Areas/Sectors for Job Creation', at a workshop on 'Employment Centric Interventions for Development', organised jointly by Ekatam Vikas Vichar Kendra and Chaudhary Bansi Lal University, Bhiwani, Haryana at Haryana Bhawan, New Delhi, August 8, 2018
- Gave Lecture and made presentation on 'High-Skilled Labour Mobility, Start-ups and India', to a batch of 27 Executive MBA students, organised by International Management Institute, New Delhi, August 2, 2018
- Participated as an expert in the closed-door roundtable discussion on 'Future of Work - ICT', jointly organised by International Labour Organization (ILO) and Delhi Policy Group (DPG), New Delhi, July 30, 2018
- Presentation on 'International Trade in Agriculture Products and Processed Food – Trade in Organic Produce and Organic Food' and 'Trade Promotion – Schemes for Export Promotions in India' at the workshop on 'Capacity Building for Entrepreneurs on Export and Import Compliances & Procedures', organised by PLR Chambers in partnership with The Department of Planning and Programme Implementation, Government of Mizoram, Aizawl, July 27, 2018
- Presented the key findings of the white paper 'India as an Innovation Economy – the Role of IP and ICT' of European Business and Technology Centre (EBTC), organised by ICRIER, New Delhi, June 26, 2018
- Presentation on 'Changing Discourse on Globalization: Where does India Stand on FTAs', at the 'Trade Policy Roundtable', organised by Delhi Policy Group (DPG), New Delhi, May 9, 2018
- Presentation on 'Trade Rules in E-Commerce: WTO and India', at Indian Institute of Management (IIM), Bangalore, April 27, 2018

Publication

Books/Reports/Chapters in books

- Chapter, "India's Experience with the Special Economic Zones (SEZs): Status, Concerns and Way Forward", with Avantika Kapoor. In Julien Chaisse and Jiaxiang Hu edited International Economic Law and the Challenges of the Free Zones: Global Regulatory Issues and Trends, Kluwer Law International, Global Trade Law Series, Vol. 38, May 2019
- Report, "SPS Barriers to India's Agriculture Export: Learning from the EU Experiences in SPS and Food Safety Standards", co-authored with Tanu M. Goyal, Smita Miglani and Avantika Kapoor, ICRIER, March 2019 <http://icrier.org/pdf/SPS_Barriers_to_India_Agriculture_Export.pdf>
- Report, "Survey of Fruits, Vegetables & Juice Intake of School Children, Nutritionists & Dieticians", co-authored with Souvik Dutta, Tanu M. Goyal, Ankita Marwaha and Avantika Kapoor, New Delhi: Academic Foundation, October 2018
- Report, "Ayurveda Industry: Market Size, Strength and Way Forward", Confederation of Indian Industry (CII), October 2018
- Chapter, "Measuring Services Trade: Major Challenges in India and Way Forward", co-authored with Tanu M. Goyal. In Biswajit Nag and Debashis Chakraborty edited India's Trade Patterns and Export Opportunities: Reflection through Trade Indices and Modeling Techniques, New Delhi: Sage, October 2018

- Chapter, “Labour Mobility and Remittances in South Asia”. In Raihan, Selim (ed.), *Next Steps to South Asian Economic Union: A Study on Regional Economic Integration (Phase II)*, South Asian Association for Regional Co-operation (SAARC) Secretariat, pages. 189-206, August 2018

Papers in Refereed Journals

- “High Skilled Labour Mobility in an Era of Protectionism: Foreign Start-ups and India”, co-authored with Avantika Kapoor and Angana Parashar Sarma. In *Economic Developments in India*, Vol. 244, Academic Foundation, February 2019
- “Special Economic Zones Face the WTO Test”, co-authored with Parthapratim Pal. In *Economic and Political Weekly*, Vol. 53 (33), pages 20-22, August 18, 2018
- “Facilitating Trade in Organic Food Products: The Case of India and ASEAN”, co-authored with Avantika Kapoor. In *Journal of Agricultural Science and Technology B*, Vol. 8 (4), pages 253-265, April 2018
- “India and Trade Facilitation in Services (TFS) Agreements: Concerns and Way Forward”, co-authored with Avantika Kapoor. In *Economic Developments in India*, Vol. 237, Academic Foundation, pages 71-102, April 2018

Working Papers

- “Trade, Trade Agreements and Subsidies: The Case of the Indian Apparel Industry”, co-authored with Anusree Paul, Angana Parashar Sarma and Soham Sinha, ICRIER, working paper no. 365, October 2018
- “High-Skilled Labour Mobility in an Era of Protectionism: Foreign Start-ups and India”, co-authored with Avantika Kapoor and Angana Parashar Sarma, ICRIER, working paper no. 362, July 2018

Others

- “Promoting Agriculture Exports and Food Quality through Technology” co-authored with Soham Sinha and Angana Parashar Sarma. In *Artha, Shri Ram College of Commerce (SRCC) Annual Economics Journal*, April 2019
- “Strengthening the Relationship: Investments & Co-Operation”, with Soham Sinha and Angana Parashar Sarma. In *Diplomacy & Beyond Plus: A Journal of Foreign Policy & National Affairs*, pages 34-37, October 2018

ALOK SHEEL

National Conferences/Seminars/Workshops

- Presentation, ‘The Global Financial System’, at an interactive session at the induction programme for Indian Foreign Service Officer Trainees (2018 batch), organised by Foreign Service Institute, Ministry of External Affairs, New Delhi, May 8, 2019
- Presentation, ‘Forensic Smell Test of India’s GDP Numbers’, at roundtable discussion, organised by ICRIER, New Delhi, May 6, 2019
- Participant, roundtable discussion on ‘Next Steps in South Asian Integration’, organised by National Security Council, Sardar Patel Bhavan, New Delhi, April 26, 2019
- Lead discussant, seminar on ‘Macro prudential Policy by Marek Licak (Director Macro prudential Policy Dept) and Ludovit Odor (Vice Governor) of the National Bank of Slovakia’, jointly organised by RIS and Jindal School of Government and Public Policy, New Delhi, March 14, 2019
- Presentation, ‘Global Imbalances’, at 9th ICRIER-PRI (Japan) conference on ‘Global Economic Trends and India-Japan Economic Partnership’, organised by ICRIER, New Delhi, March 8, 2019

- Chair, 'Exports to Jobs' at release of the World Bank and the International Labour Organisation Report on 'Exports to Jobs: Boosting the Gains from Trade in South Asia', New Delhi, February 28, 2019

Publications

Books/Reports/Chapters in Books

- Chapter, "Adjustments in the Global Economy and Finance in the Wake of the Global Financial Crisis". In Kathuria, Rajat and Prateek Kukreja (ed.), 20 Years of G20: From Global Co-operation to Building Consensus, Singapore: Springer, 2019

NISHA TANEJA

Appointed

- Member, Working Group constituted by the Ministry of Statistics & Programme Implementation (MoSPI) to suggest appropriate methodology for base revision of Index of Industrial Production (IIP), since June 2018

International Conferences/Seminars/Workshops

- Presentation on 'Informal Trade between India and Myanmar' at the workshop on 'India-Myanmar Trade and Connectivity', organised by ICRIER, Myanmar, March 24, 2019
- Speaker, session on 'Intraregional Trade in South Asia: Challenges and Opportunities' at the 'Twenty-first Sustainable Development Conference (SDC)' and 'The Eleventh South Asia Economic Summit (SAES XI)', organised by SDPI, Pakistan, December 4, 2018
- Participant, session on 'Economy, Trade and Connectivity Issues' at 'India-Nepal Think Tank Summit', organised by Nehru Memorial Museum & Library (NMML), in collaboration with Asian Institute of Diplomacy and International Affairs (AIDIA) and Indian Embassy, Kathmandu, Nepal, July 29, 2018
- Panellist, session on 'Transit and Multimodal Connectivity (Roadways, Waterways, Railways and Aviation)' at the conference on 'Advancing BIMSTEC Co-operation', organised by The Asia Foundation and DPG, Yangon, Myanmar, June 14-15, 2018
- Participant, at the Fifth Economic Seed Community Meeting on 'Transforming India-Pakistan Relations (Cultural, Economic and Security)', organised by FES, Kathmandu, Nepal, June 3-5, 2018.
- Discussant, 15th Annual SANEI Conference 'Tax Policy and Reforms in South Asian Countries', Kathmandu, Nepal, May 10-11, 2018

National Conferences/Seminars/Workshops

- Speaker, session on 'Opportunities and Challenges for Regional Co-operation and Connectivity in South Asia', organised by The World Bank, Delhi, March 15, 2019
- Presentation on 'Informal Trade between India and Myanmar' at the workshop on 'India-Myanmar Trade and Connectivity', organised by ICRIER, Imphal, February 24, 2019
- Presentation on 'Strategy for Increasing India's Export to UAE by 60%', Department of Commerce, Delhi, January 24, 2019
- Chair, session on 'Facilitating India's Act East Policy: Gap Analysis in Infrastructure at Land Customs Stations in the North Eastern Region of India', organised by ICRIER, Guwahati, January 20, 2019
- Chair, session on 'Issues in International Trade' at the sixth research conference on 'Empirical Issues in International Trade and Finance', organised by The Indian Institute of Foreign Trade (IIFT), Delhi, December 14, 2018

- Presentation on 'India's Trade with Nepal' in Department of Commerce, Delhi, December 13, 2018
- Presentation on 'Strategy for Increasing India's Export to UAE by 60%' in Department of Commerce, Delhi, December 13, 2019
- Presentation on 'India-Bhutan Economic Co-operation', in Department of Commerce, Delhi, December 10, 2018
- Speaker, session on 'South Asian Integration', organised by Amity School of Economics, Amity University, Noida, November 13, 2018
- Speaker, session on 'Border Security: Balancing Security and Trade Facilitation' at the 'Regional Connectivity Conference: South Asia in the Indo-Pacific Context', jointly organised by The U.S. Department of State and CUTS International, Delhi, November 2, 2018
- Speaker, panel discussion on 'Engaging Naya Pakistan: Trade & Economic Relations', organised by Chaophraya Dialogue - India Chapter, Delhi, September 3, 2018
- Presentation on 'India-Sri Lanka ETCA', organised by Department of Commerce, August 20, 2018
- Speaker, 'Connectivity in BBIN Region', organised by DFAT, Australian High Commission, Delhi, August 14, 2018
- Panellist, stakeholder consultation on 'Demystifying Non-Tariff Barriers to India-Bangladesh Trade in Agricultural Products and their Linkages with Food Security and Livelihood', organised by CUTS International, Delhi, August 10, 2018
- Presentation on 'Transit and Multimodal Connectivity (Roadways, Waterways, Railways and Aviation)' at the conference on 'Advancing BIMSTEC Sub-regional Co-operation', organised by Delhi Policy Group, Delhi, April 26-27, 2018
- Presentation on 'India-Myanmar Border Trade and Connectivity' at the conference on 'Sub-regional Co-operation between India, Bangladesh and Myanmar', organised by ICRIER, Delhi, April 23, 2018
- Participant, discussion on 'Developmental Challenges and Opportunities for the North East', organised by The World Bank, Delhi, April 17, 2018

Publications

Books/Reports/Chapters in Books

- Report, "India-Nepal Economic Relations: Charting a Way Forward", co-authored with Shravani Prakash, Samridhi Bimal and Riya Roy, submitted to Ministry of Commerce, November 2018
- Report, "India-Bhutan Economic co-operation", co-authored with Taher Nadeem, submitted to Ministry of Commerce, October 2018
- Report, "India-Sri Lanka ETCA): Upgrading the FTA", co-authored with Taher Nadeem and Sakshi Garg, submitted to Ministry of Commerce, September 2018
- Report, "India's Act East Initiative: Enhancing India Myanmar Trade and Connectivity", co-authored with Sanjana Joshi, Samridhi Bimal, Sakshi Garg and Riya Roy, submitted to DFID, September 2018

Working Papers

- "India-Myanmar Border Trade", co-authored with Sanjana Joshi, Samridhi Bimal, Riya Roy, and Sakshi Garg, ICRIER, working paper no. 378, May 2019
- "Emerging Trends in India-Pakistan Trade", co-authored with Samridhi Bimal and Varsha Sivaram, ICRIER, working paper no. 363, August 2018

Others

- “Giving a Fillip to India-Philippines Economic Relations”, co-authored with Sakshi Garg in *Diplomacy & Beyond*, March 2019

SENIOR FELLOWS

RADHICKA KAPOOR

International Conferences/Seminars/Workshops

- Presentation on ‘Building Human Capital and Skills in Asia: Models, Policies, Issues and Challenges’, at ‘6th ADB-Asia Think Tank Development Forum’, Canberra, Australia, August 22-23, 2018
- Presentation on ‘India’s Economy: Opportunities and Outcomes’, at Sussex India Conference, University of Sussex, UK, May 26, 2018
- Presentation on ‘Informality in the Formal Sector: Evidence from Indian Manufacturing’, at the 1st annual conference of the World Bank-IZA on ‘Jobs for Development Network’, Bogota, Colombia, May 11-12, 2018

National Conferences/Seminars/Workshops

- Presentation on ‘Improving Youth Labour Market Outcomes in Developing and Emerging Economies’, in the conference organised by Brookings India, March 6, 2019
- Panellist in the seminar session on ‘How to Reinvigorate the Labour Market through Greater Export Growth’ at the launch of the report ‘Exports to Jobs: Boosting the Gains from Trade’, jointly organised by World Bank and ICRIER, February 28, 2019
- Panellist in the conference on ‘Future of Employment: Challenges and Opportunities’, jointly organised by Symbiosis School of Economics and ICRIER, Pune, February 20-22, 2019
- Presentation on ‘Understanding the Performance of India’s Manufacturing Sector’, at ‘Political Economy of Contemporary India’ conference, organised by IGIDR, Mumbai, January 8-9, 2019
- Presentation on ‘Deconstructing India’s Employment Challenge’, in ‘Indian Economy and Society Seminar’, organised by Centre for Development Studies, Kerala, December 12-14, 2018
- Presentation on ‘Future of Work: View from the Global South’, at the 10th Annual International G20 Conference on ‘From Global Co-operation to Building Consensus: Views from G20 Countries’, New Delhi, October 11-12, 2018
- Panellist in the workshop on ‘Future of Work in Global South’, for the ILO’s Global Commissioners on the Future of Work, organised by ILO and SEWA, Ahmedabad, October 5-7, 2018
- Panellist in release of the report ‘Emerging Technologies and the Future of Work in India’, organised by Tandem Research & ILO India, Delhi, September 13, 2018
- Panellist in the workshop on Future of Work, organised by Centre for Internet Society, New Delhi, August 31, 2018

Publications

Books/Reports/Chapters in Books

- Report, ‘Future of Work’, under G-20 project (submitted to the Ministry), 2019
- Chapter, “Where are the Jobs?” In Jayal, Niraja Gopal (ed.), *Re-forming India: The Nation Today*, New Delhi: Penguin India, 2019
- Chapter, “The Imperative of Manufacturing Led Growth”, In *India 2030: A Socio-Economic Paradigm*, Skoch Group, 2018

- Chapter, “The Changing World of Work in Developing and Emerging Economies”. In Kathuria, Rajat and Prateek Kukreja (ed.), 20 Years of G20: From Global Co-operation to Building Consensus, Singapore: Springer, 2019

Papers in Refereed Journals

- “Rethinking India’s Employment Data Architecture”. In *Economic and Political Weekly*, Vol. 53 (40), October, 2018

Working Papers

- “Explaining the Contractualisation of India’s Workforce”, co-authored with P.P Krishnapriya, ICRIER, working paper no. 369, January 2019
- “Stylized Facts on India’s Organised Manufacturing Sector”, Centre for Sustainable Employment, working paper, May 2018

ALI MEHDI

International Conferences/Seminars/Workshops

- Presentation on ‘Call to Action on Antimicrobial Resistance’, jointly organised by Governments of United Kingdom, Thailand and Ghana, United Nations Foundation, The World Bank and Wellcome Trust, Accra, Ghana, November 19-20, 2018

National Conferences/Seminars/Workshops

- Presentation in the session on ‘Improving Global Health for Economic Growth’, at the 11th annual international G20 conference on ‘Global Co-operation for Inclusive Growth: Views from G20 Countries’, ICRIER, New Delhi, May 30, 2019
- Presentation on ‘Faculty Development Programme on Research Gaps in Economics – Issues and Data Sets’, organised by Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching, MHRD, Govt. of India and Economics Department, Hansraj College, University of Delhi, New Delhi, May 2, 2019
- Presentation in the session on ‘National Symposium on Sustainable Development Goals: Prospects and Challenges’, organised by Jamia Millia Islamia and Institute of Policy Studies and Advocacy, New Delhi, April 20, 2019
- Presentation at brainstorming consultation meeting on ‘Developing a National Framework for Non-Communicable Disease (NCD) Surveillance’, organised by National Centre for Disease Informatics and Research (NCDIR), Bengaluru, March 28, 2019
- Presentation in the seminar on ‘Japan-India Partnership for Achieving Sustainable Development Goals (SDGs)’, jointly organised by ICRIER and Embassy of Japan, New Delhi, March 15, 2019
- Presentation in ‘Thought Leaders’ Policy Dialogue on Health, Innovation and Competitiveness’, organised by Geneva Network, Mumbai, October 11, 2018

Publications

Books/Reports/Chapters in Books

- Book, “A shot of Justice: Priority-Setting for Addressing Child Mortality”. New Delhi: Oxford University Press, January 2019
- Book, “Freedoms, Fragility and Job Creation: Perspectives from Jammu and Kashmir”, co-authored with Divya Chaudhry and Priyanka Tomar. New Delhi: Springer India, 2019

- Report, “Facilitating Ease of Doing Business in India’s Food Sector: Streamlining Food Safety Compliance Ecosystem in India”, co-authored with Priyanka Tomar, Divya Chowdhry and Pallavi Joshi. New Delhi: Academic Foundation, 2019
- Chapter, “The European Union as a Preferred Destination of Indian Migrants? Prospects, Patterns, Policies and Challenges” co-authored with Divya Chaudhry, Pallavi Joshi and Priyanka Tomar. In Ranjan, Irudaya S. (ed.), India Migration Report 2018: Migrants in Europe, New Delhi: Routledge India, September 2018

Papers in Refereed Journals

- “SDGs, Health and the G20: A Vision for Public Policy”. In *Economics* Vol. 12(35), pages 1-12.

Working Papers

- “G20 research – Synchronized Surveillance Systems: How G20 should Tackle Antimicrobial Resistance”. submitted to Ministry of Finance, Government of India and Department for International Development (DFID), Government of United Kingdom, ICRIER, 2019

SAON RAY

Appointed

- Ph.D. proposal examiner for “Determinants and Strategies for De-Carbonisation of Indian Railways,” IGIDR, Mumbai, September, 2018

International Conferences/Seminars/Workshops

- Presentation, at ‘Global Co-operation for the 2030 Agenda – MGG Partner and Planning Conference, Brussels, October 2-5, 2018

National Conferences/Seminars/Workshops

- Presentation on ‘RCEP Study on Goods and Services’, Ministry of Commerce, New Delhi, June 3, 2019
- Discussant at roundtable organised by Centre de Sciences Humaines, May 16, 2019
- Presentation on ‘RCEP Goods and Services’, at the stakeholders’ consultation organised by ICRIER in collaboration with World Trade Centre, Pune, May 10, 2019
- Presentation on ‘Financing Resilience Against Natural Disasters’, at the stakeholders’ consultation organised by ICRIER, New Delhi, May 3, 2019
- Presentation on ‘RCEP Goods and Services, at the stakeholder consultation, organised by ICRIER in collaboration with ICC, Kolkata, April 10, 2019
- Presentation on ‘RCEP Study on Goods and Services’, Ministry of Commerce, New Delhi, April 9, 2019
- Presentation on ‘RCEP Study on Goods and Services’, Ministry of Commerce, New Delhi, April 1, 2019
- Chair, session on ‘Sustainable Development Goals’ at international seminar on ‘India-Japan Partnership for Achieving Sustainable Development Goals (SDGs)’, March 15, 2019
- Presentation on ‘RCEP Study on Goods and Services’, Ministry of Commerce, New Delhi, March 13, 2019
- Presentation on ‘Fintech and Financial Inclusion in India’, at the ‘9th ICRIER-PRI workshop on Global Economic Trends and India-Japan Economic Partnership’, New Delhi, March 8, 2019
- Discussant at roundtable discussion on ‘India’s Trade Policy and the Regional Comprehensive Economic Partnership’, organised by the Australian High Commission, New Delhi, February 12, 2019
- Discussant at ‘Closed door workshop on RCEP’, organised by ICRIER, New Delhi, January 16, 2019

- Presentation on 'Climate Adaptation in Manufacturing Industries: Lessons from Surat', seminar organised by ICRIER, New Delhi, January 4, 2019
- Presentation on 'Implications of US-China Trade War on Indian Industry', at India International Centre, New Delhi, February 11, 2019
- Presentation on 'AI and Blockchain in Finance', at Indian Institute of Management, Kolkata, January 28, 2019
- Chair, session on 'Energy Security and Cross Border Energy Co-operation', at '11th South Asia Conference on Non-traditional Security Challenges in South Asia: Agenda for Co-operation', organised by IDSA, New Delhi, December 19, 2018
- Presentation on 'Global Value Chains and the Missing Links', at South Asian University, New Delhi, October 26, 2018
- Presentation on 'Application of Innovative Technologies for Promoting Financial Inclusion', Ministry of Finance, New Delhi, October 18, 2018
- Presentation on 'Deconstructing India's Imports: The Role of Intermediates', at seminar 'Connectivity, Trade Relations and Investment Opportunities between China and Eastern India', jointly organised by Observer Research Foundation and Consulate General of the People's Republic of China, Kolkata, September 11, 2018
- Discussant at 'SDG Prioritisation and Validation Workshop', organised by Open Cities Institute, New Delhi, August 21, 2018
- Presentation on 'Effect of Consumer Finance on Financial Inclusion in India', at workshop for report launch, organised by ICRIER, New Delhi, August 10, 2018
- Panellist, session on 'Labour Regulations, Industrial Relations and Public Policy Pushes', at the 'Automotive Sector and the Future of Work in India' workshop, organised by the Centre for Internet and Society, New Delhi, July 31, 2018
- Presentation on 'Application of Innovative Technologies for Promoting Financial Inclusion in India' at stakeholders' consultation, organised by ICRIER, New Delhi, June 15, 2018

Publications

Books/Reports/Chapters in Books

- Book, "Low Carbon Pathways for Growth in India", co-edited with Rajat Kathuria and Kuntala Bandyopadhyay, Springer, 2019
- Book, "Global Value Chains and the Missing Links: Cases from Indian Industry", with Smita Miglani, Routledge, 2018

Papers in Refereed Journals

- "Understanding the NBFC Conundrum". In *Economic and Political Weekly*, Vol. 54 (14), April 6, 2019
- "Use of Blockchain and Artificial Intelligence to Promote Financial Inclusion in India", co-authored with Smita Miglani and Sandeep Paul. In *Asia-Pacific Tech Monitor*, Vol. 36 (1), January-March, 2019

Working Papers

- "What Explains India's Poor Performance in Garments Exports: Evidence from Five Clusters" ICRIER, working paper no. 376, May 2019
- "The Probability of Getting a Loan: Evidence from Indian Cities", co-authored with Smita Miglani and Sandeep Paul, ICRIER, working paper no. 370, February 2019

- “The Growing Importance of Consumer Finance for Financial Inclusion in India”, co-authored with Smita Miglani and Sandeep Paul, ICRIER, working paper no. 367, December 2018
- “Innovation, Efficiency and Inclusion: Integration of Digital Technologies in the Indian Microfinance Sector”, co-authored with Sandeep Paul and Smita Miglani, ICRIER, working paper no. 366, October 2018
- “Upgrading in the Indian Automobile Sector: The Role of Lead Firms, co-authored with Smita Miglani, ICRIER, working paper no. 360, June 2018

ANIRUDH SHINGAL

Appointed

- Fellow, World Trade Institute, University of Bern, March 2019

National Conferences/Seminars/Workshops

- Presentation on ‘Government Procurement Benchmarking and Assessment: Global and Indian Experiences’, at the Global Procurement Summit 2019, New Delhi, February 7, 2019
- Presentation on ‘India’s Strategic Engagement under the G20 Compact with Africa Initiative’ at the Exim Bank, Mumbai, January 30, 2019
- Presentation on ‘India’s Strategic Engagement under the G20 Compact with Africa Initiative’ at the Confederation of Indian Industries, New Delhi, January 25, 2019
- Presentation on ‘India’s Strategic Engagement under the G20 Compact with Africa Initiative’ at the Ministry of Finance, Government of India, New Delhi, January 23, 2019
- Presentation on ‘India’s Strategic Engagement under the G20 Compact with Africa Initiative’ at the Ministry of Finance, Government of India, New Delhi, January 15, 2019

Publications

Books/Reports/Chapters in Books

- Report, “India’s Strategic Engagement under the G20 Compact with Africa Initiative”, with Minakshee Das and Akshaya Aggarwal, submitted to the Ministry of Finance, Government of India, February 2019
- Report, “Trade in Environmentally-sound Technologies: Implication for Developing Countries”, co-authored with Xiaolan Fu (et al) UNEP, TMCD University of Oxford and NUST, December 2018
- “Procurement in the Belt and Road Initiative”, with Bernard Hoekman and Tanya Ghossein, discussion paper no. 10, MTI Global Practice, World Bank Group, December 2018

Papers in Refereed Journals

- “Backward Participation in Global Value Chains and Exchange Rate Driven Adjustments of Swiss Exports”, co-authored with Dario Fauceglia, Andrea Lassmann and Martin Wermelinger. In *Review of World Economics*, Vol. 154 (3), pages 537-584, August 2018

Working Papers

- “Trade Effects of Standards Harmonisation in the EU: Improved Access for Non-EU Partners”, co-authored with Malte Ehrich, ICRIER, working paper no. 371, April 2019
- “Intra- and Extra- African Greenfield Investment”, co-authored with Max Mendez-Parra, Overseas Development Institute, April 2019

PANKAJ VASHISHT**International Conferences/Seminars/Workshops**

- Presentation, 'Changing Task Content of Jobs in India: Implications and Way Forward', at 'ADB Think Tank Development Forum', jointly organised by Asian Development Bank and Australian National University, Crawford School, Australian National University, Canberra, August 22-23, 2018.

National Conferences/Seminars/Workshops

- Presentation, 'Technology and Task Content of Jobs', at Faculty Development Programme on 'Research Gaps in Economics: Issues and Data Sets', organised by Mahatma Hansraj Faculty Development Centre, Hansraj College, New Delhi, April 27, 2019
- Presentation, 'Technology and Future jobs', at Faculty Development Programme on 'Research Gaps in Economics: Issues and Data Sets', organised by Mahatma Hansraj Faculty Development Centre, Hansraj College, New Delhi, April 26, 2019
- Presentation, 'Adoption and Impact of Industry 4.0 Technologies' at workshop on 'The Future of Work in India', organised by the Center for Internet and Society, New Delhi, July 31, 2018

Publications**Papers in Refereed Journals**

- "Changing Task Content of Jobs in India: Implications and Way Forward", co-authored with J. Dubey. In *Economic and Political Weekly*, Vol. 54 (3), pages 44-52, January 2019
- "Destruction or Polarization: Estimating the Impact of Technology on Jobs in Indian Manufacturing". In *The Indian Journal of Labour Economics*, Vol. 61 (2), pages 227-250, June 2018

FELLOWS**NEHA GUPTA****Publications****Working Papers**

- "Climbing up India's Manufacturing Export Ladder: How Competitive are Intermediate Goods?", co-authored with Deb Kusum Das, ICRIER, working paper no. 371, April 2019

RESEARCH ASSOCIATES/CONSULTANTS**KAUSHAMBI BAGCHI****International Conferences/Seminars/Workshops**

- Presented a paper titled "Political Economy of Data Nationalism" at the 22nd Biennial Conference of the International Telecommunications Society at Korea University, Seoul, June 24- 27, 2018

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

- Report, "Evaluating Spectrum Auctions in India", co-authored with Rajat Kathuria, Mansi Kedia and Richa Sekhani. ICRIER, April 2019
- Report, "Women Empowerment through Digitised Means of Financial Inclusion", co-authored with Rajat Kathuria, Mansi Kedia and Sashank Kapilavai, ICRIER, October 2018 (submitted to the Department of Economic Affairs)

SAMRIDHI BIMAL

Publications

Books/Reports/Chapters in Books

- Report on “India-Nepal Economic Relations” co-authored with Nisha Taneja, Shravani Prakash, Sakshi Garg and Riya Roy, ICRIER, November 2018 (submitted to the Ministry of Commerce)

Papers in Refereed Journals

- “India’s Engagement with the Global Economic Order”, co-authored with Sanjana Joshi, *UNISCI Journal*, January 2019

Working Papers

- “India-Myanmar Border Trade”, co-authored with Nisha Taneja et al, ICRIER, working paper no. 378, June 2019
- “Emerging Trends in India-Pakistan Trade”, co-authored with Nisha Taneja and Varsha Sivaram, ICRIER, working paper no. 363, August 2018

TANU M. GOYAL

International Conferences/Seminars/Workshops

- Presented report on ‘Identifying Emerging Challenges to G20 Members’, Riyadh, Saudi Arabia, March 11, 2019
- Presented a paper on ‘India’s Development Aid in Social Sector’, 9th International Academic Conference on ‘Multidisciplinary and Independent Studies on Social Sciences’, (Global Meeting of Social Science Community), Rome, Italy, August 13-14, 2018
- Presented the report on ‘India’s Development Assistance to Nepal: The Case of Education Sector’, Kathmandu, Nepal, May 29, 2018

Publications

Books/Reports/Chapters in Books

- Report, “Identifying Emerging Challenges to G20 Members”. ICRIER, April 2019 (submitted to Saudi Secretariat)
- Report, “SPS Barriers to India’s Agriculture Exports: Learning from the EU Experiences in SPS and Food Safety Standards”, co-authored with Arpita Mukherjee, Smita Miglani and Avantika Kapoor. ICRIER, March 2019 (accessible at http://icrier.org/pdf/SPS_Barriers_to_India_Agriculture_Export.pdf)
- Report, “India’s Development Assistance to Nepal – Case of the Education Sector”. Oxfam India, October 2018 (accessible at <https://www.oxfamindia.org/India-Development-Assistance-Nepal-Education>)
- Chapter, “Measuring Services Trade Major Challenges in India and Way Forward” with Arpita Mukherjee. In Nag, Biswajit and Chakraborty, Debashis (ed.), *India’s Trade Analytics: Patterns and Opportunities*, New Delhi: Sage, 2019

Working Papers

- “The Role and Changing Paradigm of India’s Assistance to Nepal: Case of the Education Sector”, ICRIER, working paper no. 377, June 2019

Other publications

- Co-edited the Full Paper series for MIRDEC-9th, International Academic Conference on Multidisciplinary and Independent Studies on Social Sciences, (Global Meeting of Social Science Community) ISBN:978-605-81247-0-7
- Co-edited the Full Paper series for MIRDEC-8th, International Academic Conference on Multidisciplinary and Independent Studies on Social Sciences, (Global Meeting of Social Science Community) ISBN:978-605-82290-9-9

MANSI KEDIA

Appointed

- Appointed as member of the Task Force to Review India's Direct Tax Code, since November 2017

International Conferences/Seminars/Workshops

- Speaker at the conference on 'Taiwan-India Industrial Co-operation', organised by the Institute for Information Industry (III), Taipei, August 8, 2018
- Speaker at a conference on 'Promoting enabling environment conducive to efficient telecom transmission service market in Bangladesh', organised by the University of Dhaka and Asia Foundation, Dhaka, June 26, 2018

National Conferences/Seminars/Workshops

- Presented report findings and moderated a panel discussion for an ICRIER report launch 'An Analysis of Competition and Regulations in India's TV Distribution and Broadcasting Services', New Delhi, March 18, 2019
- Speaker, panel discussion on 'Present and Future of Net Neutrality', organised by Centre for Communication Governance at NLU Delhi and The Internet Freedom Foundation, New Delhi, March 14, 2019
- Speaker, workshop on 'Direct Taxation Concepts & Impact', conducted for the LAMP Fellows on Public Finances, New Delhi, January 23, 2019
- Presented report findings at the '4th International Summit- India Satcom 2018', organised by BIF, New Delhi, November 21, 2018
- Speaker at 'Digital Citizenship Summit 2018', jointly organised by Digital Empowerment Foundation and Software Freedom Law Center, New Delhi, November 1, 2018
- Moderated a panel discussion on 'Data Protection for a Free and Fair Digital Economy', organised by ICRIER and Centre for Communication Governance at National Law University, Delhi, August 24, 2018
- Speaker, workshop on 'The Future of Work', organised by Canadian International School Bangalore, June 29, 2018

Publications

Books/Reports/Chapters in Books

- Report, "Evaluating Spectrum Auctions in India", co-authored with Rajat Kathuria (et al). ICRIER, April 2019
- Report, "An Analysis of Competition and Regulations in India's TV Distribution and Broadcasting Services", co-authored with Rajat Kathuria and Richa Sekhani. ICRIER, March 2019
- Report, "Growth Dividends of Digital Communications: The Case for India", co-authored with Rajat Kathuria (et al). ICRIER and Broadband India Forum (BIF), December 2018

- Report, “Ecommerce and Taxation: Challenges for India and G20”. co-authored with Rajat Kathuria and Richa Sekhani, ICRIER, October 2018
- Report, “Women Empowerment through Digitised Means of Financial Inclusion”. ICRIER, October 2018 (submitted to the Department of Economic Affairs)

Papers in Refereed Journals

- “Testing the Waterbed Effect for India’s Telecom Industry”, in *Indian Economic Review*, April 2019

PRATEEK KUKREJA

International Conferences/Seminars/Workshops

- Presented paper titled “Skill Mismatch and Returns to Education in Manufacturing: A Case of India’s Textile and Clothing Industry” at the International Association for Research on Income and Wealth (IARIW) 35th General Conference, Copenhagen, August 22, 2018

National Conferences/Seminars/Workshops

- Presented paper on ‘Skill Mismatch and Returns to Education in Manufacturing: A Case of India’s Textile and Clothing Industry’ at the international conference on ‘Vocational Education in India and China : Sharing Experiences’, organised by Institute of Chinese Studies and India International Centre, New Delhi, January 23, 2019

Publications

Books/Reports/Chapters in Books

- “20 Years of G20: From Global Co-operation to Building Consensus” (edited with Rajat Kathuria), Springer Nature, Singapore, 2019
- “Exploring the Pattern of Trade Union Activity in the Indian Manufacturing Sector”, in K.R. Shyam Sundar (ed.) “Globalisation, Labour and Development in India – Essays In Honour of Lalit K. Deshpande” (with Jaivir Singh, D.K. Das and Kumar Abhishek), 2019

Papers in Refereed Journals

- “Factors Influencing the Decision to Hire Contract Labour by Indian Manufacturing Firms”, co-authored with Jaivir Singh, D.K. Das and Kumar Abhishek. In *Oxford Development Studies*, Taylor and Francis online, <https://doi.org/10.1080/13600818.2019.1624705>, June 2019
- “Labour Regulations and Informalisation in India’s Organised Manufacturing: A Case of Textile and Clothing”, with Seema Bathla. In *The Indian Journal of Labour Economics*, Springer; Vol. 61 (4), pp 453-471, November 2018

Working Papers

- “Skill Mismatch and Returns to Education in Manufacturing: A Case of India’s Textile and Clothing Industry”, ICRIER, working paper no. 364, September 2018

SMITA MIGLANI

Publications

Books/Reports/Chapters in Books

- Report, “SPS Barriers to India’s Agriculture Export Learning from the EU Experiences in SPS and Food Safety Standards”, co-authored with Arpita Mukherjee, Tanu M. Goyal and Avantika Kapoor, ICRIER, March 2019

- Report, “Application of Innovative Technologies for Promoting Financial Inclusion”, co-authored with Saon Ray and Sandeep Paul. ICRIER and Department of Economic Affairs, Gov. of India, August 2018

Working Papers

- “The Probability of Getting a Loan: Evidence from Indian Cities”, with Saon Rayi and Sandeep Paul, ICRIER, working paper no. 370, February 2019
- “The Growing Importance of Consumer Finance for Financial Inclusion in India”, with Saon Ray and Sandeep Paul, ICRIER, working paper no. 367, December 2018
- “Innovation, Efficiency and Inclusion: Integration of Digital Technologies in the Indian Microfinance Sector”, with Saon Ray and Sandeep Paul, ICRIER, working paper no. 366, October 2018
- “Upgrading in the Indian Automobile Sector: The Role of Lead Firms”, with Saon Ray, ICRIER, working paper no. 360, June 2018

Papers in Refereed Journals

- “Use of Blockchain and Artificial Intelligence to Promote Financial Inclusion in India”, co-authored with Saon Ray and Sandeep Paul. In *Asia-Pacific Tech Monitor*, Vol. 36 (1), January-March 2019

SARANYA SIRCAR

National Conferences/Seminars/Workshops

- Presentation on ‘Climate Change Impact on Migration: Cases in the Indo-Pacific’, at the International Young Scholars’ conference on ‘The Indo-Pacific: Political, Security and Economic Dimensions’, New Delhi, February 7-8, 2019

Publications

Books/Reports/Chapters in Books

- Report, “Values in Foreign Policy: Interests and Ideals – Report of the International Conference,” co-edited with Krishnan Srinivasan and Sanjay Pulipaka. ICRIER, April 2019
- Chapter, “The BCIM: Understanding the Geopolitical Dynamic”, co-authored with Sanjay Pulipaka. In Gurudas Das and C Joshua Thomas (eds.), In *BCIM Economic Cooperation: Interplay of Geo-economics and Geo-politics*. New Delhi: Routledge, September 2018

Others Publications

- “New Power Transition in the Maldives: Consequences on the Regional Security Framework,” Think-Ink, ICRIER, November 2018

RESEARCH ASSISTANTS

UJJWAL KRISHNA

International Conferences/Seminars/Workshops

- Presented paper on ‘Exploring the Integration of Child Refugees in the UK: The Case of the Kindertransport’, and Panellist, session on ‘Integration and Resilience’, at the Symposium on Critical Approaches to Kindertransport Research and Historiography, organised by the Institute of Advanced Studies, University College London (UCL), London, UK, January 22-24, 2019
- Panellist, conference on ‘India’s Progress towards the UN Sustainable Development Goals’, organised by the Institute of Development Studies (IDS), University of Sussex, UK, December 6, 2018

- Chair, session on 'India's Economy: Opportunities and Outcomes', at the Sussex India Conference, organised by the University of Sussex, UK, June 26, 2018

Publications

Books/Reports/Chapters in Books

- Report, "Growth Dividends of Digital Communications: The Case for India", co-authored with Rajat Kathuria (et al). ICRIER, Broadband India Forum and Asian Development Bank Institute (ADB), December 2018

Working Papers

- "DOT IN", ICRIER and Ministry of Electronics and Information Technology (MEITY), Government of India, Policy Brief, December 2018

SANDEEP PAUL

International Conferences/Seminars/Workshops

- Attended, '7th biennial conference ECPR Standing Group on Regulatory Governance', University of Lausanne, Switzerland, July 4-6, 2018

National Conferences/Seminars/Workshops

- Presentation, 'Role of Waterways in Promoting Urban Resilience of Kochi', at the seminar on 'Economic Resilience in a Changing Climate: Tales of Adaptation from Four Indian Cities', organised by ICRIER, New Delhi, January 4, 2019

Publications

Books/Reports/Chapters in Books

- Report, "Application of Innovative Technologies for Promoting Financial Inclusion", co-authored with Saon Ray and Smita Miglani. ICRIER and Department of Economic Affairs, Gov. of India, 2018

Working Papers

- "The Probability of Getting a Loan: Evidence from Indian Cities", co-authored with Saon Ray and Smita Miglani, ICRIER, working paper no. 370, February 2019
- "The Growing Importance of Consumer Finance for Financial Inclusion in India", co-authored with Saon Ray and Smita Miglani, ICRIER, working paper no. 367, December 2018
- "Innovation, Efficiency and Inclusion: Integration of Digital Technologies in the Indian Microfinance Sector", co-authored with Saon Ray and Smita Miglani, ICRIER, working paper no. 366, October 2018

RICHA SEKHANI

National Conferences/Seminars/Workshops

- Panellist, discussion on 'Findings from the Inequality of Access Across States in India', at Centre for New Economic Studies, OP Jindal University, Sonapat, October 25, 2018
- Panellist, discussion on 'Internet Shutdowns and its Socio-economic Impact in India', at 'The 7th edition of Democracy Wall', organised by Symbiosis Centre for Media and Communication, Pune, July 20, 2018

Publications

Books/Reports/Chapters in Books

- Report, "Evaluating Spectrum Auction in India", co-authored with Rajat Kathuria (et al). ICRIER, April 2019

- Report, “An Analysis of Competition and Regulatory Intervention in India’s Television Distribution and Broadcasting Services”, co-authored with Rajat Kathuria and Mansi Kedia. ICRIER, March 2019
- Report, “Growth Dividends of Digital Communications: The Case of India”, co-authored with Rajat Kathuria (et al). ICRIER and Broadband India Forum (BIF), December 2018

Papers in Refereed Journals

- “Street Vending in Urban ‘Informal’ Markets: Reflections from Case-studies of Street Vendors in Delhi (India) and Phnom Penh City (Cambodia)”, co-authored with Deepanshu Mohan (et al). *Cities*, Vol no. 89, pages 120-129, June 2019



Audited Annual Accounts

Audited Annual Accounts

V SAHAI TRIPATHI & CO CHARTERED ACCOUNTANTS

C-593, LGF, Defence Colony
New Delhi - 1100 24
Tel. : +91-11- 46612531-33
Fax : +91-11- 46540520
E-Mail : vst@sahaitripathi.com

INDEPENDENT AUDITOR'S REPORT

To
The Members,
Indian Council for Research on International Economic Relations,
Core 6A, 4th Floor, India Habitat Centre,
New Delhi - 110003.

Opinion

We have audited the accompanying Financial Statements of **Indian Council for Research on International Economic Relations** (hereinafter referred as 'ICRIER') which comprise the Balance Sheet as at March 31, 2019 and the Income and Expenditure Account for the year then ended, and a summary of significant accounting policies and notes to accounts.

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid financial statements give the information required by the Income Tax Act, 1961 ("the Act") in the manner so required and give a true and fair view in conformity with the Accounting Standards issued by Institute of Chartered Accountants of India (ICAI), and other accounting principles generally accepted in India, of the State of Affairs of the Entity as at March 31, 2019 and its deficiency or surplus for the year ended on that date.

Basis for Opinion

We conducted our audit of the financial statements in accordance with the Standards on Auditing specified by ICAI (SAs). Our responsibilities under those Standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent from the Entity in accordance with the Code of Ethics issued by the Institute of Chartered Accountants of India (ICAI) together with the independence requirements that are relevant to our audit of the financial statements under the provisions of the Act and the Rules made thereunder, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ICAI's Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the financial statements.



Information Other than the Financial Statements and Auditor's Report Thereon

The Board of Directors is responsible for the preparation of the other information. The other information comprises the information included in the Management Discussion and Analysis, Board's Report including Annexures to Board's Report, but does not include the financial statements and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

If based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Management's Responsibility for the Financial Statements

Management of ICRIER is responsible for the preparation of these financial statements that give a fair view of the financial position and financial performance of ICRIER in accordance with Accounting Standards and other accounting pronouncements, to the extent applicable, issued by the Institute of Chartered Accountants of India from time to time. This responsibility includes the design implementation and maintenance of internal controls relevant to the preparation and presentations of the financial statements that gives a true and fair view and are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the ICRIER's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Entity or to cease operations, or has no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists.



Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the ability of ICRIER to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause ICRIER to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Materiality is the magnitude of misstatements in the financial statements that, individually or in aggregate, makes it probable that the economic decisions of a reasonably knowledgeable user of the financial statements may be influenced. We consider quantitative materiality and qualitative factors in (i) planning the scope of our audit work and in evaluating the results of our work; and (ii) to evaluate the effect of any identified misstatements in the financial statements.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.



We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on Other Legal and Regulatory Requirements

- 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) In our opinion, proper books of account as required by law have been kept by the ICRIER so far as appears from our examination of those books;
  - c) The Balance Sheet as at March 31, 2019 and the Income and Expenditure Account dealt with by this report are in agreement with the books of account;
  - d) In our opinion, the Balance Sheet as at March 31, 2019 and the Income and Expenditure Account comply with the Accounting Standards and other accounting pronouncements, to the extent applicable, issued by the Institute of Chartered Accountants of India from time to time.
-

For, V Sahai Tripathi & Co.
Chartered Accountants
Firm's Registration No.: 000262N

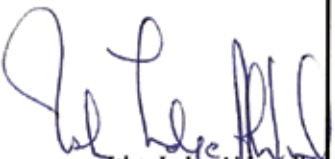


(Kamlaker Misra)
Partner
Membership No. 075821
Place: New Delhi
Dated: 10 September 2019



Indian Council for Research on International Economic Relations

Balance Sheet as at March 31, 2019

Particulars	Schedule No.	As at 31-Mar-19 Amount (₹)	As at 31-Mar-18 Amount (₹)
SOURCES OF FUND			
Endowment Fund		346,456,469	345,971,469
Opening Balance		345,971,469	345,471,469
Life Membership fee received during the year		5,000	-
Donations received during the year		-	-
Transferred from General Fund to RBI - Chair EF		480,000	500,000
Building Fund		150,809,215	157,384,806
Opening Balance		175,000,000	150,000,000
Received during the year		10,000,000	25,000,000
Accumulated depreciation reserve		(34,190,785)	(17,615,194)
Fixed Assets Fund-Net Block		38,893	47,076
Fixed Assets Fund-Gross Block		2,401,811	4,000,000
(Accumulated depreciation reserve)		(2,362,918)	(3,952,924)
General Fund		60,446,829	55,661,901
Opening Balance		55,661,901	73,826,168
Transferred From Income & Expenditure Account		4,784,928	(18,164,267)
Investment Equalisation Reserve		1,293,638	79,869
Current Liabilities & Provisions	1	33,480,019	28,281,065
Current Liabilities		11,348,517	10,453,073
Provisions		13,913,471	13,982,059
Grant received in advance		8,218,031	3,845,933
TOTAL		592,525,064	587,426,187
APPLICATIONS OF FUND			
Fixed Assets	2	184,171,493	184,781,312
Gross Block		261,374,853	247,025,439
Accumulated depreciation reserve		(77,203,360)	(62,244,127)
Investments	3	357,330,000	360,620,665
Long-term Investment		357,330,000	360,620,665
Current Assets, Loans & Advances	4	51,023,571	42,024,211
Cash and Bank		12,387,300	15,428,765
Loans, Advances & Other Recoverables		14,015,626	12,353,203
Grant Receivable		20,771,602	11,239,899
Prepaid Expenses		3,849,043	3,002,342
TOTAL		592,525,064	587,426,187
Significant Accounting Policies and Notes (Schedule 7) In terms of our separate report of even date FOR V SAHAI TRIPATHI & CO CHARTERED ACCOUNTANTS Firm Reg. No. - 000262N			
Kaml (Part) M. N. Place: Date: 1   Geetha Nair (Secretary)  Rajat Kathuria (Director & CE)  Isher Judge Ahluwalia (Chairperson)			

Indian Council for Research on International Economic Relations
Income & Expenditure account for the year ended March 31, 2019

Particulars	Schedule No.	As at 31-Mar-19 Amount (₹)	As at 31-Mar-18 Amount (₹)
A. INCOME			
Grants	5	124,024,883	112,245,493
Received during the year		119,056,813	102,886,865
Receivable during the year		20,771,602	11,239,899
Received during the year for previous year		(11,431,434)	(5,316,457)
Brought Forward from Previous Year		3,845,933	7,281,119
Carried Forward for next year		(8,218,031)	(3,845,933)
Income/Profit on Investment		36,745,678	24,958,064
Interest on Investments for the year		22,053,057	21,723,698
Transfer to Building Fund		-	-
Profit on disposal of Mutual Fund Investment		14,692,621	3,234,366
Interest on Savings Bank Account		1,917,376	2,877,092
Exchange Rate Fluctuation		(27,831)	(65,019)
Other Income	6	1,108,774	1,236,271
TOTAL (A)		163,768,880	141,251,901
B. EXPENDITURE			
Research Expenses:-		112,605,782	116,955,962
Salaries & Allowances		51,997,853	54,541,772
Consultancy Charges		30,249,308	26,874,528
Travel Expenses		10,760,714	11,705,043
Workshops Seminars & Meetings		7,498,811	13,424,928
Publication Expenses		3,610,610	2,375,809
Communication Expenses		903,556	996,209
Library Expenses		7,584,931	7,037,673
Administrative Expenses:-		31,420,466	29,682,347
Salaries & Allowances		26,125,558	26,342,976
Professional Services		688,880	399,902
Office Expenses		4,490,428	2,849,701
Fees and Subscriptions		115,600	89,768
Bad Debts Written Off		-	632,000
Overheads:-		13,164,450	10,243,891
Utility & Electricity Charges		558,168	2,119,891
Repair and Maintenance		7,901,646	6,900,558
Property Tax		4,704,636	1,223,442
TOTAL(B)		157,190,698	157,514,200
Surplus/(Deficit) before Tax and Depreciation (A-B)		6,578,182	(16,262,299)
Depreciation	2	17,954,803	19,035,514
Transfer of Depreciation to Fixed Assets Fund Account		(7,411)	(9,597)
Transfer of Depreciation to Building Fund Account		(16,663,597)	(17,615,194)
Loss on Sale of Fixed Assets		(2,671)	(21,115)
TDS Paid on Demand		32,130	12,360
Surplus/(Deficit) before appropriation		5,264,928	(17,664,267)
Appropriated to RBI Chair Endowment Fund		480,000	500,000
Surplus/(Deficit) after appropriation		4,784,928	(18,164,267)
TOTAL		163,768,880	141,251,901

Significant Accounting Policies and Notes to Accounts (Schedule 7)

In terms of our separate report of even date

FOR V SAHAI TRIPATHI & CO

CHARTERED ACCOUNTANTS

Firm Reg. No. - 000262N


Kamalaker Mishra
(Partner)


Geetha Nair
(Secretary)


Rajat Kathuria
(Director & CE)


Isher Judge Ahluwalia
(Chairperson)



Indian Council for Research on International Economic Relations		
FY 2018 - 19		
		Schedule 1
<u>Current Liabilities & Provisions:</u>		
Particulars	As at 31-Mar-19 (₹)	As at 31-Mar-18 (₹)
A) Current Liabilities:-	11,348,517.00	10,453,073
-Sundry Creditors	5,992,993	4,265,488
-Statutory Dues	2,786,320	2,039,747
-Retention Money - Builder	2,569,204	4,147,838
B) Provisions:-	13,913,471	13,982,059
-Expenses Payable	3,182,129	2,072,830
-Provision for Gratuity [liability (Net)] (As per Schedule 1A)	10,731,342	11,909,229
C) Grants Received in Advance:	8,218,031	3,845,933
Total	33,480,019	28,281,065

Schedule 1A**Provision for Gratuity [liability (Net)]**

Particulars	*As at 31-Mar-19 (₹)	As at 31-Mar-18 (₹)
Present value of obligations at the end of the period (as per Actuarial valuation)	17,369,078	18,011,893
Less : LIC Fund for Gratuity A/c	6,637,736	6,102,664
Net Unfunded Gratuity obligations	10,731,342	11,909,229

* Refer Schedule 7 Notes to Accounts Part B (5) : Provision for Employee Benefits

* Actuarial valuation was carried out for the first time in FY 2017-18 through a certified Actuary. Till last year, provision for Gratuity has been made as per LIC calculation.



Indian Council for Research on International Economic Relations
Details of Fixed Assets (FY 2018-19)

Schedule 2

Particulars	Rate of Depreciation (%)	Gross Block					As at 31.03.2019	As at 01.04.2018	Depreciation			Net Block	
		As at 01.04.2018	Additions		Sales/ Written Off	For the Year			Deductions	Upto 31.03.2019	As at 31.03.2019	As at 31.03.2018	
			More than 180 days	Less than 180 days									
													Own
Air Conditioners	15%	37,620	-	-	-	37,620	8,042	4,437	-	12,479	25,141	29,578	
Building (IHC)	10%	22,186,295	-	-	-	22,186,295	18,465,563	372,073	-	18,837,636	3,348,659	3,720,732	
Car	15%	939,111	-	-	-	939,111	405,634	80,022	-	485,656	453,455	533,477	
Computers	40%	9,832,100	222,375	-	1,134,539	8,919,936	9,179,258	346,893	1,126,554	8,399,597	520,339	652,842	
Electrical Fittings	10%	1,063,525	-	-	-	1,063,525	801,234	26,229	-	827,463	236,062	262,291	
EPABX	15%	105,820	-	-	-	105,820	90,351	2,320	-	92,671	13,149	15,469	
Fax	15%	160,210	9,500	-	83,000	86,710	154,940	1,489	78,154	78,275	8,435	5,270	
Cell Phone	15%	487,012	-	-	-	487,012	261,781	33,785	-	295,566	191,446	225,231	
Furniture & Fixtures	10%	13,003,230	9,760	5,097	80,337	12,937,750	9,534,209	346,879	67,797	9,813,291	3,124,459	3,469,021	
Laser Printer	40%	1,071,324	-	-	37,750	1,033,574	1,035,491	14,290	37,642	1,012,139	21,435	35,833	
Misc. Equipments	15%	495,881	10,280	-	-	506,161	221,998	42,624	-	264,622	241,539	273,883	
Multimedia Presentation System	15%	270,400	-	-	-	270,400	264,360	906	-	265,266	5,134	6,040	
Overhead Projector	15%	257,770	-	-	-	257,770	200,586	8,578	-	209,164	48,606	57,184	
Refrigerator	15%	14,500	-	-	-	14,500	11,117	507	-	11,624	2,876	3,383	
Scanner	40%	48,353	-	-	-	48,353	41,445	2,763	-	44,208	4,145	6,908	
Total As at 31.3.2019		49,973,151	251,915	5,097	1,335,626	48,894,537	40,676,009	1,283,795	1,310,147	40,649,657	8,244,880	9,297,142	
Total As at 31.3.2018		49,507,544	421,941	259,666	216,000	49,973,151	39,480,401	1,410,723	215,115	40,676,009	9,297,142	10,027,143	

Funded Assets:

Particulars	Rate of Depreciation (%)	Gross Block					Depreciation			Net Block		
		As at 01.04.2018 Fused	Additions		Sales/ Written Off	As at 31.03.2019	As at 01.04.2018	For the Year Own	Deductions	Upto 31.03.2019	As at 31.03.2019	As at 31.03.2018
			More than 180 days	Less than 180 days								
Computers	40%	3,655,612	-	-	1,430,139	3,653,097	744	1,429,483	2,224,358	1,115	2,515	
EPABX	15%	87,620	-	-	-	65,535	3,313	-	68,848	18,772	22,085	
Laser Printer	40%	168,050	-	-	168,050	167,934	-	167,934	-	-	116	
Overhead Projector	15%	88,718	-	-	-	66,358	3,354	-	69,712	19,006	22,360	
Total*		4,000,000	-	-	1,598,189	2,401,811	7,411	1,597,417	2,362,918	38,893	47,076	
Land	-	33,913,421	-	-	-	33,913,421	-	-	-	33,913,421	33,913,421	
Building (Pushp Vihar)	10%	115,018,298	5,230,104	11,369,433	131,250	11,185,703	11,462,929	13,125	22,635,507	108,851,078	103,832,595	
Air Conditioner	15%	4,566,540	-	-	4,566,540	668,074	584,770	-	1,252,844	3,313,696	3,898,466	
Computers	40%	5,517,203	-	530,322	187,203	5,860,322	1,385,264	74,881	3,517,264	2,343,058	3,310,322	
Lift	15%	3,147,316	-	-	-	472,097	401,283	-	873,380	2,273,936	2,675,219	
Furniture & Fixure	10%	30,250,399	214,811	-	-	3,147,316	2,986,572	-	5,734,436	24,730,774	27,263,827	
Overhead Projector	15%	261,000	-	-	-	39,150	33,278	-	72,428	188,572	221,850	
Televisions	15%	378,111	-	-	-	56,717	48,209	-	104,926	273,185	321,394	
Total**		193,052,288	5,444,915	11,899,755	318,453	210,075,505	17,615,194	16,663,597	88,006	34,190,785	175,887,720	175,437,094
Grand Total As at 31.3.2019		247,025,439	5,696,830	11,904,852	3,252,268	261,374,853	62,244,127	17,954,803	77,203,360	184,171,493	184,781,312	
Total As at 31.3.2018		202,287,785	6,279,362	38,824,292	366,000	247,025,439	43,423,727	19,035,514	215,115	62,244,127	184,781,312	158,864,058

* Against Capital Grant

** Against Building Fund

Refer Schedule 7 Notes to Accounts Part B (4) : ICRIER Green Building



Indian Council for Research on International Economic Relations				
FY 2018 - 19				
Schedule 3				
Investments:				
Particulars	As at 31 March 2019		As at 31 March 2018	
	Cost Price (₹)	Market Price (₹)	Cost Price (₹)	Market Price (₹)
Investments in Fixed Deposit with Banks:	322,850,000	322,850,000	268,750,000	268,750,000
Bank of India	-	-	96,100,000	96,100,000
Canara Bank	-	-	62,900,000	62,900,000
HDFC Bank	66,100,000	66,100,000	-	-
ICICI Bank	97,250,000	97,250,000	-	-
IDBI Bank	2,500,000	2,500,000	2,500,000	2,500,000
IndusInd Bank	89,300,000	89,300,000	49,500,000	49,500,000
Kotak Mahindra Bank	67,700,000	67,700,000	57,750,000	57,750,000
Investment in GOI Bonds	34,480,000	34,480,000	33,980,000	33,980,000
Investment in Mutual Funds:	-	-	57,890,665	69,877,336
Birla Sunlife Dynamic Bond Fund -Ret-Grth (Current Year - 169540 units of Rs.10 each) (Previous Year - 195769 units of Rs.10 each)			4,330,103	5,083,234
Birla Sunlife Floating Rate Fund-LTP-Reg Growth (Current Year - 23629 units of Rs.10 each)			4,721,262	5,027,340
Birla Sunlife Frontline Equity Fund (Current Year - 15311 units of Rs.10 each) (Previous Year - 20955 units of Rs.10 each)			2,411,180	3,203,067
DSP BlackRock Focus 25 Fund - Growth (Current Year - 223589 units of Rs.10 each)			4,659,820	4,889,893
Franklin India Corporate Bond Opp. - Debt Fund (Current Year - 556896 units of Rs.10 each) (Previous Year - 699408 units of Rs.10 each)			7,962,394	10,048,138
Franklin India Prima Plus - Growth (Current Year - 8642 units of Rs.10 each)			4,571,317	4,869,210
Franklin India Ultra Short Bond Fund-Super IP Growth (Current Year - 208845 units of Rs.10 each)			4,678,343	5,023,376
HDFC Equity Fund (Current Year - 5541 units of Rs.10 each) (Previous Year - 7576 units of Rs.10 each)			2,486,783	3,278,155
ICICI Prudential LTP - Growth (Current Year - 233945 units of Rs.10 each) (Previous Year - 288992 units of Rs.10 each)			4,047,605	5,074,438
IDFC - DBF - Reg - Growth (Current Year - 245204 units of Rs.10 each) (Previous Year - 284733 units of Rs.10 each)			4,305,868	5,061,295
Kotak Select Focus Fund (Current Year - 101412 units of Rs.10 each) (Previous Year - 150561 units of Rs.10 each)			2,222,751	3,226,224
SBI Blue Chip Fund - Growth (Current Year - 131959 units of Rs.10 each) (Previous Year - 186553 units of Rs.10 each)			3,536,785	4,911,885
UTI Dynamic Bond - Debt Fund (Current Year - 507789 units of Rs.10 each) (Previous Year - 638211 units of Rs.10 each)			7,956,454	10,181,080
Total	357,330,000	357,330,000	360,620,665	372,607,335



Indian Council for Research on International Economic Relations		
FY 2018-19		
Schedule 4		
Current Assets, Loans & Advances:		
Particulars	As at 31-Mar-19 (₹)	As at 31-Mar-18 (₹)
A) Current Assets	12,387,300	15,428,765
-Cash in Hand (As per Schedule 4A)	19,653	23,590
-Balances with Banks in Saving Accounts (As per Schedule 4B)	12,367,646	15,405,175
B) Loans, Advances & Other Recoverables	14,015,626	12,353,203
- Advances Recoverable in Cash or in Kind	9,955,597	7,619,348
- Interest Accrued	4,039,895	4,529,844
- Other Recoverables	-	191,535
- Royalty Receivable	20,134	12,476
C) Grants Receivable	20,771,602	11,239,899
D) Prepaid Expenses	3,849,043	3,002,342
Total	51,023,571	42,024,210

Schedule 4A

Imprest:

Particulars	As at 31-Mar-19 (₹)	As at 31-Mar-18 (₹)
Petty Cash-Imprest	12,942	9,982
Petty Cash - Imprest (USD)	6,711	13,608
Total	19,653	23,590

Schedule 4B

Bank Accounts- INR:

Particulars	As at 31-Mar-19 (₹)	As at 31-Mar-18 (₹)
ICICI Bank Ltd A/c No: 000701062084	1,734,274	104,766
Kotak Mahindra Bank A/c No: 01720010028420	5,141,055	739,021
State Bank of India A/c No: 30614820322	3,506,235	96,354
Kotak Mahindra FCRA A/c - 9911779692	1,986,083	14,465,034
Total	12,367,646	15,405,175



Indian Council for Research on International Economic Relations	
FY 2018 - 19	
Schedule 5	
Details of Grant Receivable as on 31.3.2019 :	
Particulars	(₹)
Opening as on 1.4.2018	11,431,434
Less: Written off during the year	0
Less: Received during the year	11,431,434
Grant Receivable for previous F/Ys:	0
ADD: Grant Receivable for F/Y: 2018-2019	20,771,602
Closing as on 31.3.2019	20,771,602
Working:	
Details of Grant Receivable as on 01.04.2018	
Particulars	(₹)
Grant Receivable A/c - DFID	4,175,000
Grant Receivable A/c - Oxfam	2,063,059
Grant Receivable A/c - PwC	1,194,243
Grant Receivable A/c - WRI	3,807,597
Grant Receivable A/c - IMF	191,535
Total	11,431,434
Grant Received During the year out of PY receivable:	
Particulars	(₹)
Grant Receivable A/c - DFID	4,175,000
Grant Receivable A/c - Oxfam	2,063,059
Grant Receivable A/c - PwC	1,194,243
Grant Receivable A/c - WRI	3,807,597
Grant Receivable A/c - IMF	191,535
Total	11,431,434
Grant Receivable as at 31.3.2019:	
Particulars	(₹)
Grant Receivable A/c - DFID	9,013,693
Grant Receivable A/c - Ecorys	1,919,650
Grant Receivable A/c - FCO	2,925,076
Grant Receivable A/c - IIMA	1,557,900
Grant Receivable A/c - NCDEX	315,000
Grant Receivable A/c - OECD	534,481
Grant Receivable A/c - Japan Embassy	1,752,000
Grant Receivable A/c - PwC	844,227
Grant Receivable -Tata Sky	1,909,575
Total	20,771,602
Other Recoverables as at 31.3.2019:	
Particulars	(₹)
Seminar Grant Receivable A/c - IMF	0
Total	0
Grant Received in Advance as at 31.03.2019:	
Particulars	(₹)
Grant Received in Advance - IDFC	2,500,000
Grant Received in Advance - IIMA	1,406,500
Grant Received in Advance - MoC	661,208
Grant Received in Advance - MoEF	2,583,698
Grant Received in Advance - Shakti	1,066,625
Total	8,218,031

Schedule 6

Other Income:

Particulars	Current Year (₹)	Previous Year (₹)
Royalty	20,134	12,476
Interest on Income Tax Refund	146,398	-
Sundry balances Written back	-19,135	636,233
Income Recognized on Discount GOI Invtt.	317,481	116,268
Misc. Receipts	643,896	471,294
Total	1,108,774	1,236,271



**Indian Council for Research on International Economic Relations
For the Year Ended March 31, 2019**

SCHEDULE 7: SIGNIFICANT ACCOUNTING POLICIES AND NOTES TO ACCOUNTS

(A) Accounting Policies:

1. Basis of Preparation of Financial Statements:

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

2. Use of Estimates:

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

3. Depreciation/ Amortization:

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

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

4. Income Recognition:

- a) Grants are accounted for when there is reasonable certainty of their ultimate collection. The accounting policy is based on prudence and certainty.
- b) Interest accrued on fixed/term deposits is treated as income under revenue accounts of the year in which it is accrued using the time proportion method, based on underlying interest rates on accrual basis.



5. **Fund Accounting:**

- a) Donations received towards the corpus are carried forward in the Balance Sheet under Endowment Fund. Interest earned thereupon is used as per the terms or conditions imposed by Donor.
- b) Funds received for creation of chair/ professorship are kept intact and interest earned thereupon is used as per the terms or conditions imposed by Donor.

6. **Fixed Assets:**

- a) Fixed assets purchased from own funds are stated at cost including taxes, duties, freight and other incidental expenses and taxes incurred in relation to acquisition and installation of the same.
- b) Fixed assets purchased out of specific funds received from grantor(s) or donor(s), have also been capitalized and the depreciation on same has been computed as per the policy of ICRIER. The depreciation charged on such Fixed Assets has been reduced from the corresponding respective fund balance.
- c) Incidental expenditure during construction period incurred up to the date of commissioning is capitalized. Cost of acquisition/construction is inclusive of freight, taxes & other incidental expenses.
- d) Expenditure on books purchased and publications is charged to the Income and Expenditure account and separate record is maintained.

7. **Investments:**

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

8. **Employee Benefits:**

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



b) Defined Benefit Plan:

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

ICRIER has voluntarily applied Accounting Standard-15 on Employee Benefits which mandates that wherever applicable, the present value of the obligation under such defined benefit plans is to be determined based on actuarial valuation using the Projected Unit Credit Method, which recognizes each period of service as giving rise to additional unit of employee benefit entitlement and measures each unit separately to build up the final obligation. Actuarial gains and losses are to be recognized immediately in the Profit & Loss Account. Gains or losses on the curtailment or settlement of any defined benefit plan are recognized when the curtailment or settlement occurs. Past service cost is to be recognized as an expense on a straight-line basis over the average period until the benefits become vested.

Actuarial Valuation has been done in respect of Gratuity during the FY 2018-19. The Company has recognized the provisions in respect of gratuity on the basis of Actuarial Valuation.

c) Earned leaves:

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

9. Fixed Deposits with Bank Categorized as Investments:

- a) Investments have been made in Fixed Deposits in Scheduled Banks in compliance with Section 11(5) of the Income Tax Act, 1961.
- b) Funds received from Funding Agencies/ Donor(s) and the remaining unutilized, have been categorized under Cash & Cash Equivalents.

10. Basis of Accounting:

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



11. Grant Accounting:

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

12. Provisions and Contingencies:

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

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



(B) Notes to Accounts:

1. Current Assets, Loans and Advances:

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

2. Taxation:

The Director General of Income Tax (Exemptions) has with effect from the financial year 2006-07 and onwards granted us exemption from income tax under sub-clause (iv) of section 10 (23C) subject to our fulfilling certain conditions including application of 85% of our income during the year and investment of our surplus funds in specified investments. Therefore, no provision for income tax is made.

3. Depreciation on Funded Assets:

During the year ended 31st March, 2019, depreciation has been charged on funded assets with effect from date of purchase of such assets. The accumulated depreciation has been netted from the Gross Value of Fixed Assets. The corresponding depreciation on same has been shown separately under Schedule-2 on fixed assets and such amount of depreciation is deducted from Fixed Assets Fund appearing in the Balance Sheet.

4. Provisions for Employee Benefits:

Provision for Gratuity

Actuarial Valuation has been done in respect of Gratuity during the FY 2018-19. The Company has recognized the provisions in respect of gratuity on the basis of Actuarial Valuation.

(Amount in Rupees)

Particulars	2018-19	2017-18
Amount recognized in Balance Sheet		
Present value of obligations as at the end of the period	1,73,69,078	1,80,11,893
Fair value of plan assets	66,37,736	61,02,665
Present value of unfunded obligations	1,07,31,342	1,19,09,228
Unrecognized past service cost	-	-
Net Liability/(Assets)	1,07,31,342	1,19,09,228
Amount in Balance Sheet		
Liability	1,73,69,078	1,80,11,893
Assets	66,37,736	61,02,665
+Net Liability/(Assets)	1,07,31,342	1,19,09,228
Expenses recognized in the Statement of Profit & Loss		
Current service cost	21,90,261	-
Interest on defined benefit obligation	13,95,922	3,68,247
Expected return on plan assets	(4,72,957)	-
Net actuarial losses/(gain) recognized in the year	(27,91,112)	-
Past service cost	-	-
Losses/(gains) on "Curtailements and Settlements"	-	-
Total, included in "Employee Benefit Expense"	3,22,114	-
Reconciliation of benefit obligations and plan assets for the period		-



Change in defined benefit obligation		-
Opening defined benefit obligation	1,80,11,893	-
Current service cost	21,90,261	-
Interest cost	13,95,922	-
Actuarial losses/(gains)	(28,34,538)	-
Liabilities extinguished on curtailments	-	-
Liabilities extinguished on settlements	-	-
Liabilities assumed on acquisition	-	-
Exchange difference on foreign plans	-	-
Benefits paid	(13,94,460)	-
Closing defined benefit obligation	1,73,69,078	-
Change in fair value of assets		-
Opening fair value of plan assets	61,02,665	-
Expected return on plan assets	4,72,957	-
Actuarial gain/(Losses)	(43,426)	-
Assets distributed on settlements	-	-
Contributions by employer	-	-
Assets acquired due to acquisition	-	-
Exchange difference on foreign plans	-	-
Benefits paid	(13,94,460)	-
Closing fair value of plan assets	66,37,736	-
Summary of the actuarial assumptions		
Discount rate	7.75%	7.75%
Interest Rate	-	-
Expected rate of return on assets	7.75%	7.75%
Future salary increases	10%	10%
Attrition Rate	-	-
Retirement Age	60	60

5. **Contingent liability:**

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

6. **Plough Back to Endowment Fund:**

During the year ended March 31, 2019, Rs. 4,80,000 has been appropriated to the Endowment Fund from the Income & Expenditure account which on account of Income from Investment made, as per the terms and conditions of RBI- Chair Fund Endowment Grant.

7. **Related Party Transaction:**

During the FY 2018-19, the Director & CE of ICRIER has been paid Rs.59,44,558/- (Rs. 54,19,980 for FY 2017-18) as gross remuneration for whole time employment.

8. **Comparative Figures:**

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



9. **Round Off:**

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

10. **Schedules:**

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

As per our report of even date
Attached to the balance sheet
For & on behalf of
V Sahai Tripathi & Co
Chartered Accountants
Firm Reg. No.-000262N

On behalf of the Board



KAMLAKER MISRA
PARTNER
(M.N.-075821)

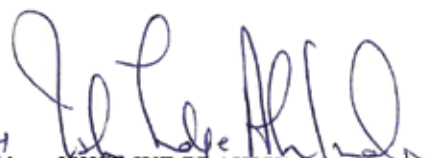
Place: New Delhi
Date: 10 September 2019



GEETHA NAIR
SECRETARY



RAJAT KATHURIA
DIRECTOR & CE



ISHER JUDGE AHLUWALIA
CHAIRPERSON



ICRIER Donors

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

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

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- Housing Development Finance Corporation Ltd.
- HDFC Assets Management Company
- HDFC Bank
- HDFC Standard Life Insurance
- Hindustan Lever Ltd.
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- State Bank of India
- Sterlite Industries
- Tata Chemicals
- Tata Consultancy Services
- Tata Iron & Steel Co.
- Tata Sons (P) Ltd.
- Trident Group
- Union Bank of India
- Unit Trust of India
- WP Carey Foundation

About ICRIER

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

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

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

ICRIER conducts thematic research in the following eight thrust areas:

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

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



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