

**ISID**

**Institute for Studies in Industrial Development**

An institution of Indian Council of Social Science Research (Ministry of Education)

**Policy Research to Foster India's Industrial Transformation**

# 36<sup>th</sup> Annual Report 2022-23 & Research Programme 2023-25



## Business Standard

Jobs for 18-21 age group not so easy to get any more, shows data

A quarter would be retained for regular service. For this year, the upper age limit has been increased to 23  
Ishan Gera | New Delhi



As The Country Got Back On Track In The Aftermath Of Covid-19, The Year 2021-22 Saw More People Joining The Workforce Than Had Exited.

The creation of formal jobs for those in the 18-21 age group in India has declined steadily, sharply eroding this cohort's share of the net new employees' Provident Fund (EPF) accounts opened over the last four years. It is a trend that economists and researchers saw might continue.

The data shows the share of this age group in the net EPF accounts created — a proxy for net new formal jobs created — fell from 37.9 per cent in 2018-19 to 24.1 per cent in 2021-22.

More formal jobs have been added compared to pre-pandemic (in million)

## In pandemic shock, critical lessons for MSMEs

Apart from suitable government policies, the managements of small



AKHILESH K. SHARMA & SUSHIL K. RAI

Micro, Small and Medium Enterprises (MSMEs) are critical for achieving the overall objectives of economic development. The sector is a significant contributor in terms of industrial output, employment generation, and the share in gross domestic product and export. But despite many initiatives by governments since independence, the sector has been facing challenges in its quest for survival and growth. The COVID-19 pandemic has further exposed the vulnerability of the MSME sector. During the pandemic, this sector was among the worst hit on account of the demand and supply shocks caused and the measures taken later to curb the spread of infection. The sector is still struggling to survive and recover from the pandemic-induced shocks.

The pandemic's deep impact Let us focus on the impact of COVID-19 on MSMEs. A recent study (by the writers) — as a primary survey of 755 small firms located in

raw materials. The main reasons for a fall in turnover included restriction on economic activities and mobility; decrease in demand; shortage of raw materials; restriction on trade; slow recovery of markets; payment delays and labour shortage, among others. These firms faced a 25% reduction in their employment particularly in the informal workers' segment that stood at around 47%. Major challenges faced by firms in their revival included delayed payment issues; reduced demand; a lack of financial resources; supply chain disruptions; increased cost of production; lack of skilled workers and, most importantly, business uncertainties. Although most of the firms were aware about the initiatives under the 'Atmanirbhar Bharat' package, only half of them found it to be of any help. Given the lack of demand and business uncertainties, firms did not find it rational to avail of financial assistance available under the 'Atmanirbhar Bharat' package. A majority of firms suggested that the Government should have been more focused on creating a revival of demand for products and services.

Lessons for resilience Nevertheless, not all firms have suffered due to the pandemic-induced shock.

## The Indian EXPRESS

## Indian economy to grow by 7-7.8 pc in FY23 despite global headwinds: Experts

PTI | NEW DELHI

The Indian economy can grow by 7-7.8 per cent this fiscal on the back of better agricultural production and a revitalised rural economy amid global headwinds mainly due to the ongoing Russia-Ukraine war, eminent economists said on Tuesday.

Eminent economist and BR Ambedkar School of Economics (BASE) Vice-Chancellor NR Bhanumathy said at present India's economy is facing multiple headwinds largely from external sources. "Noting that growth in the industrial sector is under pressure and the Russia-Ukraine war have brought in risks to the economy, which is otherwise strong with all the domestic macro fundamentals being well managed, he said unlike advanced economies, India's Covid stimulus measures, especially the fiscal policy interventions, are less inflationary and, rather growth-enhancing.

"With better agricultural production and revitalised rural economy India should touch 7 per cent growth in the current year despite global headwinds, Bhanumathy told

PTI. Echoing similar views, eminent economist and Institute for Studies in Industrial Development (ISID) director Nagesh Kumar said the high-frequency indicators point to a robust growth momentum carrying through 2022-23 with a real GDP growth somewhere between 7.5-7.8 per cent.

French economist Guy Sorman said India could be severely impacted by the high cost of energy and fertiliser imports. "However, because India is still, largely an agricultural economy, the impact of slower growth will be tempered by city workers going back to their village."

"This could increase agricultural production and grain exports," Sorman added. The World Bank has cut India's economic growth forecast for the current fiscal to 7.5 per cent in rising inflation, supply chain disruptions, and geopolitical tensions taper recovery.

India's economy grew 8.7 per cent in the last fiscal (2021-22) against a 6.6 per cent contraction in the previous year. In its third monetary policy of 2022-23, the Reserve Bank

retained its GDP growth forecast at 7.2 per cent for the current fiscal, but cautioned against negative spillovers of geopolitical tensions and a slowdown in the global economy.

On high inflation, Bhanumathy said, CPI inflation peaked in March 2022 and a large part of the CPI inflation, in the last three months is driven by fuel prices. "Delayed transmission of domestic fuel prices and rise in global fuel and other commodity prices appear to have led to a sudden spurt in CPI inflation," he said, adding that recent policy measures, such as reduction in fuel taxes and hike in policy interest rates, should, however, moderate inflation and inflation expectations in the coming quarters.

Kumar noted that the global headwinds of rising commodity prices do pose downside risks for the Indian economic outlook as the CPI levels are elevated. "Yet, I do not think that India is heading towards stagflation, given that the growth momentum seems quite robust," Kumar argued.

## THE HINDU

## Petty patents can boost R&D

A petty patents regime could encourage domestic enterprises to undertake minor adaptive innovations



NAGESH KUMAR & REJI K. JOSEPH

Innovative activity is the key driver of competitiveness and economic growth. In that context, India's rank of 46 in WIPO's Global Innovation Index (GII) 2021, up from 81 in 2015, is encouraging. This finding corroborates an earlier one by UNCTAD in the Digital Economy Report 2021 where India was seen as exceeding expectations. While these findings are encouraging, India, which applies to emerge as one of the larger economies of the world, needs to move up further in the innovation rankings, for building self-reliance in technology, especially in the context of the incipient digital revolution. China occupies the 12th rank in the GI, ahead of Japan at 13th. This shows that it is possible to move up the ladder with sustained effort.

Boosting R&D activities India has much room for enhancing its innovative activity. Among the key indicators, gross R&D expenditure (GIRE) stands at a mere 0.7% of GDP, as in the leading innovative nations. Furthermore, only about 20% of the GIRE is spent by business enterprises, despite the generous tax incentives offered by the government. This suggests that Indian enterprises have not got into an R&D culture, the talk of innovative rivalry. The bulk of innovative activity is conducted by a handful companies in the pharma and auto sectors.

What can be done to boost the R&D activ-

ity? With public-funded research laboratories and universities, and so on. A generous programme is needed to push R&D activities of enterprises through partial funding for viable R&D proposals of industry to strengthen India's competitive edge. Besides, products based on ingeniously developed technology could be protected by export tax concessions (such as those enjoyed by export turnover) to encourage innovation.

The patent system The number of patents registered by residents is another indicator of innovative activity. The patent filings by Indian enterprises and other institutions have increased from 8,841 in 2011 to 23,441 in 2020 (WIPO). However, patents granted have been only 778 and 4,885 respectively. Although the ratio of applications to grants has gone up over the years, many patent applications fail to satisfy the three-pronged test of novelty, inventive step and utility. In that context, another policy to promote local innovation could be to protect minor innovations through the so-called utility models or petty patents, as has been done by several East Asian countries. The patent system tends to encourage minor innovations since the criteria for inventive step tend to look at the novelty of the invention. The experience of several East Asian countries suggests that petty patents and industrial design patents could be effective means of encouraging domestic enterprises to undertake minor adaptive innovations and foster an innovation-based rivalry among them. India should consider adopting a petty patent system. Such a system could protect minor innovations made, especially those by MSMEs,

## businessline.

Nagesh Kumar

Among many trends that the Covid pandemic has accelerated is a shift towards real economy comprising production, jobs, and localisation replacing the earlier emphasis on finance, consumerism, and globalisation.

Harvard economist Dani Rodrik calls this trend 'Productivism'. Governments around the world are adopting industrial policies that incentivise domestic manufacturing to create jobs and reshoring of the value chains. Industrial policy, shunned in the heyday of globalisation, is now back in fashion in industrialised as well as developing countries.

In the US, once the greatest champion of free markets and globalisation, the Biden Administration has defined its industrial policy recently with the \$200 billion CHIPS and Science Act, the \$737-billion Inflation Reduction Act, and the \$550-billion Infrastructure Investment and Jobs Act. These Acts will foster local manufacturing and innovation of semiconductors, chips, electric mobility, and other new technology products through hundreds of billions of dollars in subsidies and tax breaks. The use of domestic content regulations on solar panels has also been authorised under the Buy America Act. India's recent manufacturing push under Make in India has created a part of the global trend. India's new industrial policy will unfold with ease-of-doing-business, production-linked incentives (PLIs), tariff protection, sectoral missions such as the Semiconductor Mission, and Gati Shakti, among many initiatives.

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## New industrial pol for New India

UPWARD TRAJECTORY. India's policy must be in sync with Vision to become the world's third largest economy

by Nagesh Kumar

of a developed country by generating jobs and prosperity in an inclusive and balanced manner, and a roadmap for achieving it. It should identify the sectors that would be targeted for building leadership in garments and leather goods (sectors in which we have a comparative advantage), high-value-added services with potential to drive economic growth and meet aspirations (such as consumer electronics, IT services, etc.), and capital goods, or help in the development of the global value chain and run the global market.

to lead India on the path of innovation-led growth. It should lay out a path for tapping the opportunities of green industrialisation like EVs or Solar PV equipment manufacturing and also push towards sustainable practices and retrofitting. Much more importantly, it should create policy space to leverage certain strategic interventions of the type that the East Asian countries adopted for building competitive manufacturing capabilities. These include creative non-tariff measures to incentivise domestic products, performance requirements that could help MSMEs get integrated with global value chains and run the global market.

overlooked. A new architecture for the industry is needed to overcome limitations of current term-lending due to mismatches. Hence, recommended the new national industrial bank for the term-l manufacturing sector. The Union Budget should consider the establishment of a national industrial bank. Finally, the East Asian experience shows that coordination of different sectors

## the pioneer

Brainstorming on future-oriented infrastructure development

Thursday, 17 January 2023 | Staff Reporter | Bhopal

Development of infrastructure and quality of life complement each other. Giving importance in the global development model is essential for the formulation of policies and for a safe and

eco-friendly lifestyle is absolutely necessary in the present global circumstances. Brainstorm second session of the special Think-T-20 programme under the 6-20 on "Integration the art-technology and Availability of Adequate Finance" in the session "Financing Resilient Sustainable Transition Towards Life" chaired by Shyamala Gopinath, former Deputy Governor of India, at Kushiabhai Thakre International Convention Center, Bhopal.

Gopinath mentioned India's Panchamrit goals to the world by Prime Minister Narendra Modi and the importance of finance for the world along with India to adopt an environment-friendly lifestyle, in this determination of the role and co-operative attitude of development finance to multilateral institutions, carbon market instruments and role various nations will facilitate it to the goal.

## THE HINDU

## India's R&D estimates are an income

India's research and development (R&D) expenditure-GDP ratio of 0.7% is very low when compared to major economies and is much below the world average of 1.8%. The main reason is the low investment in R&D by the corporate sector. While the corporate sector accounts for about two-thirds of gross domestic expenditure on R&D (GIRE) in leading economies, its share in India is just 37%. There is evidence, however, suggesting that India's GIRE data are an underestimate.

A 2022 initiative of the National Science Foundation (NSF) of the United States on Foreign R&D by U.S.-based multinational corporations

performing firms does not capture all the R&D performing firms. The NSSTDS relies on the Department of Scientific and Industrial Research (DSIR) list of recognised R&D units and the Process database of the Centre for Monitoring Indian Economy Pvt. Ltd. for this purpose. The DSIR list may not have many of the actual R&D performers for two reasons: firms which consider government incentives as not attractive enough or that are sensitive about sharing critical information with the DSIR may not be inclined to register themselves with the DSIR. Second, it may be difficult for DSIR firms in services such as software and R&D services to meet the



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## Maastricht University

## The digital market competition with multisided markets: a case of Indian e-commerce

20 June 2022 by: Law



Digital platforms are one of the key developments in facilitating industry 4.0 and are at the center of the multifold benefits the consumers derived through this. An important feature of the digital platforms is the presence of high sunk costs and low marginal costs (UNCTAD, 2019). This occurs since the major cost of operation is the platform creation and popularizing among the stakeholders. Algorithms is the key tool through which the major decisions and processing undertaken by these platforms. This involves high investment in the initial stage of operation. Apart from this, successful operation of any platform depends on the efficient marketing and the service delivery to make it popular among customers. Prevalence of high sunk cost and network effects makes high entry barriers to the new players to successfully enter into the market.

Competition assessment in traditional markets is based on the consumer welfare approach, which consider lower prices or increased quality of products at the same price as an indicator of increased

## PROMARKET

Insights shaping the future of capitalism.

## India's Evolving Industrial Policy Is Critical for Realizing Its Development Vision

BY NAGESH KUMAR March 21, 2023



Industrial policy was once so out of fashion that it was jokingly called "the policy that shall not be named." Now it's back in a big way. On issues ranging from clean energy to semiconductors to Covid-19, governments are trying to improve the performance of key business sectors. Can they manage to do so without subverting competition and subsidizing special interests?

This article is part of ProMarket's series on industrial policy. Stay tuned as we publish an article each week this quarter on the topic.

After pursuing an economic strategy of liberalization and global economic integration that has given primacy to market forces since 1991, India has changed tracks once again. Confronted by the need to create decent jobs for the nearly 12 million people who join the workforce every year, India turned



# Contents

<i>Chairman's Message</i>	<i>iii</i>
<i>Board of Governors, 2023</i>	<i>iv</i>
<i>Research Advisory Committee, 2023</i>	<i>vi</i>
<i>Director's Report</i>	<i>vii</i>
I. Research Programme	1
II. Policy Dialogues, Public Lectures, and Research Seminars	14
III. Capacity Building Programmes	25
IV. ISID Databases, e-Resources and Documentation	27
V. ISID Institutional Collaborations	29
VI. Publications	30
VII. Outreach Activities	44
VIII. ISID Team	55
IX. Statement of Accounts	58

## Chairman's Message

The year 2022-23 saw ISID moving to a new upward trajectory in terms of its policy research, advocacy and outreach activities focused on the industrial transformation of the country. A number of important policy-oriented studies were completed including those supported by the NITI Aayog and the Department of Pharmaceuticals of the Government of India and new ones were launched. The Institute became actively engaged with the work of the Think-20 process under India's G20 Presidency. It also organized a number of major policy dialogues and research seminars, published several important policy papers and engaged in other outreach activities, as summarized in the report.



After many decades of rather indifferent attention given to industry, especially manufacturing, the Indian Government is now moving decisively towards exploiting the potential of industrialization of the country through an investor-friendly policy regime under the Make-in-India initiative reinforced by *Aatmanirbhar Bharat*.

As India enters the last quarter of its Centenary and adopts the Vision of emerging as a developed country by 2047 by closing the remaining development gaps, this transformation towards industrialization is critical. Manufacturing-led development has the potential to create millions of decent jobs to foster inclusive development, so important for realizing this Vision. In this context, ISID's work on supporting the industrialization of the country through policy research and advocacy assumes new criticality.

I wish to take this opportunity to thank the donors and institutional partners, among other stakeholders. We owe special thanks to Prof Dhananjay Singh, Member-Secretary, Indian Council of Social Science Research (ICSSR), for constantly supporting our endeavours.

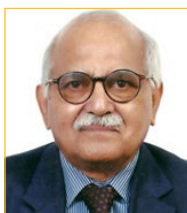
The ISID Board of Governors has been reconstituted over the past year. While welcoming the new members, I wish to express my gratitude to the past and the outgoing members of the Board for their solid contribution in giving the Institute a sense of direction.

And last but not the least a special word of thanks to our energetic Director, Nagesh Kumar for the efforts made by him to project the activities of the Institute and to evolve new partnerships. I am confident that the Director and faculty members of ISID will carry their mandate with a new zeal to support the country's march towards industrialization.

**S K Misra**

# Board of Governors, 2023

## Chairman



Shri S K Misra  
*Chairman, Indian Trust for Rural Heritage and Development & Former Chairman, Indian National Trust for Art and Cultural Heritage (INTACH) & Former Principal Secretary to the Prime Minister*

## ICSSR Nominees



Prof Dhananjay Singh  
*Member-Secretary, Indian Council of Social Science Research (ICSSR), Ministry of Education, Government of India*

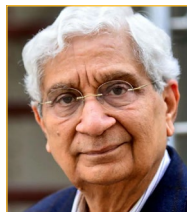


Prof Sudipto Mundle  
*Chairman, Centre for Development Studies, Trivandrum*

## Members



Prof Ajay Shankar (IAS Retd)  
*Former Secretary, Department of Industrial Policy and Promotion, Government of India*



Prof Deepak Nayyar  
*Emeritus Professor of Economics, Jawaharlal Nehru University, and Former Vice-Chancellor, Delhi University*



Prof Ashima Goyal  
*Professor, Indira Gandhi Institute of Development Research (IGIDR) and Member of India's Monetary Policy Committee of RBI, former Member of PM Economic Advisory Council*



Dr Naushad Forbes  
*Chairman of Ananta Aspen Centre and Co-Chairman of Forbes Marshall, Former President of Confederation of Indian Industry (CII)*



Shri Brahm Dutt (IAS Retd)  
*Former Secretary, Road Transport and Highways, Former Chairman of Yes Bank*



Shri Nilmadhab Mohanty (IAS Retd)  
*Former Secretary, Ministry of Industry, Government of India & Former Principal Adviser to UNIDO (United Nations Industrial Development Organisation)*



Prof Padmini Swaminathan  
Former Director, Madras Institute  
of Development Studies, Chennai  
& Former Chairperson, School  
of Livelihoods and Development  
in TISS, Hyderabad



Shri Ram Mohan Mishra (IAS Retd)  
Chairman, Meghalaya  
Investment Commission, Former  
Secretary, Ministry of Women  
& Child Development, Former  
Development Commissioner of  
Small Scale Industries (DCSSI)



Prof Prajapati Trivedi  
Commonwealth SG's Special Envoy  
on SDGs, Distinguished Professor,  
Management Development  
Institute (MDI), Gurgaon, Visiting  
Faculty at Kennedy School of  
Government, Former Secretary  
in the Cabinet Secretariat



Prof Rishikesh T Krishnan  
Director, Indian Institute of  
Management Bengaluru (IIMB)



Prof Pulin Nayak  
Former Director, Delhi School of  
Economics & Centre for Development  
Economics, Delhi University, Delhi



Prof Sachin Chaturvedi  
Director General, Research and  
Information System for Developing  
Countries (RIS); Member, RBI  
Board, Vice-Chairman, State  
Planning Board, Madhya Pradesh

### Member-Secretary



Prof Nagesh Kumar  
Director, ISID

### Faculty Representation



Dr Satyaki Roy  
ISID



Dr Mahua Paul  
ISID

# Research Advisory Committee, 2023

## Chairman



Prof Deepak Nayyar  
*Emeritus Professor of Economics, Jawaharlal Nehru University, and Former Vice-Chancellor, Delhi University*

## Members



Prof Pulin Nayak  
*Former Director, DSE*



Dr Naushad Forbes  
*Co-Chairman of Forbes Marshall*



Prof Sudipto Mundle  
*Chairman, CDS, Trivandrum*



Prof Sachin Chaturvedi  
*Director General, RIS*



Prof Ashima Goyal  
*IGIDR*



Prof Padmini Swaminathan  
*Former Director, MIDS, Chennai*



Prof Rishikesh T Krishnan  
*Director, IIMB*



Prof Prajapati Trivedi  
*Distinguished Professor, MDI, Gurgaon*



Prof Ajay Shankar  
(IAS Retd)  
*Former Secretary, DIPPT*



Prof K Narayanan  
*IIT Bombay*



Prof Rakesh Basant  
*formerly at IIM Ahmedabad*



Prof R Nagaraj  
*formerly at IGIDR, Mumbai*



Prof Nagesh Kumar  
*Director, ISID*



Dr Satyaki Roy  
*ISID*



Dr Reji K Joseph  
*ISID*

## Director's Report

The outgoing year (2022-23) proved to be a fruitful year for the Institute for Studies in Industrial Development (ISID) with respect to its research, policy advocacy and outreach. The comprehensive programme of research on different dimensions of India's industrial transformation prepared and launched in the preceding year got into full motion with several new policy-oriented studies. ISID also became actively engaged in the activities of the Think-20 engagement group under India's G20 Presidency.



The year saw the completion of important policy-oriented studies including one on architecture for industrial financing supported by the NITI Aayog, on leveraging the FTAs with ASEAN and the Middle East countries for India's pharmaceutical exports supported by the Department of Pharmaceuticals of the Government of India. It also contributed to the National Manufacturing Innovation Survey conducted by UNIDO in collaboration with the Department of Science and Technology of the Government of India. The ISID faculty began the preparation of the new flagship *India Industrial Development Report* under a research programme supported by the Indian Council of Social Science Research (ICSSR). New ones were launched on competition issues in the iron-ore sector supported by the Competition Commission of India and on the medical devices industry supported by ICSSR, among others.

ISID organized a number of policy roundtables and research seminars in the areas of its work to engage academics, policymakers, and industry representatives, among other stakeholders, as a part of its policy advocacy and outreach activities. These included a Special Think-20 Policy Roundtable on Finance and Global Economic Governance for Green Industrial Transformation, organized under India G-20 Presidency, organized jointly with the Boston University Global Development Policy Center with participation from several G20 Members and international organizations. ISID hosted the 15<sup>th</sup> Knowledge Forum Conference on Technology and Economy with over 70 participants. ISID collaborated with Helsinki-based UNU/WIDER for hosting a policy roundtable on Industrialization, Inequalities and Inclusive Development; and with CUTS International for a policy roundtable on Competition Policy and Climate Change. The 2022 Foundation Day event focused on the Industrial Strategy for the Post-Pandemic Era with UNIDO's Director-General Mr Gerd Mueller as the keynote speaker. A policy roundtable on Green Industrialization in India with leading thought leaders on the subject from India, the United States and Germany helped to identify the issues to be taken up for a research programme on the subject. Another one focused on mission-oriented industrial policy for successful structural transformation. ISID also hosted 11 research seminars on themes covering exports and growth in Indian manufacturing, inter-State disparities in industrialization in India, public policy for inclusive innovation, complementarity between formal and informal sectors of the Indian industry, intra-industry trade in manufactured goods, global value chains and productivity, manufacturing productivity and India's economic growth, and Covid-pandemic and revival of MSMEs. The Institute also organized a capacity development programme for university teachers and researchers to enhance their research and advocacy capacity, especially focusing on industrial development.

ISID issued 22 Working Papers and 6 Policy Briefs in the year, besides the publications of faculty members in peer-reviewed journals. ISID continued its policy advocacy and outreach through opinion articles in the popular media, through its weekly news roundup *Industry Matters* (issued every Friday), its quarterly

newsletter, and through its revamped website, social media handles on Tweeter, LinkedIn and YouTube. In 2022-23, ISID also managed to come out of a period of financial stress, it faced in the previous year.

As India moves towards achieving the Vision of a Developed Nation by 2047, the manufacturing-led transformation of the country becomes even more central to its development strategy for creating decent jobs and incomes for its youthful population. ISID commits itself to supporting India's development Vision by vigorously pursuing its work programme to foster the inclusive and sustainable industrial transformation of the country!

I also take this opportunity to express my gratitude to the members of ISID faculty and staff for their dedication to their work. I am grateful to the outgoing as well as new members of the ISID Board of Governors and its subcommittees for their guidance. I am also indebted to ICSSR, our collaborators and partners, among other stakeholders, for their support to our work.

September 30, 2023

Nagesh Kumar

### Acknowledgements

ISID wishes to place on record its appreciation for the support extended by the ICSSR, Ministry of Finance, NITI Aayog, and Department of Pharmaceuticals, Competition Commission of India, Government of India, INFLIBNET, an inter-University Centre of UGC. The Institute would like to place on record its special appreciation for the support extended by the Ministry of Commerce and Industry, Ministry of Science and Technology, Ministry of Micro Small & Medium Enterprises, Department of Promotion of Industrial and Internal Trade (DPIIT), ICSSR-NASSDOC, Central Statistical Office (CSO), Ministry of Statistics and Program Implementation, Global Development Network (GDN), Council on Energy, Environment, and Water (CEEW), Forum for Health Systems Design and Transformation (HSTP), Indraprastha Gas Limited (IGL), UCO Bank and HDFC Bank. The collaborating organizations included the United Nations University World Institute for Development Economics Research (UNU/WIDER), United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP), Bangkok and New Delhi; Economic and Social Research Council (ESRC), UK; Forum for Global Knowledge Sharing; CII, FICCI, PHD Chamber of Commerce & Industry; Boston University Global Development Policy Centre; the Climate Policy Lab, Tufts University, USA; Essex Business School, UK; United Nations Industrial Development Organization (UNIDO), Vienna; United Nations Conference on Trade and Development (UNCTAD), Geneva; Confederation of Indian Industry (CII), Council for Social Development (CSD); CUTS International (Consumer Unity & Trust Society), Centre for Development Studies (CDS), Thiruvananthapuram; University of Delhi; Institute of Economic Growth (IEG); the Observer Research Foundation; the G20 Secretariat, Government of India.

The Institute acknowledges the support received from the Libraries of Jawaharlal Nehru University, University of Delhi, Ratan Tata Library (RTL), IEG, NIPFP, NCAER, IIPA, TERI School of Advanced Studies, National Institute of Educational Planning and Administration (NIEPA), India International Centre, American Centre Library, DELNET, and networks of Asia-Pacific Research Network on Trade (ARTNet).

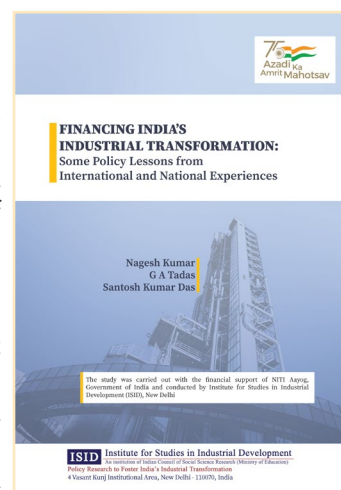
# I. Research Programme

ISID developed a new comprehensive medium-term research programme of policy research in 2021 which was endorsed by the Research Advisory Committee (RAC) and subsequently by the Board of Governors. This research programme covers various dimensions of industrial development, especially seeking to support policymaking. These dimensions include industrial structure, performance, and policies; corporate governance and industrial financing; leveraging MSMEs and Start-Ups; globalization, FDI, and trade; technology, innovation, and Industry 4.0; green industrialization; employment and labour markets; spatial dimensions of industrial development and sectoral studies on competitiveness. In what follows, research projects completed and those that were ongoing and awarded in 2022-23 are listed before outlining the full research programme updated in 2023 for 2023-25, as endorsed by the RAC.

## Completed Research Projects

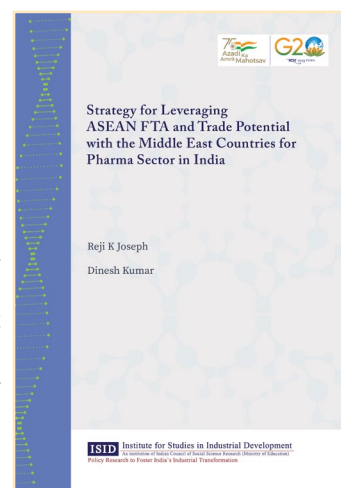
### Financing India's Industrial Transformation: Some Policy Lessons from International and National Experiences

Access to and availability of finance or credit plays a critical role in advancing the industrial development of any country. A recent ISID study has attempted to analyze the financial constraints to industrial development in India against the backdrop of an ambitious vision of making India a manufacturing hub to create productive and decent job opportunities for its teeming millions and for fostering inclusive growth. The structure of India's manufacturing sector, sources of finance, and the issue of credit constraints faced by the manufacturing sector in recent decades were examined and limitations of the existing financial system in meeting the credit requirement of India's industrial sector were analyzed and recommendations made for an institutional architecture needed to realize India's aspirations for Make-in-India and the Vision 2047. A final project report co-authored by Prof Nagesh Kumar, Mr G A Tadas and Dr Santosh Kumar Das was submitted to the NITI Aayog in March 2023.



### Strategy for Leveraging ASEAN FTA and Trade Potential with the Middle East Countries for Pharma Sector in India

This study undertaken by ISID for the Department of Pharmaceuticals, Government of India, analyses the impact of India's FTA with the ASEAN on Indian pharma sector and the implications of recently signed FTA with UAE on this sector. It also looks into the trends in the trade and investment flows in this sector with the ASEAN and Middle East countries. The market access barriers faced by Indian exporters in these regions are captured in this study. Dr Reji K. Joseph & Dr Dinesh Kumar presented the findings of the study at the office of Secretary, Department of Pharmaceuticals, Government of India, on 30 November 2022. The final report will be submitted after revision in January 2023.

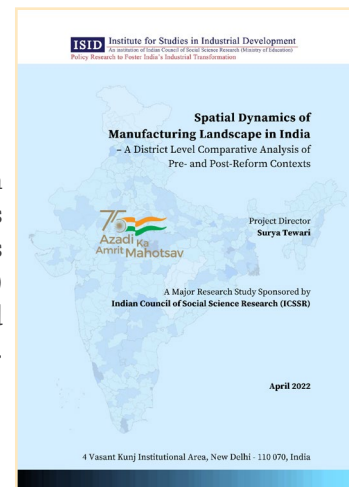


## Macroeconomic Context for Innovative Activity in India

ISID was approached by the UNIDO to provide an self-contained input on the macroeconomic context for innovative activity in India as part of the larger UNIDO-Department of Science and Technology (DST) Project on National Manufacturing Innovation Survey. This study undertaken by ISID reviews the macroeconomic innovation landscape of India in a comparative perspective with leading innovative economies globally in terms of gross expenditure on R&D, R&D spending in priority sectors, FDI including those in R&D, technology adoption, digitalization, infrastructure, human capital and knowledge output. It also makes a state wise comparison of innovation performance. The study was conducted by Dr Reji Joseph, Associate Professor, ISID.

## Spatial Dynamics of Manufacturing Landscape in India – A District Level Comparative Analysis of Pre- and Post-Reform Contexts

The objectives of this study are to determine how equal the states are with respect to manufacturing units and workers, and second, what changes have come after the implementation of economic reforms. The analysis is undertaken at the level of states and districts using the Third (1990) and Sixth (2013) Economic Census. The variables analysed are units and workers as these are only major variables covered in the Economic Census. The study was conducted by Dr Surya Tewari, Assistant Professor, ISID.



## New and Ongoing Research Projects, during 2023–24

New research projects sponsored are reflected in the Research Programme 2023–25 at relevant places.

- Dynamics of Competition in the Indian Mining Sector with a Focus on Iron Ore, sponsored by Competition Commission of India (CCI), New Delhi. Project team: Dr Beena Saraswathy, Dr Satyaki Roy, and Dr Sanjay Kumar Malik
- Fostering India's Industrial Transformation: India Industrial Development Report, sponsored by ICSSR. Prof Nagesh Kumar is the principal researcher.
- Explaining the Conundrum of Service-Led Growth in India: Changing Composition of Demand and Income Distribution, sponsored by ICSSR. Dr Satyaki Roy is the principal researcher.
- Foreign Direct Investments and India's Industrial Development: Magnitudes, Quality, Challenges and Opportunities, sponsored by ICSSR. Prof Nagesh Kumar is the principal researcher.
- Liberalisation, International Trade and Industrial Productivity: A Case Study of Organised Manufacturing Sector in India, sponsored by ICSSR. Dr R Rijesh is the principal researcher.
- Envisioning the role of MSMEs in India's Industrial Transformation: An Analysis using CGE Modelling Framework, sponsored by ICSSR. Dr Akhilesh Kumar Sharma is the principal researcher.
- Trends in Inter-Regional Disparities in Indian Manufacturing, sponsored by ICSSR. Dr Mahua Paul is the principal researcher.
- Towards Resilient and Sustained Growth of the MSME Sector in India: Lessons from the COVID-19 Pandemic, sponsored by ICSSR. Dr Akhilesh Kumar Sharma is the principal researcher.
- Fostering Medical Devices Industry of India: Issues, Challenges and the Way Forward, sponsored by ICSSR. Dr Shailender Kumar is the principal researcher.
- Make in India: An Assessment of the Impact of the Programme on Six Manufacturing Sectors, sponsored by ICSSR. Project Team: Dr Reji K Joseph, Dr Anjali Tandon, Dr Beena Saraswathy, Dr Ramaa Arun Kumar, Dr Sangeeta Ghosh and Dr Seenaiiah Kale.

## Research Programme 2023–25

ISID developed a new comprehensive medium-term research programme of policy research in 2021 which was endorsed by the Research Advisory Council and subsequently by the Board of Governors. This research programme covers various dimensions of industrial development, especially seeking to support policymaking. These dimensions include industrial structure, employment, and policies; corporate governance and industrial financing; leveraging MSMEs and Start-Ups; globalization, FDI, and trade; technology, innovation, and Industry 4.0; green industrialization; spatial dimensions of industrial development and sectoral studies on competitiveness. The research programme is updated every year for discussion and consideration by the RAC and the Board. In what follows, ongoing and planned work during 2023-25 is summarized.

### A. Industrial Structure, Employment, and Policies

Development typically involves diversification of the economic structure from the one dominated by primary activities like agriculture to the sectors with greater labour productivity such as industry and services of progressively greater complexity. The Indian economy has witnessed a dramatic transformation with the share of agriculture in GDP coming down to 15% from 50% over the past decades while that of services going up to 60%. This service-oriented structural transformation, has been able to absorb only 26% of the workforce in services, leaving agriculture and allied activities to sustain nearly half of the workforce. The neglect of manufacturing (whose share in GDP stagnates around 17%) to underpin the structural transformation has cost the country dearly in terms of creating decent jobs directly and through its extensive backward and forward linkages. India is now trying to catch up with industrialization through the Make in India programme that has been further reinforced by the *Aatmanirbhar Bharat* campaign launched in 2020 to accelerate recovery of the economy in the aftermath of the pandemic. ISID research under this broad theme analyses the emerging policies, patterns of structural transformation and industrial organization, and industrial performance.

#### A.1. Fostering India's Industrial Transformation: The India Industrial Development Report (IIDR) 2024

The IIDR is the first in a new series of biennial flagship reports launched by ISID, to mark the India@75. It draws upon in-house analytical work, wide-ranging consultations with noted experts, and policy discussions to build a compelling narrative on criticality, opportunities, challenges, and policy reforms needed for industrial transformation of India at the current juncture of its development trajectory as it seeks to emerge as a developed nation by 2047. Besides being one of the biggest economies in the world, India should also be a global leader in inclusive and sustainable development. While drawing lessons from the experiences of the successful industrializers of the West and the East in terms of strategic interventions deployed, it is also cognizant of local specificities and initial conditions besides the changed external context that has turned less benign with recent trends of protectionism, stalled multilateral trade negotiations and the global slow down following the COVID pandemic. In support of the Make-in-India and *Aatmanirbhar Bharat* programmes, the Report identifies the opportunities of creating decent job opportunities for India's youthful workforce through empowering MSMEs, providing an enabling framework to budding entrepreneurs and start-ups, improving the quality of FDI inflows, and unleashing the large national champions to emerge as competitive players on the global markets through leveraging technology, including the Industry 4.0. It also offers analysis and thoughts on green industrialization to enable

India to contribute to global sustainability targets. It will be backed by extensive policy advocacy through high-level policy dialogues, popular columns, and social media.

*Research Team:* Prof Nagesh Kumar and the entire faculty.

*Collaboration:* ICSSR

*Status:* [Ongoing], project launched in 2022-23; time frame: to be completed by March 2024

## A.2. Explaining the Conundrum of Service-led Growth in India: Changing Composition of Demand and Income Distribution

India like many other developing countries is experiencing premature deindustrialisation manifested by the stagnation of manufacturing in the share of value-added and employment at a very low peak. This is worrisome because India is way behind the average per capita income at which demand for manufacturing goods loses its relative importance and that of services takes off. Moreover, a country with a huge labour surplus can gainfully employ the labour force released from the primary sector through robust growth in manufacturing. Manufacturing generally shows higher productivity growth and the diffusion of gains through linkage effects and lower unit costs triggers a virtuous growth path with increasing demand for existing and newer goods and services. Existing literature and policy papers express concerns about the departure of India's growth trajectory from the stylised patterns of development. Policies by successive governments aimed to address the problem of jobless growth referring to the desired path of manufacturing-led growth. However, most of these discussions remained largely confined to a normative discourse of why manufacturing ought to be the 'engine of growth.' This perhaps missed out on the objective analyses of the demand pattern that emerged over time at various income levels. In short, the assumed trajectory needs to be revisited with a closer look at the emerging demand patterns at the household level. This research programme would aim to address the central question of pre-mature deindustrialisation looking into evolving consumption and investment patterns both at the micro and macro levels, identifying new dimensions of domestic demand and exports, and the way they explain the current trajectory of growth. The changing pattern of consumption in different income segments would be linked with the evolving distribution of income that might have contributed towards a service-led growth path.

*Research Team:* Dr Satyaki Roy

*Collaboration:* ICSSR

*Status:* [Ongoing], project launched in 2022-23; time frame: March 2024.

## A.3. Public Sector Enterprises and Industrial Development

According to National Accounts Statistics (NAS), public sector currently contributes about a quarter of GDP in India. Given this universe of India's public sector undertakings (PSUs), the current debate on the role of public sector in India deserves a closer look. Gleaning through the historical trajectory of policy perspectives since independence until the current phase of market-driven reforms, we see a marked shift in the assigned role of public sector in the Indian economy. Once considered to be the "temples of modern India," the role of public sector was premised on the context of nation-building after independence. The paradigmatic shift suggested reforms specific to public sector: free entry of private sector firms in industries reserved for public sector enterprises (PSEs), disinvestment of government shareholdings and listing PSEs in stock exchanges with associated requirement of changes in governance structure, withdrawing budgetary support from 'sick' PSEs, and encouraging retrenchment of labour to attain commercial viability. In this changed context, PSEs are put to test to assess if they manage to survive the rough weather of competition and get through the standard parameters of efficiency norms. The project reviews and examines the continued relevance of PSEs in India and ways and means to enhance their efficiency and competitiveness to harness their potential

and role in the industrial transformation of the country. The first output of the project has been reported in ISID Working Paper #264.

*Research Team:* Dr Satyaki Roy

*Collaboration:* ICSSR

*Status:* [Ongoing], project launched in 2022-23; time frame: 24 months

## B. Corporate Governance and Industrial Financing

The experience of industrialization the world over has underscored the critical role played by access to finance and credit. The East Asian countries have intervened strategically to develop sunrise industries through the directed credit in the Republic of Korea, Malaysia, China, among other East Asian countries. Corporate governance as shaped by regulations such as the Companies Act, the Competition Act, SEBI Act, Insolvency and Bankruptcy Code, and global standards can also help to nudge the business enterprises to pursue inclusive and sustainable business practices enhancing their contribution to overall socio-economic development. ISID's work under this theme addresses institutional architecture for industrial finance and evolving good practices in corporate governance that can be adapted to India. The past work of ISID has also explored the patterns of mergers and acquisitions and patterns of market power.

### B.1. Corporate Governance for Responsible and Sustainable Business

In the context of growing debate on “stakeholder capitalism” and the emphasis being put on environmental and social governance (ESG), the research programme would review and examine the codes of corporate governance and legislation and guidelines in the global comparative perspective to highlight the gaps and underline the potential good practices that can be adopted by India. It would also examine the M&A guidelines and antitrust regulations that help to regulate the collusive behaviour of enterprises and promote market competition and protect consumer interests. It would also review and propose new standards of corporate disclosures that may foster a move towards more responsible and sustainable business by enhancing transparency and peer pressure on corporations and fostering compliance to global standards.

*Research Team:* Dr Swati Verma and Dr Rajat Panwar.

*Status:* [ongoing]

### B.2. Dynamics of Competition in the Indian Mining Sector with a Focus on Iron Ore

ISID was awarded by the Competition Commission of India an important research project on competition issues in the mining sector with a focus on Iron Ore. Mineral resources have directly and indirectly played a key role in the evolution and growth of human societies and led to the industrial revolution and modern living conditions. Due to the non-renewable characteristics of minerals and the limited supply of them, the countries with rich minerals are naturally gifted. Nevertheless, the demand for minerals such as iron ore is increasing tremendously due to the huge infrastructure and other development requirements in developing nations. India is self-sufficient in its iron ore production. Iron ore is the key raw material for producing steel, which in turn is a critical input for industrial development. Therefore, any market imperfections in iron ore pass through to other core sectors of the economy as well. The major objective of this study was to identify whether there are any market imperfections prevailing in the iron ore market in India, using a combination of both secondary data and field survey approach.

*Research Team:* Dr Beena Saraswathy, Dr Satyaki Roy, and Dr Sanjaya Kumar Malik

*Collaboration:* Competition Commission of India

*Status:* [completed] Project launched in November 2022; report submitted August 2023.

## C. Leveraging MSMEs and Start-ups for Industrial Transformation

Micro, small, and medium enterprises (MSMEs) form the backbone of the Indian economy. With 45% share of manufacturing output, more than 40% of exports and over 28% share of GDP, MSMEs provide jobs to about 111 million people. They are key drivers of inclusive and sustainable economic growth and poverty reduction and are breeding grounds for entrepreneurship. However, they face many constraints and remain vulnerable to external shocks. However, poor availability of data on the MSME sector affects a better understanding of their evolving patterns, opportunities and constraints faced by them. ISID's work under this theme is addressing some of the data constraints by conducting primary sample surveys and simulations in the economy-wide models to develop a better understanding of their roles. ISID is also exploring the potential of Start-Ups for development.

### C.1. Envisioning the Role of MSMEs in India's Industrial Transformation

Given that majority of MSMEs are informal, they have been facing several challenges and have been the worst affected from the lockdowns imposed during the COVID-19 pandemic. Many of them had to close their businesses while others have scaled down their operations because of demand and supply constraints. ISID is developing scenarios of the role that MSMEs can play in India's industrial transformation within the framework of Computable General Equilibrium (CGE) models.

*Research Team:* Dr Akhilesh Kumar Sharma

*Collaboration:* ICSSR

*Status:* [Ongoing] Project launched in 2022-23; time frame: March 2024.

### C.2. Towards Resilient and Sustained Growth of the MSME Sector in India: Lessons from the COVID-19 Pandemic

The proposed study aims to understand factors enabling the survival of MSMEs during the COVID-19 pandemic, their coping strategies, major challenges and opportunities, efficacy of government policies in revival of the sector, and to identify factors for the resilient and sustained growth of MSMEs amidst uncertainties. It will be based on both primary and secondary data. Mixed method approach will be used for analysis. Primary data will be collected through a semi-structured questionnaire from around 600 small firms of selected MSME clusters located in different regions of the country. Snowball sampling will be used to identify sample firms for the study. Appropriate statistical methods will be used for the analysis. Findings will add to the understanding of policymakers and researchers about issues pertaining to COVID-19 and MSMEs and help them to design appropriate policies for resilient and sustained growth of the sector.

*Research Team:* Dr Akhilesh Kumar Sharma

*Collaboration:* ICSSR

*Status:* [Ongoing] Project launched in 2022-23; time frame: March 2024.

### C.3. UK-India Bilateral Trade in Fintech and Fintech-Enabled Services: Emerging Trends and Potential for Growth

This project will address issues pivotal to the fintech revolution. Some of the new initiatives include FinTech/silicon ecologies incubating UK-India firms for innovative financial services; funding conduits for infrastructure and green finance; and regulatory frameworks to ease market access for UK-India FinTech firms. Besides promoting bilateral business in financial services, the project would contribute significantly to the cause of inclusive development addressing financial inclusion, digital empowerment, and start-up ecosystem. It is being undertaken jointly by teams from India and the United Kingdom for three years.

*Research Team:* India: Prof Sachin Chaturvedi and Dr Priyadarshi Dash (RIS), Prof K J Joseph (GIFT),

Dr Reji K Joseph (ISID); UK: Prof T G Arun and Prof Sheri Markose (University of Essex), Prof Victor Murinde (University of London), and Dr Philip (Kostov University of Central Lancashire).

*Collaboration:* Supported by ICSSR and ESRC

*Status:* [Ongoing]; time frame: 36 months from March 2021

## D. Globalization, FDI, and Trade

By bringing much-needed technology, capital and entrepreneurship, and access to markets, FDI inflows can contribute to industrial development. Hence, governments worldwide seek to attract FDI inflows from multinational enterprises (MNEs) through different policy measures including incentives and facilitation. However, the quality of FDI inflows has been found to be highly uneven with some inflows being welfare-reducing for host countries. FDI flows are increasingly two-way flows as Indian enterprises also undertake greenfield investments as well as acquisitions abroad to strengthen their presence in their key markets for acquiring strategic assets. In an open economy context, international competitiveness becomes an important factor in the success of the manufacturing sector not only in export markets but also in the domestic markets. Furthermore, participation in global value chains could be an important route for fostering the manufacturing sector. The trade policy measures and trade negotiations—multilateral, regional or bilateral—can significantly shape the competitiveness of manufactured products and market access. ISID's work under this theme covers some of the issues concerning harnessing the potential of FDI inflows and outflows as well as export competitiveness and participation in value chains of the country.

### D.1. Leveraging FDI for India's Industrial Transformation: Magnitudes, Quality, Challenges and Opportunities

India has emerged as an attractive destination of FDI with magnitudes of inflows growing constantly even in the aftermath of the COVID pandemic. However, what is not clear is whether the FDI inflows attracted by India are of high quality that helps to crowd-in more domestic investments rather than crowd-out and contribute to building the export and technological capability of the country. The project is analysing the patterns of inflows and examine their quality. It is also analysing FDI in relation to India's participation in GVCs that have become key issues for manufacturing-led development in the open economy context. In that context the project has analyzed the patterns of India's GVC participation and its depth and draw policy lessons. Some analysis has already been presented in an ISID Working Paper #267. More work is in progress.

*Research Team:* Prof Nagesh Kumar and Dr Isha Chawla.

*Collaboration:* ICSSR

*Status:* [Ongoing] Project launched in 2022-23; time frame: 24 months.

### D.2. Liberalisation, International Trade, and Industrial Productivity in Indian Manufacturing

The study is an attempt to examine the impact of trade on productivity in India. The empirical analysis will be based on the organized segment of the Indian manufacturing sector since the onset of trade policy reforms in the 1990s. The theoretical literature indicates several plausible channels through which trade enables static production and consumption gains as well as dynamic productivity gains through exposure to new technology and economies of scale. As trade integration expands through trade liberalization, production efficiency improves through increased market access and scale economies, higher competitive pressure, an incentive to invest in technology and skills, reduction in x-inefficiency, better access to superior production inputs, knowledge spillovers, reallocation

of production processes, etc. Therefore, the present study aims to evaluate the net impact of trade-induced productivity growth at the disaggregated level. We will adopt a panel econometric methodology to assess trade-productivity linkage by relating productivity to trade outcome and policy-related variables.

*Research Team:* Dr R Rijesh

*Collaboration:* ICSSR

*Status:* [Ongoing], project launched in 2022-23; time frame: 24 months.

### D.3. Enhancing Policy Space for Industrialization: Issues for the G-20 Agenda

The G-20 has emerged as an important platform for discussions on global economic and financial architecture. The Indian presidency of the G-20 from December 2022 presented to India an opportunity to shape a more development-friendly global economic and financial architecture that supports the process of the manufacturing sector in India and other late-industrializers by retrieving some of the policy space lost over time in the multilateral trade and financial negotiations. In run



up to the G20 Summit preparations, ISID actively contributed to the Think-20 process, by serving as a Co-chair of the Taskforce 6 on SDGs, hosting a Special T20 Policy Roundtable on Finance and Global Economic Governance for Green Industrial Transformation on March 02, 2023, jointly with the Boston University Global Development Policy Center (BU-GDPC). ISID also prepared three T20 Policy Briefs which were peer reviewed and published by the T20 Secretariat. ISID also reissued them under its own policy brief series for further dissemination as follows:

- Towards an Innovative Financing Mechanism for Sustainable Development: Reviving International Financial Transactions Tax (IFTT) on the G20 Agenda, PBs #23-05, June 2023
- Aligning G20 Industrial Policies with Biodiversity Conservation, PBs #23-04, May 2023
- Finance and Global Economic Governance for Green Transformation: Key Recommendations of ISID-BUGDPC Special T20 Roundtable, PB #23-02, March 2023

ISID also contributed to T-20 Meetings held in New Delhi, Bhopal, Mumbai, Mysore and Kigali (Rwanda), and the G20 International Conference organized by the NITI Aayog in July 2023. ISID will continue to contribute to the policy discussions on enhancing the policy space for industrialization in the context of G20 Summit in Brazil and South Africa.

*Research Team:* Prof Nagesh Kumar and Prof Kevin Gallagher (BU-GDPC)

*Status:* [Ongoing]

## E. Technology, Innovation, and Industry 4.0

The new growth theories incorporate technological change endogenously as a factor of production in its own right. Similarly, the neo-technology theories of trade emphasize the role of technology in determining a country's international trade and competitiveness. With the onset of the Digital Revolution or Industry 4.0, technology and innovation will assume an even greater criticality as determinants of competitiveness and economic growth. Under this theme, ISID's work explores the firm-level R&D behaviour of Indian enterprises to identify policy lessons to enhance it. ISID has

also started analyzing the opportunities and challenges that Industry 4.0 poses before the country, particularly the manufacturing sector.

### E.1. Determinants of Innovation by Indian Enterprises

The neglect of innovative activity by Indian enterprises, which is a key factor determining their competitiveness, is key policy concern. This project will analyze the determinants of R&D behaviour of Indian enterprises by large firms, MSMEs as well as MNE affiliates (revisiting the patterns observed by Kumar and Aggarwal, 2005), using a large panel data set. It would also examine the determinants of R&D activity across key sectors and technology groups. It will draw policy lessons for designing appropriate policies to strengthen the innovation capability of manufacturing firms in India. Some work on determinants of firm-level R&D activity by high-technology firms was presented in an ISID Working Paper #266 by Dr K Seenaiah. More work is in progress.

*Research Team:* Prof Nagesh Kumar, Dr K Seenaiah and Prof Suma Athreye

*Status:* [Ongoing], project launched in 2022-23; time frame: 12 months.

### E.2. Industry 4.0, Automation and Employment in India's Manufacturing Sector

Advances in technology, artificial intelligence, machine learning, deep learning, data mining, internet of things, cloud computing, mobile robotics, and so on, which are essential features of the Fourth Industrial Revolution or Industry 4.0, not only facilitate the increasing automation of routine jobs or task, but also facilitate automation of non-routine jobs. This automation, as predicted, are most likely to take away around 50% of the total jobs in developed and developing countries. Developing countries, like India, are striving to adopt advanced technologies or automation technologies to revitalize their manufacturing sector. Given the capital-intensive nature of production and increasing adaptation of Industry 4.0 and automation technologies, the question arises: Is it feasible to boost employment in the manufacturing sector? In this context, this study intends to understand the extent of diffusion of automation technologies and its purported impact on employment in the manufacturing sector in India. The output of the project has been reported in three ISID Working Papers. A paper on conceptual issues has been prepared by Dr Satyaki Roy. Paper by Prof Nagesh Kumar takes stock of the opportunities and challenges in harnessing the potential of the new revolution. The third paper by Dr Sanjaya Kumar Malik has looked at the adoption of Industry 4.0 technologies in India's Start-Ups. ISID has also hosted a policy roundtable on the subject and has issued a policy brief based on the discussions.

*Research Team:* Prof Nagesh Kumar, Dr Satyaki Roy and Dr Sanjaya Kumar Malik

*Status:* [Ongoing]; project launched in 2022; time frame: 24 months.

## F. Green Industrialization

As India catches up with industrialization, care should be taken to avoid the conventional paths of industrializing first and cleaning up later. It is possible to exploit the potential of green industrialization combining the objectives of industrialization as well as sustainable development. This would involve a policy shift towards the adoption of cleaner technologies as well as strategic interventions that help to harmonize the requirements of productivity-enhancing structural change with environmental objectives and to align national interests with the protection of global commons. ISID seeks to develop in the coming years a full-scale work programme on potential and opportunities for greener industrialization and support policy-making process.

### F.1. Towards a Green Industrial Strategy for India

India while accelerating its industrial transformation can do it in a more sustainable manner by exploiting the potential of green industrialization combining the objectives of industrialization as well as ecological sustainability. Adoption of cleaner technologies as well as strategic interventions to harmonize the requirements of productivity-enhancing structural change with environmental objectives and to align national interests with the protection of global commons is the objective of green industrial strategy. For instance, the policies that incentivize the development and use of green technologies such as wind, solar, bioenergy, geothermal, hydrogen, and fuel-cell technologies, or those that help save other natural resources need to be adopted. While India has taken several initiatives towards the promotion of renewable energy and promoting energy efficiency, a comprehensive framework is yet to be evolved. ISID has started a discussion with Fletcher School's Climate Policy Lab at the Tufts University to develop a collaborative research programme on green industrial strategy for India, taking advantage of their expertise and recent work on the subject. A Policy Roundtable was organized as a first step with heads and experts from key think tanks from India, the US and Germany, India (CEEW, IIT-Delhi) and UNIDO in April 2022. Another Policy Roundtable was organized on Technological Opportunities for a Low Carbon World on April 27, 2023 with experts from UNCTAD, Geneva, UNU-MERIT, Maastricht, the Netherlands; Tufts University and IIT Delhi. ISID is planning further work with UNU-WIDER on green industrialization opportunities and policy lessons for India. Dr Anjali Tandon has started some work on factors enhancing the energy efficiency in Indian steel industry.

*Research Team:* Prof Nagesh Kumar, Prof Kelly Gallagher (Climate Policy Lab, Tufts University), Dr E Narasimham (Climate Policy Lab, Tufts University and CPR), Dr Kunal Sen, UNU/WIDER, and Dr Anjali Tandon

*Status:* [Ongoing]; project launched in April 2022



### F.2. Sustainable Industrialization and Innovation: Accelerating SDG-9 Achievement in South Asia

Among the United Nations 17 Sustainable Development Goals (SDGs), SDG-9 on Industry, Innovation, and Infrastructure is of particular interest to India and other South Asian countries that have not been able to harness the potential of industrialization for their development. This subregional study reviewed the status of achievement of specific targets under SDG-9 in the subregion to identify the key gaps across the countries; it identified the key challenges faced by the countries in the subregion in achieving SDG 9 targets; reviewed the key challenges created by the

Covid-19 pandemic and the geopolitical developments such as the Ukraine-Russian war; reviewed the key means of implementation needed for achieving the targets; and summarized the key issues and challenges for global, regional and subregional partnership towards accelerating the progress in respect of SDG-9. Finally, it concluded with the policy lessons for national, subregional, and international actions. The paper was presented by Dr Chatterjee at the South Asia SDG Forum held in Islamabad in December 2022. Prof Nagesh Kumar was invited to share some insights into India's industrial strategy at SDG-9 panels at the High-Level Political Forum held in July 2023 at the UN Headquarters. It is proposed to continue to remain engaged with the UN SDGs-9 process in view of its strong relevance for ISID's work.

*Research Team:* Prof Nagesh Kumar and Dr Shiladitya Chatterjee

*Status:* [ongoing]

## G. Spatial Dimensions of Industrial Development and Industrial Infrastructure

Industrialization can help to close the development gaps that some regions may be facing. Hence, policies are designed to facilitate the dispersal of the industry across the country especially in lesser developed parts through infrastructure development and through special incentives. Under this theme, ISID's work analyses the patterns of industrial development across the different parts and discern the trends in intra-regional disparities and inequalities. This analysis could provide important lessons for policy for balanced regional development.

### G.1. Trends in Inter-Regional Disparities in Indian Manufacturing

At the time of India's Independence, the country inherited severe structural and economic inadequacies resulting in nearly stalled industrial development. At that time, the national consensus was in favour of rapid industrialization of the economy which was seen as the key to economic development. The industrialization model also aimed to reduce divergence and achieve balanced regional growth. However, now we have come a long way in terms of diversification and production with a deliberate move towards mechanization of the manufacturing processes. The policy intention was not only to meet the internal demand, but also to make a mark in the export market. Moreover, there is evidence of inter-regional disparities in terms of growth, productivity, and employment in manufacturing across states. The present research study will examine these features for the period 2000-2018. An attempt will be made to compare the performance of both the organized and unorganized manufacturing sectors in the context of India's manufacturing landscape. In India, there is severe disparity in terms of manufacturing exports across states. Some states not only perform well in terms of manufacturing, but also do well in exports. This study will attempt to analyse the differences in performances with respect to state level exports keeping in mind that data problems exist and persist relating to data on state level exports.

*Research Team:* Dr Mahua Paul

*Collaboration:* ICSSR

*Status:* [Ongoing], project launched in 2022-23; time frame: 24 months.

### G.2. Regional Disparities across States in India

On many development parameters, India appears to be almost like a continent, with different states at vastly different stages of development. Underlying such stark differences are differences in the levels of per capita incomes, not in any small measure determined by the relative sectoral compositions in the sub-national economies. This study examines the sectoral compositions of different states and comments on the changes that have occurred over time. The divergence in regional incomes is seen to have risen sharply over the past two decades. It investigates the levels

of regional disparities across states in India and through decomposition, exercise investigates the relative contributions of the three sectors – primary, secondary and tertiary – to understand the drivers of the disparity witnessed. It also explores the role of infrastructure-physical and social in explaining the interstate patterns. The project output has been reported in two ISID Working Papers: #257 by Dr Shiladitya Chatterjee; and #254 by Dr Sangeeta Ghosh both issued in October-December quarter.

*Research Team:* Dr Shiladitya Chatterjee and Dr Sangeeta Ghosh

*Status:* [Ongoing], started in 2021-22; time frame: 12 months

### G.3. Exploring the Product Space Map of Indian Manufacturing Sector

As economies mature, the level of complexity in their respective economic activities tends to grow, enabled by increasing knowledge capacities and inter-connectedness of firms within and across the global markets. The framework of economic complexity helps in predicting economic growth by overcoming the challenges of the heterogenous dynamics of a country's economic growth. The essential role of a diversified set of inputs and their growing complexity needs to be incorporated in the study of the growth of economies to understand the tangible/intangible factors nested in the very nature of production. With this background, the proposed project would undertake to study the structure of India's manufacturing industries and project the future growth trajectory that India could pursue to break out of the low manufacturing sector trap using the methodology used in Hausmann et al. (2013) of constructing a product map for Indian manufacturing sector.

*Research Team:* Dr Ramaa Arun Kumar, Dr Clovis Freire (UNCTAD, Geneva)

*Status:* [Ongoing], project launched in 2021-22; time frame: 18 months.

## H. Sectoral Studies on Competitiveness of Indian Manufacturing

To catch up with the potential of manufacturing sector, the Government of India launched the Make in India programme in 2014-15. It was reinforced by the Aatmanirbhar Bharat Abhiyaan in 2020 to expedite economic recovery in the aftermath of the COVID pandemic. As a part of these initiatives, the production-linked incentive (PLI) scheme was launched in 2020 in two phases, covering 13 manufacturing sectors. This scheme aims to make Indian manufacturers globally competitive, attracting investments in cutting-edge technology areas, creating economies of scale, enhancing exports, reducing import dependence, and making India an integral part of the global supply chain. This work programme aims to analyze the challenges Indian enterprises in select manufacturing sectors are facing with respect to enhancing their domestic value addition and international competitiveness, including a review of PLI scheme where applicable, and make policy recommendations.

### H.1. Make in India: An Assessment of the Impact of the Programme on Six Manufacturing Sectors

The Make in India programme was launched in 2014 with the objective of increasing the share of the manufacturing sector in the GDP by facilitating investment, both domestic and foreign, into the industrial sector; fostering innovation; building best-in-class infrastructure; developing industrial clusters; and making India a hub of manufacturing, design, and innovation while giving due emphasis to decarbonisation for a sustainable socio-economic development. As part of this programme, the Government of India has taken various measures to encourage manufacturing and investment such as the Production-Linked Incentive (PLI) schemes, improving ease of doing business, reduction in corporate tax, FDI reforms, quality control measures, development of industrial clusters, local content requirements and public procurement orders. This study aims to analyse the impact of the

Make in India programme in six manufacturing sectors, i.e., pharmaceuticals, textiles and garments, steel, solar PV modules, fertilizers, and toys. It will make specific recommendations in each of the six sectors with a view to enhance the impact of the Make in India programme on the manufacturing sector of India. The project team consists of.

*Research Team:* Dr Reji K Joseph, Dr Anjali Tandon, Dr Beena Saraswathy, Dr Ramaa Arun Kumar, DrSangeeta Ghosh and Dr Seenaiiah Kale

*Collaboration:* ICSSR

*Status:* [Ongoing], project launched in September 2023; time frame: March 2024.

## H.2. Fostering Medical Devices Industry of India: Issues, Challenges and the Way Forward

ISID has been awarded a major research project focusing on the challenges faced in the development of the Medical Device Industry of India, by the Indian Council of Social Science Research (ICSSR) in March 2023. The medical device sector is highly critical for prevention. Yet over 70% of the medical device demand of the country are met through import. However, in recent past, India has taken several measures to promote medical device industry and promote competitiveness in the global market. This study aims to examine the structural characteristics of the Indian medical devices sector and the effectiveness of recent policy initiatives, especially the Modified-Special Incentive Scheme 2012 that provides capital subsidy, Medical Device Parks 2019, Production Linked Initiative scheme 2020 and National Medical Device Policy (draft) 2022, in improving the domestic manufacturing ecosystem. Lastly, it will examine the India's comparative advantage in the sector.

*Research Team:* Dr Shailender Kumar Hooda

*Collaboration:* ICSSR

*Status:* [Ongoing], project launched in March 2023; time frame: March 2025.

## H.3. Automobile Industry: Technology, Changing Product Lines and Policy Initiatives

The automobile industry in India is one of the sectors that experienced impressive growth in the post-liberalization period. A protected sector controlled by quantitative restrictions and high import tariffs during the import substitution regime was gradually opened to foreign players through liberalization policies. Huge pent-up domestic demand due to the growth of the middle-class segment and demographic change contributed to the expansion of the production capacity of the automobile industry in India. Besides the original equipment manufacturers, the auto component sector grew through policies of phased manufacturing and later by way of producing for MNCs operating in the domestic market and abroad. This sector entails deep backward and forward linkages extended to domestic and foreign value chains, attracts FDI, and faces global competition both in terms of scale effects and innovation. This study aims to delineate the different factors that contribute to the competitiveness of this sector in the context of domestic and global market and the way automotive manufacturers are coping with the challenges of growing market and emerging technologies. It also reviews the prospects for the PLI scheme for the auto sector. The output of the project has been reported in ISID Working Paper #255.

*Research Team:* Dr Satyaki Roy

*Status:* [Ongoing]; started in 2022-23; time frame: 12 months.

## II. Policy Dialogues, Public Lectures, and Research Seminars

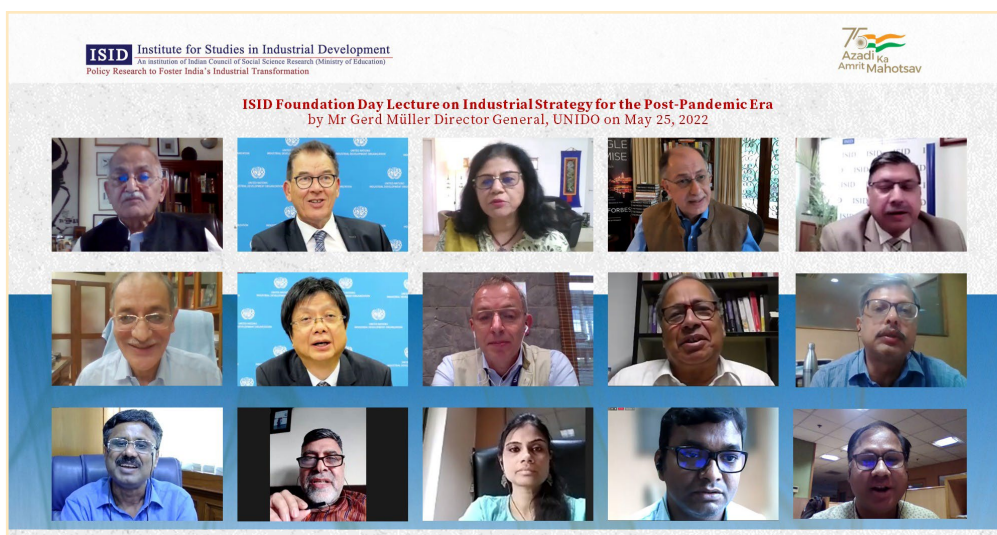
ISID organised a number of policy dialogues, webinars, and lectures to raise issues, and share perspectives on policy solutions as summarised below.

### Policy Dialogues

#### ISID Foundation Day Event

#### Industrial Strategy for the Post-Pandemic Era: Scaling-up the Inclusive and Sustainable Manufacturing Transformation

Mr Gerd Müller, Director-General, United Nations Industrial Development Organisation (UNIDO), Vienna, delivered the Keynote Lecture at the ISID Foundation Day Event on “Industrial Strategy for the Post-Pandemic Era: Scaling-up the Inclusive and Sustainable Manufacturing Transformation” on May 25, 2022. Speaking on the post-pandemic strategy, Mr Müller advocated for industrialisation as a means to end poverty, conduct fair trade, and achieve environmental sustainability. He emphasised on effective cooperation in terms of technology, business models, financing, and partnership to achieve ‘progress by innovation.’ The opening remarks were given by Mr S K Misra, Chairman, ISID and Prof V K Malhotra, Member Secretary, Indian Council of Social Science Research (ICSSR). Distinguished panellists were Ms Sumita Dawra, Additional Secretary, Department for Promotion of Industry and Internal Trade (DPIIT), Government of India and Dr Naushad Forbes Co-Chairman, Forbes Marshall and Member, ISID Board. The event was moderated by Prof Nagesh Kumar.



## ISID, BU-GDPC Special T20 Policy Roundtable Finance and Global Economic Governance for Green Transformation

ISID and the Boston University Global Development Policy Centre (BU-GDPC) organised a Special Policy Roundtable on Finance and Global Economic Governance for Green Transformation under the auspices of Think-20 under the India G-20 Presidency, at ISID New Delhi on March 2, 2023. The roundtable focused on the reforms required in the global financial architecture and international trade rules for facilitating green industrial transition. Ambassador Sujan R Chinoy, the Chairperson of T-20 and Director-General of Manohar Parrikar Institute for Defence Studies and Analyses (MP-IDSA), delivered the inaugural address. The first panel on financing for clean transition and global financial architecture, moderated by Prof. Nagesh Kumar, Director, ISID, comprised Prof Kevin Gallagher, Director, BU-GDPC; Prof Tetsushi Sonobe, Dean, ADB Institute, Tokyo; Dr Amar Bhattacharya, Senior Fellow, Brookings Institution, Washington; Ms Chandini Raina, Advisor, Ministry of Finance, Government of India; and Dr Laveesh Bhandari, Senior Fellow, Centre for Economic and Social Progress, New Delhi. The second panel on multilateral trade rules for green industrial transformation, moderated by Mr Kamal Malhotra, Non-Resident Senior Fellow, GDPC-BU comprised Prof Nagesh Kumar, Director ISID; Dr Kim Heung Chong, President, Korea Institute for International Economic Policy, Seoul; Prof Suma Athreye, School of Public Policy, IIT Delhi and ISID; and Dr Prerna Prabhakar, Council on Energy, Environment and Water, New Delhi. ISID Policy Brief #23-02 summarizes the key recommendations.



## ISID hosts the Knowledge Forum Conference on Technology and Economy

ISID hosted the 15<sup>th</sup> Annual Conference of the Forum for Global Knowledge Sharing (Knowledge Forum) on the theme 'Technology and Economy' jointly with the Indian Council of Social Science Research (ICSSR), on December 16-17, 2022 at the ISID campus. The conference had presentations of 18 papers covering foreign direct investment and platform economy; energy, environment and innovation studies; knowledge capital and innovation; econo-physics; Industry studies; R&D and Innovation; and Industry 4.0. Around 70 scholars, including paper presenters, session chairs and other experts participated in the conference. Introductory session was chaired by Prof N S Siddharthan, President Knowledge Forum and Hony Professor, Madras School of Economics. Prof Nagesh Kumar, Director, ISID gave the opening remarks followed by remarks from Dr Richa Sharma, Deputy Director and In-charge, RIC Division, ICSSR; Prof K Narayanan, India Value Fund Chair Professor, IIT Bombay and Honorary Secretary, Knowledge Forum. Prof Bino Paul, Pro Vice Chancellor, Tata Institute of Social Sciences and Treasurer, Knowledge Forum. A book Regional Economic Diversity:

Lessons from an Emergent India by Poornima Dore and K. Narayanan was launched. From ISID, Dr R Rijesh, Faculty, ISID coordinated the conference; Prof Nagesh Kumar chaired the session on Industry and Dr Sanjay Malik made a presentation in a session.



## ISID, UNU-WIDER Policy Roundtable Industrialisation, Inequalities, and Inclusive Development: Lessons from Global Experiences

ISID and United Nations University-World Institute for Development Economics Research (UNU-WIDER) organised a Policy Roundtable on Industrialisation, Inequalities, and Inclusive Development: Lessons from Global Experiences on February 24, 2023. The roundtable was organised to discuss the major findings of the book *The Developer's Dilemma* and draw policy lessons for India and other developing countries. The roundtable began with opening remarks by Prof Nagesh Kumar, Director, ISID and Prof Kunal Sen, Director, UNU-WIDER followed by two panel discussions. Session I focused on the global experiences on structural transformation and inequalities. It began with a presentation by Prof Kunal Sen, Director, UNU-WIDER, who shared the major findings of the book. The findings of the book were discussed by Prof Deepak Nayyar, Professor Emeritus, JNU and former VC, University of Delhi, and Dr Sudipto Mundle, Chairman, CDS Thiruvananthapuram. The Session was chaired by Mr Ajay Shankar, former Industry Secretary, Government of India.

Session II focused on the trajectory of structural transformation in India. The presentation made by Prof Saon Ray, Visiting Professor, ICRIER and Prof Sabyasachi Kar, IEG, was discussed by Ms Rupa Dutta,



Principal Adviser, DPIIT, Government of India; Prof. Jayan J Thomas, IIT Delhi, and Dr Satyaki Roy, Associate Professor, ISID. The session was chaired by Prof Nagesh Kumar, Director, ISID.

## Policy Roundtable

### Green Industrialisation in India: Potential, Challenges and Policies

ISID organised a Policy Roundtable on “Green Industrialisation in India: Potential, Challenges and Policies” on April 5, 2022. The presentations were made by Prof Kelly S Gallagher, Director, Climate Policy Lab, The Fletcher School, Tufts University and Dr E J Narassimhan, Postdoctoral Fellow, Harvard Kennedy School. The presentations were followed by a discussion among distinguished panellists comprising Dr Arunabha Ghosh, CEO, Council on Energy,



Environment and Water, Delhi; Dr Tilman Altenburg, German Development Institute, Bonn; Prof Ambuj Sagar, Head, School of Public Policy, Indian Institute of Technology (IIT) Delhi; and, Mr René Van Berkel, Director, Regional Office in India, United Nations Industrial Development Organisation (UNIDO). The event moderated by Prof Nagesh Kumar, was followed by a rich discussion.

## Policy Roundtable

### Mission-Oriented Industrial Policy Making for Successful Structural Transformation: Lessons for India

The Institute organized a policy roundtable on the topic “Avoiding Government Failure: Mission-oriented Industrial Policy Making for Successful Structural Transformation” based on research work by Prof Ludovico Alcorta, UNU/MERIT, and Adjunct Faculty, ISID on September 30, 2022. The presentation discusses the debate on mission-oriented industrial policy, the nature of industrial policy mission, conditions of success of industrial policy mission, key aspects of industrial policy design, and how to ensure effective policy implementation. It was followed by a rich discussion initiated by Mr Ajay Shankar, Former Industry



Secretary, Government of India, and Visiting Faculty, ISID; Prof R Nagraj, Centre for Development Studies, Trivandrum; and Dr Clovis Freire Jr, United Nations Conference on Trade and Development (UNCTAD), Geneva. The webinar was moderated by Prof Nagesh Kumar, Director, ISID.

### ISID hosts Policy Roundtable on Competition Policy and Climate Change

The Institute hosted the CUTS-ISID policy roundtable on “Competition Policy and Climate Change” on World Competition Day, December 5, 2022. The discussion centred around the challenges under the current competition regulation while incorporating environmental issues. It was suggested that competition regulation can complement environmental regulations by considering the environmental efforts



undertaken by the companies while assessing competition, when relevant cases arise. Various provisions existing in the current Competition Act allow for analysing this issue. Jyoti Jindger Bhanot, Head of Antitrust Division and Secretary, Competition Commission of India (CCI) made the special address. The other distinguished panellists included Dhanendra Kumar, Former Chairperson, CCI; Augustine Peter, former Member, CCI; Abha Yadav, Assistant Professor, National Law University, Delhi; and Dr Beena Saraswathy, Assistant Professor, ISID. Dr Arvind Mayaram, Former Finance Secretary of India and Chairman, CIRC and Dr Satyaki Roy, Associate Professor, ISID delivered welcome speech. Prof Kirit Parikh, Chairman, Integrated Research and Action for Development, chaired and moderated the event.

### CSD-ISID-IIC Panel Discussion India's Industrial Policy and Performance

The Institute in collaboration with the Council for Social Development (CSD) and India International Centre (IIC) organised a Panel Discussion on “India's Industrial Policy and Performance” on May 12, 2022. The discussion was based on Dr Nitya Nanda's book titled India's Industrial Policy and Performance: Growth, Competition and Competitiveness, published by Routledge India. Dr Rajiv Kumar,



former Vice Chairman of NITI Aayog, was the chief guest. The esteemed panellists in the discussion were Prof Muchkund Dubey, President, CSD; Prof Deepak Nayyar, Professor Emeritus, Jawaharlal Nehru University (JNU); and, Prof R Nagaraj, Visiting Professor, Centre for Developing Studies (CDS). The discussion was moderated by Prof Nagesh Kumar, Director, ISID.

## Panel Discussion

### Industry 4.0, Sustainability and Developing Countries: Opportunities and Challenges

ISID hosted a Panel Discussion on Industry 4.0, Sustainability and Developing Countries on December 17, 2022 at the Knowledge Forum Conference. The Panellists included Prof Nagesh Kumar of ISID; Prof. Suma Athreye of IIT Delhi and ISID, Prof Alakh Sharma, Director, Institute for Human Development, and Mr Ashwani Bhat, Vice President and Business Head, Smart Manufacturing. The panel discussed the key opportunities that the Industry 4.0 presents for developing countries as well as the challenges and threats especially in the future of work and policy responses needed to address them. Prof S R Hashim, former Chairman of UPSC chaired the Panel Discussion.



## Research Seminars

### Exports and Growth in Indian Manufacturing: An Econometric Analysis with a Focus on the Recent Experience

The Institute organised a Webinar on “Exports and Growth in Indian Manufacturing: An Econometric Analysis with a Focus on the Recent Experience” based on the recent research by Prof B N Golder, former faculty at the Institute of Economic Growth (IEG), Delhi on June 24, 2022. The main focus of the paper was to investigate the relationship between growth in exports and growth in manufacturing real gross value added analysed at the level of aggregate manufacturing using time-series data for 1987–88 to 2019–20 and then at the level of disaggregated three-digit industries using data for 69 industries for 2014–15 to 2019–20. Esteemed panellists were



Prof Amita Batra, Centre for South Asian Studies, JNU; Prof Manmohan Agarwal, formerly Dean, School of International Studies, JNU and Visiting Fellow at ISID; and Prof C Veeramani, Indira Gandhi Institute of Development Research (IGIDR), Mumbai. The webinar was moderated by Prof Nagesh Kumar.

## The Complementarity between the Formal and Informal Sub-Sectors of the Indian Industry

The Institute organized a webinar on “The Complementarity between the Formal and Informal Sub-Sectors of the Indian Industry” based on research by Dr Mehak Majeed, Assistant Professor, Islamic University of Science and Technology, Jammu and Kashmir; Mr Saeed Owais Mushtaq, Research Scholar, Department of Economics, University of Kashmir; and Mr Zahid Gulzar Rather, Assistant Professor, Department of Higher Education, Jammu and Kashmir on July 15, 2022. The focus of the study was to simultaneously understand the economic status of the formal and the informal sector(s) of the Indian economy at a point in time in terms of the efficiency using the stochastic frontier analysis. The presentation was made by Dr Mehak Majeed. The webinar was moderated by Mr. Ashish Kumar, Visiting Professor, ISID. Distinguished panellists included Dr Subhanil Chowdhury, Associate Professor, St. Xavier’s University, Kolkata; Dr Satyaki Roy, Associate Professor, ISID; and Dr Avinash Kumar, Assistant Professor, Centre for Informal Sector & Labour Studies, Jawaharlal Nehru University, New Delhi.



## Inter-State Disparities in Industrialisation in India



The Institute organized a webinar on “Inter-State Disparities in Industrialisation in India” on July 29, 2022. It included two presentations made by Dr Shiladitya Chatterjee, Visiting Senior Fellow, ISID on the topic ‘India’s Unbalanced Industrial Development: Possible Explanations for Inter-State Variations’ and Dr Sangeeta Ghosh, Assistant Professor, ISID on the topic ‘Examining Regional Disparities among States of India through Sectoral Compositions’. The research study by Dr Chatterjee attempts to discover the causes of inter-state variation in industrial development using the latest data from

2004-2019 while the study by Dr Ghosh examines the levels and movements of regional disparities across states of India through variations in per capita net state domestic products over a period of four decades. The presentations were followed by a rich discussion initiated by Prof Sudipto Mundle, Chairman, Centre for Development Studies (CDS), and Prof K V Ramaswamy, Indira Gandhi Institute of Development Research (IGIDR), Mumbai. The webinar was moderated by Prof Nagesh Kumar, Director, ISID.

## Public Policy and Inclusive Innovation: Lessons from Indian Experience

The Institute organized a webinar on “Public Policy and Inclusive Innovation: Lessons from Indian Experience” based on research by Dr Suma Athreye, Professor, Essex Business School; and Visiting Professor, ISID on August 26, 2022. The research highlights that innovations for the poor (inclusive innovation) are in short supply because of poor “market access” due to underdeveloped or missing markets in rural areas where most of the poor are located, and because of poor “technology access” due to the absence of domestic innovative capability and high costs of adapting technology products for the poor population. The presentation was followed by discussions initiated by Dr B N Satpathy, Office of the Principal Scientific Advisor, Government of India; Prof Rakesh Basant, Indian Institute of Management, Ahmedabad; and Prof Lakhwinder Singh, Punjabi University, Patiala. The webinar was moderated by Prof Nagesh Kumar, Director, ISID.



## Intra-Industry Trade in Manufactured Goods: A Case of India



The Institute organized a research seminar on “Intra-Industry Trade in Manufactured Goods: A Case of India” based on research work by Dr Manmohan Agarwal, Visiting Professor, ISID, and Dr Neha Betai, Academic Associate, Indian Institute of Management, Bangalore on September 16, 2022. The research explores the nature of trade between India and its top fifteen trading partners and tries to determine the factors that drive Intra-industry trade (IIT) in India.

It specifically focuses on manufactured products and divides them into ten categories based on their technological content. The presentation was followed by discussions initiated by Prof Parthapratim Pal, Indian Institute of Management, Calcutta; Prof C Veeramani, IGIDR, Mumbai; and Dr Isha Chawla, Consultant, ISID. The webinar was moderated by Prof Nagesh Kumar, Director, ISID.

## Industrial Policy and COVID-19 Vaccine Production: Policy Lessons from Experiences of India and the US

The Institute organised a webinar on “Industrial Policy and COVID-19 Vaccine Production: Policy Lessons from Experiences of India and the US” on October 28, 2022. Prof Sunil Mani, Director and RBI Chair Professor, Centre for Development Studies, Thiruvananthapuram, made the presentation on the response of the state



and the market in vaccine development in India and the USA. The choice of the countries was based respectively on leading manufacturers of low-cost vaccines, and systematic R&D on vaccine. The analysis made a strong case for state support to the market in developing crucial technologies and making them affordable so that a large section of the society can afford them. Prof Sudip Chaudhuri, IIM Calcutta; Dr Y Madhavi, Chief Scientist, CSIR NIScPR, and Dr Shailender Hooda, Associate Professor, ISID participated in the discussion. The webinar was chaired by Prof Nagesh Kumar, Director, ISID.

### Manufacturing Productivity and India's Economic Growth: An Analysis based on KLEMS Database



The institute organised a webinar on “Manufacturing Productivity and India's Economic Growth: An Analysis based on KLEMS Database” on November 18, 2022. Dr Abdul Azeez Erumban, Faculty of Economics and Business, University of Groningen, The Netherlands made a presentation supplemented by Prof. Bishwanath Golder, formerly at IEG, Delhi. The research work based on KLEMS data focuses on sources of India's economic growth in terms of industry origins, inputs, and productivity during 1994–2018,

comparing the pre- and post-global financial crisis (GFC). Manufacturing sector was found to be one of the main contributors to aggregate growth of the total factor productivity and gross value added in the post-GFC period in India. The results stressed the need for proactive policies to support agriculture, manufacturing, and market services sectors. Discussants of the webinar were Prof Suresh Babu, IIT Madras; Prof Dibyendu Maiti, Delhi School of Economics; and Dr R Rijesh, Assistant Professor, ISID. Prof Nagesh Kumar, Director, ISID moderated the webinar.

### Drivers of Investment in Indian Manufacturing

The Institute organised a webinar on “Drivers of Investment in Indian Manufacturing” based on research work of Dr Zico Dasgupta, Assistant Professor, Azim Premji University, Bengaluru on December 2, 2022. The study analysed the relationship between investment and exports through a Kaleckian model. The findings highlighted the possibility of export-induced growth process despite deterioration in trade balance. The panellists of the webinar were Dr Rohit Azad, Assistant Professor, CESP, JNU; Dr Jyotirmoy Bhattacharya, Associate Professor, Dr B R Ambedkar University Delhi; and Dr Santosh Kumar Das, Assistant Professor, ISID. Dr Satyaki Roy, Associate Professor, ISID, moderated the webinar.



### Global Value Chains and Productivity in Indian Manufacturing

ISID organised a webinar on Global Value Chains and Productivity in Indian Manufacturing on January 13, 2023. The presentation was made by Dr Karishma Banga, Research Fellow, Institute of



Development Studies, United Kingdom. The presentation was followed by panel discussion that included Prof Dev Nathan, Visiting Professor, Institute for Human Development, New Delhi; Dr Smitha Francis, Independent Consultant; and Dr Isha Chawla, Consultant, ISID. The seminar was moderated by Dr Reji Joseph, Associate Professor, ISID.

### COVID-19 Pandemic and Micro, Small and Medium Enterprises (MSMEs): Policy Response for Revival

ISID organised a webinar on COVID-19 Pandemic and Micro, Small and Medium Enterprises (MSMEs): Policy Response for Revival on February 17, 2023. Dr Minaketan Behera, Associate Professor, Jawaharlal Nehru University, made the presentation. The presentation was discussed by eminent panellists, Prof Keshab Das, Visiting Professor, Institute for Human Development, New Delhi; Prof M Vijayabaskar, Madras Institute for Development Studies, Chennai; and Dr Akhilesh Kumar Sharma, Assistant Professor, ISID. Prof Nagesh Kumar, Director, ISID, moderated the webinar.



### ISID Research Workshop

ISID organised a Research Workshop on March 31, 2023 for discussing findings of studies being conducted by faculty members. Nine research papers were presented by the faculty members. The workshop was chaired by Prof. Nagesh Kumar, Director, ISID. The presentations were commented upon by the participants including ISID Visiting Professors Prof Suma Athreye and Dr Shiladitya Chatterjee. Following research papers were presented in the workshop:

- India's Participation in Global Value Chains: Insights from Analytical Indicators and Way Forward (Isha Chawla)
- R&D Statistics of India: Why is it an Underestimate and How can it be made more Realistic? (Reji K Joseph)
- R&D behaviour and Outward Orientation of Indian Firms (K Seeneiah)
- Trade, Structural Change and Productivity in the Indian Manufacturing Sector (R Rijesh)
- Post -Crisis Trends in Inter-State Disparity in Organized Manufacturing (Mahua Paul)
- India's Strategy for Self-Reliance in Manufacturing Sector in the Post Pandemic Era: Trade Perspective (Ramaa Arun Kumar)
- Public Sector Performance in India and the Ongoing Contestation Between Efficiency and Equity (Satyaki Roy & Santosh Das)



- Impact of Pandemic on Firm Performance in India across Size and Sectors (Akhilesh K Sharma & Vanshika Jain)
- Understanding the Firm Transition across Size and Sectors in India (Akhilesh K Sharma & Tripti)

### III. Capacity Building Programmes

ISID organised a number capacity building and training activities for researchers and teachers of social sciences as summarised below.

#### Training Programmes

##### ICSSR-sponsored Ten-Day Research Methodology Programme in Social Sciences August 2-12, 2022

The Institute organized an ICSSR-sponsored Ten-Day Training Programme on Research Methodology in Social Sciences for young (MPhil/PhD/Post-Doctoral) scholars between August 2-12, 2022 through Online mode. The programme was organized to improve skills and the ability of participants to undertake research around emerging perspectives in social science research with a special focus on industrialization and development. It consisted of 30 interactive sessions delivered by eminent academicians around various aspects of research methodologies including quantitative and qualitative methods, large survey data analysis and interpretation, design of the questionnaire, empirical estimation techniques using relevant statistical software, discussion techniques of dissemination, proposal, and report writing.

As a token of respect to the commemorating 75 Years of Independence, 75 research scholars were selected from various Indian Universities/Colleges of the total screened 161 applications. The key resource persons of the program include Prof Nagesh Kumar, Director, ISID; Prof Amitabh Kundu, RIS; Prof Vivek Kumar, Jawaharlal Nehru University (JNU); Prof Manmohan Agarwal, Visiting Faculty, ISID; Prof Neeraj Hatekar, University of Mumbai; Prof H Ramachandran, Former Professor, Delhi School of Economics (DSE); Mr Ashish Kumar, Senior Fellow, NITI Aayog and Visiting Faculty, ISID; Prof Keshab Das, Gujarat Institute of Development Research; Prof Daljit Singh, Swami Shraddhand College,



University of Delhi; Prof K Varghese, JNU; Prof Ram Singh, DSE; Prof B N Goldar, Former Professor, Institute of Economic Growth, among others. The programme was coordinated by Dr Shailender Kumar, Associate Professor, ISID, and Dr Surya Tiwari, Assistant Professor, ISID.

## PhD Supervision

### Research Affiliation and Joint Supervision of PhD Students under ICSSR Institutional Fellowships

#### *Completed*

- Mr Satinder Singh from Central University of Punjab (CUP), Bathinda is pursuing PhD Programme under the joint-supervision of Dr Jajati Keshari Parida of Department of Economic Studies, CUP and Dr Shailender K Hooda of ISID on the topic “Skill Development and Youth Employability: A Comparative Study of Punjab & Haryana”.
- Mr R Prabhakaran from Muthurangam Government Arts College (MGAC) (Autonomous) is pursuing PhD Programme under the joint-supervision of Dr V Sivashankar of MGAC and Dr Satyaki Roy of ISID on the topic “Workers in Special Economic Zones (SEZs) in Tamil Nadu”.
- Ms Smita Dikshit from University of Allahabad is pursuing PhD under the joint-supervision of Dr Akhilesh Chandra Pandey of University of Allahabad and Dr Santosh Kumar Das of ISID on the topic “Impact of Media Convergence on Socio-Economic Status and Lifestyle”.
- Ms Sarika Shantaram Moon from TISS, Hyderabad is pursuing PhD under the joint-supervision of Dr Poulomi Bhattacharya of TISS Hyderabad and Dr Anjali Tandon of ISID on the topic “Determinants of Job Performance and Career Growth of Women Employees in the New Economy: A Study of Information and Communication Technology (ICT) Sector in Maharashtra”.
- Ms Jasna P T from The Gandhigram Rural Institute (Deemed to be University), Gandhigram, Tamil Nadu did her PhD under the joint-supervision of Dr S Nehru of The Gandhigram Rural Institute and Dr Beena Saraswathy of ISID on the topic “Technological Change and Sustainable Livelihood of Small-Scale Fishers in Kerala: Impact and Mitigating Mechanism”.

#### *Ongoing*

- Mr Mohit Kumar Gupta from Centre for the Study of Law and Governance, JNU is pursuing PhD under the joint-supervision of Prof Jaivir Singh of JNU and Dr Swati Verma of ISID on the topic “Investments, Taxation and Corporate Governance: Family Ownership and Control of Business Groups in India”.

## IV. ISID Databases, e-Resources and Documentation

### ISID Databases

ISID has been providing access to its online databases and other e-resources through UGC-INFLIBNET Digital Library Consortium since 2008–09, now known as e-ShodhSindhu, a consortium for Higher Education Electronic Resources initiated by the Ministry of Education, Government of India. A large number of central, state, and deemed universities; centrally funded technical institutions; AICTE institutions; Indian Institutes of Technology (IITs), Indian Institutes of Management (IIMs), and National Institutes of Technology (NITs); inter-university centres (IUCs); national law schools/universities; and other academic institutions are accessing the databases. The information and data provided is widely disseminated and its popularity can be seen in terms of growing number of its registered users. The access covers two ISID databases as follows:

#### ISID Press Clippings Database

A substantial amount of information on the corporate sector as well as on other economic trends, social and political events, and analysis and comments is regularly reported in newspapers. Realising this potential, the Institute has been maintaining an online computerised newspaper clipping index which contains images on wide-ranging subjects and is referred to as the Press Clippings Index.

The index covers major English language newspapers, including leading financial dailies. Selected clippings are stored in the form of digital images under sixty broad subject heads. Press clippings from the year 2000 onward are now available online for registered users. The image retrieval system developed at the Institute helps users to search, identify, and view the clippings at the click of a button. At present the database contains over 22,12,560 digital clipping images.

#### ISID Database of Indian Social Science Journals

The ISID Online Index to Indian Social Science Journals offers a unique facility to retrieve the desired information through keyword search to the users. The coverage of the database has since been improved by adding a few new social science journals. Presently, the Online Database Index covers 262 Indian social science journals covering different disciplines of economics, political science, public administration, sociology, social anthropology, business management, finance, geography, social work, health, and education, etc. At present, the database contains 2,43,502 article indexes. The indices of articles of 10 new journals were added to the database during this year: (1) Aarthika Charche – Journal of Economics & Governance; (2) FOCUS: Journal of International Business; (3) Humanities and Social Science Studies (HSSS); (4) Indian Journal of Finance; (5) Indian Studies Review; (6) Journal of Banking and Insurance Law; (7) Journal of Social Work and Social Development; (8) Journal of South Asian Development; (9) Public Affairs and Governance; and (10) Vision: Journal of Indian Taxation.

#### Industry Matters

Industry Matters – a weekly news update series: It provides latest news on Indian Economy, Industry and Policy compiled from various newspapers and e-resources. Industry Matters service started with the weekly inaugural issue on July 2, 2022 is issued on every Friday evening.

## e-Resources

The Institute has access to several e-resources as follows:

- IMF e-library service covering (i) International Financial Statistics, (ii) Balance of Payments Statistics, (iii) Direction of Trade Statistics, (iv) Government Finance Statistics, and (v) Trade and Investment.
- Through ICSSR-NASSDOC, ISID has access to e-Databases: CMIE – ProwessIQ; Full text e-journals: (i) EconLit, and (ii) JSTOR.
- Centre for Monitoring Indian Economy's (CMIE) Economic Outlook.
- Sage India – 14 full text e-journals from Sage India.
- EPWRF's India Time Series Database containing 27 Modules.
- Database on Towns and Cities in India.
- Annual Survey of Industries (ASI) Unit level (Non-Panel Data) for the period 1998–99 to 2017–18.
- Annual Survey of Industries (ASI) Unit level (Panel Data) for the period 1998–99 to 2015–16.
- NSSO (Unit level data): Employment and Un-employment, Consumer Expenditure, Participation in Education, Unorganised Manufacturing, Trade, Non-directory Trade Establishments & Own Account Trading, Informal Nonagricultural Enterprises, Unorganised Services excl. Trade & Finance, etc.

## Documentation Services

The ISID Library also provides to the users Reference and bibliographic services, Inter-library loans through its inter-library network, Current Awareness Services, Web OPAC (Online Public Access Catalogue) service, and Document Delivery Services. ISID library is an active member of DELNET and has been making considerable use of the network's facilities for inter-library loan, acquiring references, document delivery services, and ascertaining the availability of documents.

## ISID on Social Media

To disseminate its research findings and for policy advocacy, ISID has become active on social media outlets since May 2021. Its tweeter handle @ISID\_India has attracted 1,48,192 impressions. ISID's YouTube channel, where all the key policy roundtables organized by ISID have been broadcast, has had 8,95,731 impressions.

## ISID Website

The ISID website (<https://isid.org.in>) is a repository of the Institute's work, activities, and publications. It also provides access to ISID's databases. The website has been migrated to a more effective and secure DNS provider. It was revamped in 2022-23 to update the content and look. It has had 7,47,414 impressions between April 2022 to March 2023.



## V. ISID Institutional Collaborations

In 2022-23, ISID collaborated with a number of organizations, for research partnerships and for organizing joint policy roundtables. These include UNCTAD, UNIDO, Boston University Global Development Policy Centre, the Climate Policy Lab, Tufts university; UNESCAP, United Nations University World Institute for Development Economics Research (UNU/WIDER), CUTS-International, Observer Research Foundation, Centre for Development Studies, Trivandrum; INFLIBNET, among other. The institute signed MoUs with IIM-Sambalpur and the Faculty of Applied Social Sciences and Humanities (FASSH), University of Delhi. ISID has also planned to launch a PhD programme on Economics and Public Policy in collaboration with Jawaharlal Nehru University in 2024.

### Indian Institute of Management, Sambalpur

Institute entered into a Memorandum of Understanding (MoU) with Indian Institute of Management (IIM), Sambalpur. The MoU was signed on February 24, 2023 at the premises by Prof Nagesh Kumar, Director, ISID and Dr Mahadeo Jaiswal, Director, IIM Sambalpur. The overall aim of the partnership is for joint policy research and capacity-building activities including through an incubation centre to promote the innovation ecosystem in the country. IIM Sambalpur plans to conduct short as well as long-duration executive and other programs in management from the ISID campus, drawing upon the ISID infrastructure as well as faculty.



### Faculty of Applied Social Sciences and Humanities (FASSH), University of Delhi



The Institute has entered into a collaborative arrangement with the Faculty of Applied Social Sciences and Humanities (FASSH), University of Delhi. The primary objective is to promote research cooperation through joint activities. The MOU was signed on November 24, 2022 at the Institute premises by Prof Nagesh Kumar, Director ISID and Prof C. P Gupta, Dean, FASSH, in the presence of the faculty and research students of the FASSH; and faculty members of ISID. The meeting also discussed the collaboration opportunities between the two partners to tap the synergies

in the research interests of their faculty members. A committee comprising senior faculty members of the partners has been set up to oversee the implementation of the MoU. The first Meeting of the MoU Coordination Committee took place on December 13, 2022.

# VI. Publications

## 1. Books/Reports

- *Financing India's Industrial Transformation: Some Policy Lessons from International and National Experiences*, by Nagesh Kumar, G A Tadas & Santosh Kumar Das, ISID, New Delhi.
- *Strategy for Leveraging ASEAN FTA and Trade Potential with the Middle East Countries for Pharma Sector in India*, by Reji K Joseph & Dinesh Kumar, ISID, New Delhi.
- *Spatial Dynamics of Manufacturing Landscape in India – A District Level Comparative Analysis of Pre- and Post-Reform Contexts*, by Surya Tewari, ISID, New Delhi.
- *Labour and Capital Use in Indian Manufacturing – Structural Aspects* by Anjali Tandon, Sustainable Industrial Development series, Routledge (Forthcoming).



## 2. Journal Articles and Book Chapters

- Nagesh Kumar (2022), Indian Economy@75: Achievements, Gaps and Aspirations for the Indian Centenary, *The Indian Economic Journal*, 70(3) September 2022: 385-405.
- Nagesh Kumar (2023) Multiple Economic Crises and the Retreat of Globalisation, *New Business Age*, Kathmandu, January 9, 2023
- Nagesh Kumar (2022), Foreign Direct and Portfolio Investment Flows and Development: A Perspective on Indian Experience, in Uma Kapila ed. *Indian Economy Since Independence*, 33<sup>rd</sup> Ed., Academic Foundation, 2022, 965-86 (revised and updated version).
- Nagesh Kumar (2022), Economic and Social Achievements of India and a Vision for 2047, in Arvind Kumar ed. *India@75 and Beyond*, New Delhi: India Water Foundation: 135-42.
- Akhilesh Kumar Sharma and Atul Sarma (2022), "Legitimate versus Distortionary Freebies", *Economic & Political Weekly*, Vol. LVII, No 43, October 22, pp. 17-20.
- Sushil Kumar Rai and Akhilesh Kumar Sharma (2022), "Do Lagged Terms Affect Exchange Rate Volatility in India? An Analysis Using ARIMA Model", *Indian Journal of Finance*, Vol. 16, Issue 10 (October), pp. 8-23.
- Sushil K Rai and Akhilesh K Sharma (2023), "Forecasting Exchange Rate Volatility in India Under Univariate and Multivariate Analysis", *Bulletin of Monetary Economics and Banking*, Vol. 26 No. 1, 2023, pp. 179 - 194.
- Anjali Tandon (2022), "Inter-industry wage differentials in Indian manufacturing: Convergence or Persistence?" *Economic & Political Weekly*, Special Article, Vol. LVII, No.38, September 17, pp. 39-45.
- Anjali Tandon (2022), "Linkages and changing factor use in Indian economy: Implications of emerging trade pattern," *Journal of Social and Economic Development*, Vol. 24, Issue 1, published online June 30, Springer.
- Dinesh Kumar (2022), Developing Regional Value Chains in the Textile and Garment Sector of

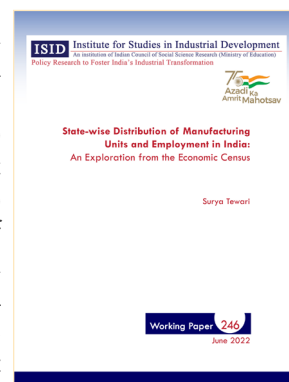
South Asia, *South and South-West Asia Development Papers* 22-05, March.

- Praveen Jha and Dinesh Kumar (2022), "India's Automobile and Textile Industries in Global Value Networks: An Assessment," in Christina Teipen et al. (Eds), *Economic and Social Upgrading in Global Value Chains*, Chapter 8, Springer, pp. 197–225.
- Isha Chawla (2022), "Benefitting from Investment Abroad? Evidence from Indian Manufacturing", *Asia and the Global Economy*, Vol. 2, Issue 1, January 2022, pp. 1-18.
- R Rijesh (2023), "Economic Liberalisation, Structural Change and Productivity Growth in Indian Organised Manufacturing Sector, 1991–2016", *The Indian Journal of Labour Economics*, Springer, March 28.
- Sangeeta Ghosh (2022), "Small No More: Beyond the Covid Relief Package for MSMEs," in *State of Finance in India Report 2021-22*, Centre for Financial Accountability, Economic Research Foundation and Focus on Global South, Yoda Press, pp 39-43.
- Sangeeta Ghosh (2022), "Formalising the Informal through GST: Evidence from a Survey of MSMEs," *Review of Development and Change*, Vol. 27, No 2, pp 150-169.
- Santosh Kumar Das (2022), "NPA Resolution and Bad Bank," *Economic & Political Weekly*, Vol. 57, No. 20, May, pp. 13–15.
- Satyaki Roy (2022), "From Export Pessimism to Global Integration: Need for a Calibrated Engagement with the Global Market", Book Review of *International Trade and Investment Behaviour of Firms* by Murali Patibandla, Oxford University Press, *Economic & Political Weekly*, Vol. LVII, No.31, July 30, pp. 33-35.
- Santosh K Das (2023), "Finance and Populism" in Chacko Chennattuserry, J., Deshpande, M., Hong, P. (eds), *Encyclopedia of New Populism and Responses in the 21<sup>st</sup> Century*, Springer, Singapore.
- Seema Goyal (2022), "Role and Impact of Visual Imagery During Crisis", in A. Singh (Eds.), *International Handbook of Disaster Research*, Springer, Singapore, September, pp. 1-8.
- Shailender Kumar Hooda (2022), "Private Sector in the Healthcare Market in India," in K. B. Saxena (Ed.) *Private Sector Participation in Public Services-Health*, Aakar Books, Delhi, India, pp.101-130.
- Vanshika Jain (2023), Book Review - *The Comprehensive Asia Development Plan 3.0 (CADP 3.0): Towards an Integrated, Innovative, Inclusive, and Sustainable Economy*. Economic Research Institute for ASEAN and East Asia (ERIA): Jakarta, 2022, 582 pp., ISBN: 978-6025-460-42-5. *Journal of Asian Economic Integration*, 5(1), 85–89.

### 3. Working Papers

#### State-wise Distribution of Manufacturing Units and Employment in India: An Exploration from the Economic Census, Surya Tewari, WP246, June 2022

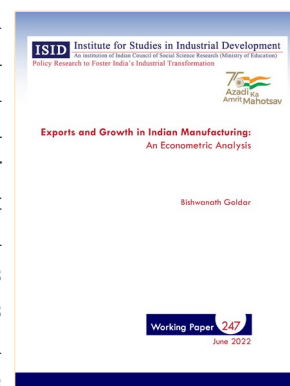
The paper focuses on changing manufacturing landscape of India between pre and post economic reform periods. As pre-economic reform period was characterised by emphasis on balanced regional development, the development of manufacturing industries took place in some of the so called industrially backward regions of the country. However, with economic reforms, in order to take advantage of global capital, focus has shifted to competitive edge. This has repercussion on both, spatial organisation of manufacturing industries as well as associated factors of production, such as labour. The paper focuses on whether or not manufacturing units and workers have experienced any spatial change in pre and post reform times using economic census three (1990) and six (2013). The results do not depict



concentration of units and workers at the state level as the Gini values are small. Moreover, between 1990 and 2013, there is stability in the character of manufacturing in the country. Location quotient also depicts the same. For manufacturing units as well as workers, the level of specialisation is same in states as at national level with position of states roughly the same in both the census. However, at the level of NIC 2-digit and technology groups (low, medium-low, and high-medium), concentration is observed. The Gini values are noted above 0.40 in manufacturing groups such as beverages, tobacco, pharmaceuticals, and those related to engineering (NIC 26 to 30). In general, concentration values have declined across manufacturing groups. With respect to technology groups, the analysis shows an increase in Gini coefficient from low to high technologies. Across all technology groups, majority of the states depict low to moderately high level of specialisation.

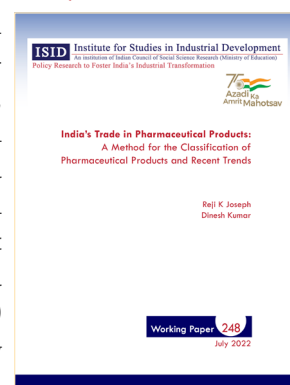
### Exports and Growth in Indian Manufacturing: An Econometric Analysis, Biswanath Goldar, WP247, June 2022

The paper investigates econometrically the relationship between the growth in exports and the growth in the manufacturing sector real gross value added (GVA) in India. An analysis of this relationship is undertaken first at the level of aggregate manufacturing using time-series data for 1987-88 to 2019-20 and then at the level of disaggregated three-digit industries using panel data for 2014-15 to 2019-20. The analysis presented in the paper reveals a significant positive relationship between the growth in exports and the growth in real GVA of manufacturing. From the results of the empirical analysis, it appears that for the low-growth and medium-growth industries, increases in exports make an important contribution to their growth, but for the high-growth industries, there are probably other forceful drivers of growth and exports play a relatively less important role. An important finding of the study is that a greater prevalence of R&D activities and foreign equity participation among medium and large industrial enterprises in India enhances the pace of industrial growth in India, and so does the adoption of ISO 14000 series certification and the associated implementation of environmental management systems among such industrial enterprises.



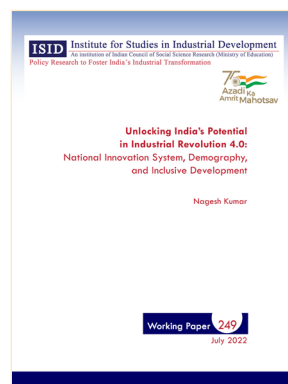
### India's Trade in Pharmaceutical Products: A Method for the Classification of Pharmaceutical Products and Recent Trends, Reji K. Joseph, WP248, July 2022

It has been challenging for researchers to identify the appropriate classification for the identification of pharmaceutical products for undertaking cross-country comparisons in trade as various agencies, international and national, follow different classifications for the identification of pharmaceutical products. This paper proposes a new method, based on International Standard Industrial Classification (ISIC), for the identification of pharmaceutical products and categorisation of pharmaceutical products based on global best practices. The pharmaceutical products identified based on this new method of classification cover HS six-digit products from HS chapters 29 and 30 and captures pharmaceutical products more comprehensively. This study also provides a brief analysis of the trends in India's trade in pharmaceutical products based on new method.



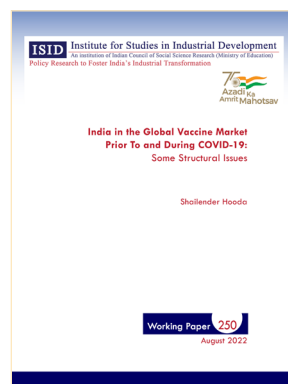
## Unlocking India's Potential in Industrial Revolution 4.0: National Innovation System, Demography, and Inclusive Development, Nagesh Kumar, WP249, July 2022

Industrial Revolution 4.0 (IR4.0) has a lot of opportunities as well as important challenges for developing countries such as India. This article takes a stock of the opportunities that India has in harnessing IR4.0 for her inclusive development and the challenges that the new revolution presents before the country. It argues that with her extant capabilities in ICT software development, a youthful demography and skill development potential, India can be at the centre of IR4.0 and become the world's skill or talent capital besides leveraging the potential of the new technologies for closing its own development gaps. It also summarizes some policy lessons for tapping the potential of India in IR4.0 that include, among others, the need to quickly transform the educational system to make it fit-for-purpose for the digital revolution, step up the enterprise-level innovative activity, facilitate the adoption of relevant technologies by MSMEs, closing the digital divide, and evolving a new architecture for social protection designed to protect displaced workers, as well as gig economy workers.



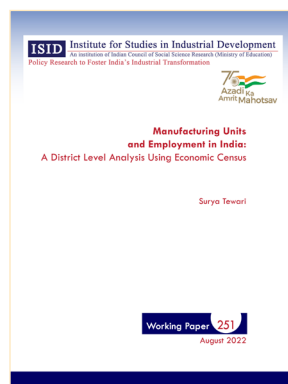
## India in the Global Vaccine Market Prior To and During COVID-19: Some Structural Issues, Shailender Kumar, WP250, August 2022

India has a century long legacy in vaccine development and manufacturing. The indigenous manufacturers have provided a commendable service to the national immunisation programme and made the country self-sufficient in basic vaccines. India currently is a leading exporter of vaccines to the developing world. However, overtime, the country also became import dependent on some newer generation and basic vaccines in which domestic supply was inadequate. During the Coronavirus outbreak, India gained the status of fastest vaccinating country in the world in administering more than two billion Covid-vaccination doses through the indigenously produced vaccines and strengthened the global fight against the Coronavirus by supplying vaccines to more than 100 countries. Expectedly India prioritised vaccinating its own population over exporting the vaccines since the spring of 2021, restricting exports. China exploited this opportunity by ramping up Covid-vaccine exports. However, of late, some concerns have been raised against the efficacy and safety of Chinese vaccines. India, being a well-trusted country at WHO Prequalification platform, has a great opportunity to gain much around existing, newer generation and combination vaccines as well as those beyond Covid-19 by addressing some structural issues highlighted in the paper.



## Manufacturing Units and Employment in India: A District Level Analysis Using Economic Census, Surya Tewari, WP251, August 2022

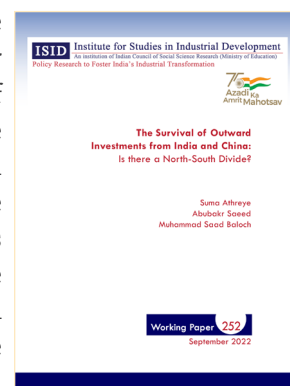
District as a unit of planning and development was understood long back in India. The current emphasis on One District One Product is a reflection of importance attributed to districts. Manufacturing development is the core of this strategy. The untapped potential of manufacturing makes such strategy imminent. The first step in that direction should be to understand where each state stand with respect to manufacturing and how it is changing over time. The analysis is made with respect to manufacturing units and workers using



third (1990) and sixth (2013) economic census. Gini coefficient, location quotient and Local Moran's I is computed. Gini shows comparatively higher levels of intra-state concentration in states like Gujarat, Tamil Nadu, Jharkhand, Madhya Pradesh, and Arunachal Pradesh. Himachal Pradesh, Uttarakhand, and Haryana depict the same with respect to workers. In general, across all states there are increasing levels of concentration from 1990 to 2013. At NIC 2-digit high intra-state disparities are basically associated with high technology manufacturing. As far as specialisation is concerned majority of the districts depict lower values of location quotient. Local Moran's I show existence of few clusters in the country with their position roughly remains the same in both 1990 and 2013. In Delhi NCR clustering with respect to workers is found to have intensified during the time period considered.

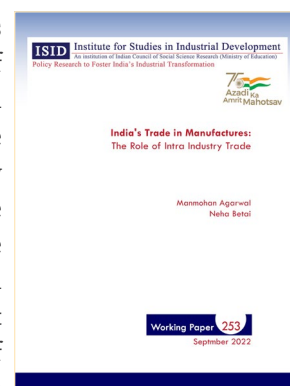
### The Survival of Outward Investments from India and China: Is there a North-South Divide? Suma Athreye, Abubakr Saeed, Muhammad Saad Baloch, WP252, September 2022

Multinationals from India and China courted the economies of both the North and the South and they had different advantages in doing so. After more than two decades of successful internationalization, can the survival of Indian and Chinese investments reveal the factors that are associated with the success of EMNC investments in the North and the South? This is the main question we explore in this paper. We find that there is a North-South divide in the survival of Indian and Chinese outward investments. Investments in the North are subject to more intense competitive pressure due to the stronger technological and managerial abilities of domestic firms and survival is markedly weaker there. In Southern locations, where Indian and Chinese firms enjoy competitive advantages and industrial leadership in several areas, they also have better rates of survival. Apart from highlighting the role of relative (to host country firms) firm-specific advantages in explaining survival in the North and South, we also find that a larger diaspora in Southern locations is associated with greater survival.



### India's Trade in Manufactures: The Role of Intra Industry Trade, Manmohan Agarwal & Neha Betai, WP253, September 2022

Since the second world war, it was observed that trade between two countries could not be explained entirely by the classical and neoclassical models of trade that emphasised inter-industry trade. It was found that trade between countries was increasingly dominated by Intra-industry trade (IIT), where countries exchanged products that fell in the same sectors. In this paper, we try to determine the IIT between India and its top fifteen trading partners. Unlike other papers, we do not simply calculate aggregate IIT for all merchandise trade. Instead, we focus on manufactured products and divide them into ten categories based on their technological content. Our analysis reveals that while India's IIT has increased in recent years, it is not the dominant form of trade between India and its most important partners. When we look at the factors that determine IIT, we find that India's comparative advantage and trade agreements play a positive and significant role in increasing IIT. Lastly, an analysis of the category Medium Technology Manufactures - Process reveals that this sector has potential for higher IIT and gains from it if India can enhance its efficiency and increase its size.



## Examining Regional Disparities among States of India through Sectoral Compositions, Sangeeta Ghosh, WP254, October 2022

This paper examines the levels and movements of regional disparities across states of India through variations in per capita net state domestic products (pcnsdp) over a period of four decades. We find that disparities have widened across states for the period under study, with sharper rises in the post reforms period particularly from the 2000s onwards. We examine the growth of pcnsdp of states in various time periods, including the high, low, and intermediate periods of growth for the Indian economy in the post-reform period. We do not find any evidence of converge in the growth rates of states, even as most states have performed better in terms of their growth in per capita incomes in the post-reform period. We examine the relative compositions of the state economies vis-à-vis India to shed light on the disparities witnessed and their own growth in per capita incomes. We find that the states that have seen lower growth rates in their pcnsdps are also states whose economies have gained relative shares in their primary sectors and have lost relative shares in their secondary or tertiary sectors over the years vis-à-vis India. We perform a decomposition exercise to investigate the relative contributions of the three sectors – primary, secondary and tertiary – to understand the drivers of the disparity witnessed. We find that the relevance of the tertiary and the secondary sectors has increased over time in explaining the disparities.



## Growth Slowdown in the Automobile Industry in India: Dwindling Middle Class Demand or Changing Consumption Pattern? Satyaki Roy, WP255, November 2022

Automobile industry in India recorded high growth in the post-liberalisation period primarily due to the growing middle class demand and the release of the pent up demand for personal vehicles. This growth was also facilitated by relocation of production facilities to the developing countries as the vehicle penetration gradually stagnated in the advanced countries while India is yet to reach the explosive stage in vehicular penetration. However, this paper shows that the growth of value added and investment in automobile industry declined in the second decade of this millennium and the slowdown was primarily triggered by the financial crisis which the sector could hardly overcome rather the decline intensified due to the pandemic. Based on firm level analyses the sector shows a negative balance of payment throughout the past two decades and the export growth declined since the end of the first decade while dependence on imports increased both in terms of rising ratio of imported inputs to indigenous inputs and also on the basis of rising gap between expenditure on imported technology and in-house research and development. Interestingly the wide gap between the growth of sales in personal vehicles and that of per capita income is coming to a close which might be indicating a slowing down of middle class income growth or a change in behaviour in the consumption of transport services.



## Status and Scope of Industrial Development in Aspirational Districts of India, Surya Tewari, WP256, November 2022

Industrial backwardness had been one of the main planks to define backwardness in the country. Over time many new parameters kept on adding and as of now the backward districts renamed as aspirational are defined in terms of poverty, education, health and nutrition, and basic infrastructure.



These indicators have indirect link with industry through increase in productivity and employability. Using economic census three and six paper analyses manufacturing units and workers in these districts. Results show decline in the growth of manufacturing workers in many of these districts between 1990 and 2013. This may be indicative of outmigration as revealed from population census data. The analysis further shows low technology manufacturing to be predominant in these districts. As there is a focus on manufacturing development in these districts through various programmes and schemes it is important that manufacturing should particularly be monitored in aspirational district programme parameters.

### India's Unbalanced Industrial Development: Possible Explanations for Inter-State Variations, Shiladitya Chatterjee, WP257, December 2022

Several theories have been advanced over the years about the causes of India's general industrial malaise. Amongst them are state level issues which if properly identified could provide solutions to spur overall industrial development in India. Indian states and union territories exhibit a very wide range of industrial attainments and this paper attempts to identify the state level problems which are holding some states behind despite considerable potential to grow industrially. These include infrastructure, human development and policy and institutional environment for industrial development. The paper suggests that the problems of the major subsectors of industry namely manufacturing and construction need to be looked at separately as well as industry by size classes with particular attention to MSMEs; that industrial policy on MSMEs be guided by better information collection through surveys; and that industrial development requires effort at both the state and central levels and better cooperation between them.



### Vaccine Manufacturing Industry of India: Structure, Size, and Competitiveness, Shailender Kumar, WP258, December 2022

Vaccine manufacturing in India has historically been centered around producing a wide-variety of conventional vaccines that made the country self-sufficient as well as a net exporter of basic vaccines. However, overtime, other safe and efficacious vaccines that follow technologically more advanced manufacturing processes became available in the market against some high burdened diseases, their increased uptake made the country import dependent. In the second half of 2000s when manufacturing capacity of public sector was being dismantled, India became a big market for imported vaccines (e.g., import penetration rate increased from 10.6% to 62.5% between 2007-08 to 2013-14) since then and export got affected adversely. Despite such repercussions, India continued to enjoy comparative advantage ( $RCA > 1$ ) and trade surplus due to high acceptability of Indian vaccines in developing countries market. High R&D intensity and active State support are critical for making the country self-reliant and self-sufficient in vaccine development and manufacturing, and addressing future health challenges like the Coronavirus.



### Competitive Manufacturing as a Driver of India's Next Economic Transformation: Opportunities, Potential, and Policies, Nagesh Kumar, WP259, December 2022

A manufacturing-led transformation is imperative for India to address the challenge of employment creation, reviving growth, and sustainable management of the balance of payments and contribute to

India's Vision 2047. The manufacturing sector can be boosted by tapping the opportunities for making for India and for global markets and exploiting the potential of new digital and green industries. India's talent pool and rising domestic demand and restructuring of global value chains on a China+1 basis provide opportunities for India to emerge as a manufacturing hub. However, manufacturing development does not happen in a vacuum, and governments around the world have intervened extensively through several strategic interventions to foster the manufacturing sector or the so-called industrial policy. Against that backdrop, this essay explores the potential and opportunities for the next phase of India's economic transformation led by manufacturing. It also summarizes key policy lessons from the development experiences of industrialized and East Asian newly industrialized countries regarding the strategic interventions for fostering the manufacturing sector.



### The Complementarity between the Formal and Informal Sub-Sectors of the Indian Industry, Mehak Majeed, Saeed Owais Mushtaq, & Zahid Gulzar Rather, WP260, January 2023

Indian economy is categorized as one of the fastest growing advancing economy. Much of the growth has been attributed to the industrialization process post-independence especially after economic reforms of 1990s. However the formal industrial sector has been unable to absorb the growing labor force and thus majority of labor force have been forced to derive and find self-employment options in the informal sector. The current study is an attempt to analyze the Indian industry in light of this formal and informal bifurcation. Using the Stochastic Frontier Analysis, the production functions are validated and technical efficiency (TE) predicted. The study reveals that the formal industrial sector in India is relatively efficient. However, the informal sector, apart from absorbing higher number of labor force, is performing better than dictated by hitherto classic theoretic predictions. The study also analyzes the factors influencing the TE of the formal and informal sectors. The study concludes that the formal and informal sectors mutually reinforce the industrial growth in India, have positive linkages and contribute efficaciously to economic outcomes like output and employment.



### For Whom the Bell Tolls: Inclusive Innovation and Innovation Policy, Suma Athreye & Abhijit Sengupta, WP261, January 2023

This paper argues that innovations for the poor (inclusive innovation) are in short supply because of poor "market access" due to underdeveloped or missing markets in rural areas where most of the poor are located, and because of poor "technology access" due to the absence of domestic innovative capability and high costs of adapting technology products for poor populations. Based on a review of 58 recent cases of inclusive innovation, which have been discussed in the media, in policy circles and in the academic literature, we identify the agency and areas where inclusive innovations have been successful and areas where significant gaps exist. Our findings reveal that domestic private firms, MNEs and other non-state actors have played a significant role in introducing pro-poor innovations but have mostly concentrated their effort in areas of low market access and/or high technology access. Inclusive innovation efforts are scarce in situations where technology access is low, although multilateral charities and agencies are targeting such areas. Policy support for inclusive innovation in India has taken



the form of finance provision but this should be complemented by more R&D in public sector bodies and public investments in marketing infrastructure. In this sense, the constraints to inclusive innovation mirror the overall situation regarding innovation in India.

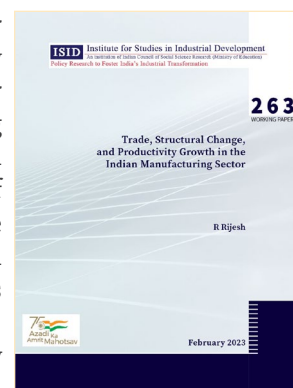
### Adoption of Industry 4.0 Technologies in India's Start-up Ecosystem, Sanjaya Kumar Malik, WP262, February 2023

Industry 4.0 (IR4)—a fusion of old and emerging technologies (e.g., AI, IoT, robotics, 3D printing, blockchain and so on)—is increasingly narrowing down the boundary of physical and digital world. The effective adoption of IR4 technologies can bring about a sea change in productivity growth, facilitate efficient and sustainable utilisation of depletable resources, enable predictive maintenance and can thus bring significant progress to our lives. Analysing the selected IR4 start-ups of India, this paper reveals that IR4 technologies are adopted into several sectors for performing several challenging tasks which cannot be done efficiently and flawlessly by human-beings. It underscores that the steady improvement in the diffusion of ICT—a precondition for successful adoption of IR4 technologies—has indeed facilitated the adoption of IR4 technologies into Indian start-ups. Moreover, of the total selected IR4 start-ups, one-third have effectively adopted the IR4 technologies, around 50% are in initial phase of the adoption, and these adoptions of IR4 technologies are mostly located in metro-cities, not expanded into small cities. The present diffusion of ICT is not enough, therefore it must be diffused expediently to ensure the successful adoption of IR4 technologies in India.



### Trade, Structural Change, and Productivity Growth in the Indian Manufacturing Sector, R Rijesh, WP263, February 2023

This article examines the nexus between trade, structural change, and labour productivity growth in India's organized manufacturing sector. The study aims to investigate the impact of trade on labour productivity and labour reallocation that has contributed to aggregate productivity growth during the 1991-2018 period. The descriptive statistical analysis reveals that both exports and imports have increased significantly, and the composition of exported products has shifted towards medium-high-technology-intensive products. We find that the major growth in value added and wages has been observed in the medium-to-high-technology-intensive industries, whereas the low-technology segment continues to dominate employment generation. The panel econometric analysis suggests that productivity growth is primarily driven by technical change within industries, and trade mainly induces intra-sectoral productivity growth with limited impact on labour reallocation between sectors. The absence of structural change from trade openness can be attributed to the existence of market frictions and structural rigidities that prevent efficient resource allocation across the manufacturing sector in India.



### Public Sector Performance in India and the Ongoing Contestation between Efficiency and Equity, Satyaki Roy, Santosh Kumar Das, WP264, March 2023

This paper aims to revisit the performance of public sector in India particularly in the context of market oriented reforms pursued in the past few decades. It is found that the share of public sector in GDP, if we compare pre and post reform periods, on an average didn't show a drastic decline. In fact the number of central public sector enterprises (CPSEs) and particularly the number of profit making CPSEs

increased sharply in post 2000s. The performance of public sector by usual indicators improved initially because of change in institutional arrangements in terms of enhanced transparency, greater autonomy and so on, being manifested in the rise in both net profit and profitability during the same period. However, performance on the same count suffers a decline since 2012, as the paper argues, primarily because of decline in public investment in plant and machinery as well as in technology and due to relative under-pricing of public sector output. The paper also underlines the fact that the contestation between efficiency and equity is very much embedded in the idea of public sector. These enterprises are supposed to fulfil certain goals both in the input and output side which cannot be adequately captured by the one dimensional metrics of efficiency used otherwise to measure performances of profit maximizing firms.



### Impact of Import Liberalisation on Employment in Manufacturing Industries in India, Ramaa Arun Kumar, WP265, March 2023

India liberalised its trade in 1991 as a part of the major economic reforms that took place as a result of the twin deficits in the late 1980s. This was the beginning of a structural change that could have taken India away from major obstacles to a higher level of economic development. Trade liberalisation, in particular, not only deteriorated the trade deficit situation further, the lack of foresight in opening up sectors was also detrimental for the industrialisation process in India. In the present context, the Covid-19 pandemic has adversely affected supply chains all over the world. Given that India's dependence on China in many sectors has grown manifolds in many sectors as pharmaceuticals emanated the need for introspecting this phenomenon. The emphasis on Aatmanirbharta (self-reliance) has changed the perspective to target our trade as well as industrial policy to come out of the excessive reliance of India's import dependence and build up domestic manufacturing base.



In this context, the study analyses the impact of import liberalisation on the industrialisation process, with emphasis on employment at the industry level. As mentioned above, import liberalisation may have variable impact on different types of industries. Therefore, to find differential impact, we have divided the 4-digit industries into used-based classification, viz., primary, intermediate, consumer and capital goods. Using panel data estimations from 2008-09 to 2018-19, we find that the effect of import liberalisation had a negative impact on the industrialisation process of the consumer goods industries which bore the major share of import surge in the era of unilateral reduction of tariffs and non-tariff barriers by India without commensurate industrial policies to protect the vulnerabilities of the growing consumer goods industries. A right mix of industrial and trade policy would speed up the industrialisation process in India and have long term impact on employment and output.

### R&D behaviour of Indian Firms: A Case of High-tech Manufacturing, Seenaiah Kale, WP266, March 2023

Analysis of Manufacturing R&D (research and development) has several implications for the firms and policy makers all over the world, particularly for the emerging market economies. Given the backdrop of India's weak R&D, this study empirically examines the key drivers of R&D in case of high-tech



manufacturing firms, using panel data spanning from 2001 through 2020. We implement Heckman two-stage procedure to account the endogeneity and correct the likelihood of biased estimates due to the sample selection criteria. Findings show that the firm size has traditional “non-linear relationship” and the impact of outward orientation is significantly positive. The technological efforts of Indian firms, particularly the domestic firms increasingly attributed to external activities of the firm.

## FDI, International Trade and Global Value Chains (GVCs): Trends and Patterns in India's GVC Participation, Isha Chawla, Nagesh Kumar, WP267, March 2023

With the rise of global value chains (GVCs), gross trade data tends to mask complex patterns of international production sharing, through foreign direct investment (FDI) or arm's length trade. Using the OECD Trade in Value Added (TiVA) database for 1995-2018, and the Asian Development Bank (2022) consolidated dataset for 2000 and 2007-2020, this paper examines value-added components of gross exports by origin (home or abroad) to study the extent of GVC participation based on forward and backward linkages. Though India's GVC participation rate has risen over time, it was lower than that of several economies in the Asia-Pacific region, and its relative share in the total participation gains was marginal. Nevertheless, India's relative share in forward GVC content from (and backward GVC content to) the region was not as peripheral. Revealed comparative advantage (RCA) based on value-added exports that is adjusted for GVC activity yields insights by avoiding over-or underestimation of competitiveness in exports. Raising net participation gains (ratio of forward to backward linkages) and seizing opportunities in GVCs in times of insecurity will require key enablers in a world where manufacturing processes are being rewired and stimulating the mutually reinforcing relationship between FDI and GVC participation by attracting quality FDI inflows.



## 4. Policy Briefs

### Industrialisation, Inequalities, and Inclusive Development: Lessons from Global Experiences, PBs #23-03, March 2023

This policy brief summarises key policy discussions from the ISID-UNU-WIDER Policy Roundtable on *Industrialisation, Inequalities, and Inclusive Development: Lessons from Global Experiences* held on February 24, 2023. The discussion was centered largely around the recently published book, *The Developer's Dilemma*, authored by Alisjahbana, A S; K Sen; A Sumner; and A A Yusuf (2022). The roundtable was addressed by Prof Nagesh Kumar, Director, ISID; Prof Kunal Sen, Director, UNUWIDER; Prof Deepak Nayyar, Professor Emeritus, JNU and former VC, University of Delhi; Dr Sudipto Mundell, Chairman, CDS Trivandrum and Professor Emeritus, NIPFP; Prof Saon Ray, Visiting Professor, ICRIER and Prof Sabyasachi Kar, Professor, Institute of Economic Growth; Ms Rupa Dutta, Principal Adviser, Office of Economic Adviser, DPIIT; Prof Jayan Jose Thomas, Professor, IIT Delhi, and Dr Satyaki Roy, Associate Professor, ISID. The two parts of the roundtable was moderated by Mr Ajay Shankar, former Industry Secretary and Prof Nagesh Kumar, Director, ISID.



## Finance and Global Economic Governance for Green Transformation: Key Recommendations of ISID-BUGDPC Special T20 Roundtable, PB #23-02, March 2023

The *Think-20 Special Policy Roundtable Finance and Global Economic Governance for Green Transformation* organised by ISID and the Global Development Policy Centre (GDPC) of Boston University (BU) under the auspices of the Think-20 process under the India G20 Presidency at ISID campus, New Delhi, on March 02, 2023. Given the theme cutting across several T20 Taskforces (TFs), the Roundtable had participation from a number of them. The inaugural address was delivered by Ambassador Sujan R Chinoy, the Chairperson of T-20 India (TF7) and Director-General of Manohar Parrikar Institute for Defence Studies and Analyses (MP-IDSA), New Delhi. The distinguished speakers of the two technical sessions included Prof Nagesh Kumar, Director, ISID (TF6); Prof Kevin Gallagher, Director, BU-GDPC (TF4); Mr Kamal Malhotra, Non-Resident Senior Fellow, BU-GDPC; Prof Tetsushi Sonobe, Dean and Chief Executive, ADB Institute, Tokyo and also the Chairperson of T-7 initiative of G-7 (TF1); Dr Amar Bhattacharya, Senior Fellow, Brookings Institution, Washington (TF5); Ms Chandini Raina, Advisor, Ministry of Finance, Government of India; Dr Laveesh Bhandari, Senior Fellow, Centre for Economic and Social Progress, New Delhi; Dr Kim Heung Chong, President, Korea Institute for International Economic Policy, Seoul (TF1); Prof Renato Baumann, Institute of Applied Economic Research (IPEA), Brasilia; Prof Suma Athreye, School of Public Policy, IIT Delhi and ISID; and Dr Prerna Prabhakar, Council on Energy, Environment and Water, New Delhi. This policy brief summarizes key recommendations of the Roundtable.



## Leveraging Women-led MSMEs through e-Commerce and Digital Marketing, PBs #23-01, January 2023

This policy brief summarizes the key policy recommendations from the ISID-UNESCAP session on *Leveraging e-commerce and Digital Marketing for Women-led MSMEs* held at the International Conference on “Women-led MSMEs as Catalysts of Transformation” at the ISID campus during the 23rd – 25th March 2022 jointly organized by Federation of Indian Women Entrepreneurs (FIWE), Ministry of MSMEs, Government of India and Institute for Studies in Industrial Development (ISID). The distinguished speakers of the session included Mrs K Ratnaprabha, Former Chief Secretary, Government of Karnataka & President, UBUNTU; Dr Rajan Sudesh Ratna, Dy Head, UNESCAP-SSWA Office; Mr Anurag Awasthi, COE Manager, GeM; Ms Shirley Jayawardena, President, Federation of Chambers of Commerce and Industry of Sri Lanka (FCCISL); Ms Arundhati Mukherjee, Marketing Consultant. The session was chaired and moderated by Prof Nagesh Kumar, Director, ISID.



## Envisaging a Post-Pandemic Industrial Strategy for Inclusive and Sustainable Manufacturing Transformation, PBs #22-05, October 2022

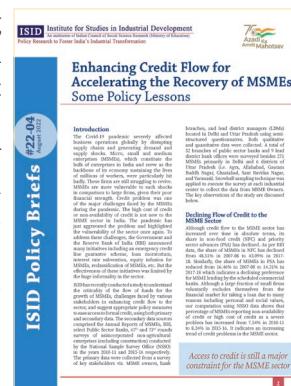
This policy brief is based on the 35<sup>th</sup> ISID Foundation Day Event on *Industrial Strategy for the Post-Pandemic Era: Scaling-up the Inclusive and Sustainable Manufacturing Transformation*, held on May 25, 2022 which featured a keynote address by Mr Gerd Müller, Director General, United Nations Industrial Development Organisation (UNIDO). The lecture was followed by discussions among eminent panellists: Ms Sumita Dawra, Special Secretary, Department



for Promotion of Industry and Internal Trade, Dr Naushad Forbes, Co-Chairman, Forbes Marshall, and Mr S K Misra, Chairperson, ISID. Prof Nagesh Kumar moderated the discussions.

## Enhancing Credit Flow for Accelerating the Recovery of MSMEs: Some Policy Lessons, PBs #22-04, August 2022

MSMEs are pivotal in fostering socio-economic development by contributing significantly to gross domestic product and trade, promoting regional industrialisation and employment generation. Among many, the credit problem is one of the major challenges faced by the MSME sector. ISID conducted a study during 2018-2020 to understand the criticality of the flow of funds for the growth of MSMEs, challenges faced by various stakeholders in enhancing credit flow to the sector, and suggest appropriate policy measures to ease access to formal credit, using both primary and secondary data. This policy brief discusses key findings and policy recommendations based on this study.



## Towards Green Industrialization in India: Challenges and Opportunities, PB #22-03, June 2022

This policy brief is based on a Policy Roundtable on *Green Industrialisation in India: Potential, Challenges and Policies*, organised by ISID on April 5, 2022. Prof Kelly S Gallagher, Director, Climate Policy Lab, The Fletcher School, Tufts University, and Dr Easwaran J Narassimhan, Postdoctoral Fellow, Harvard Kennedy School, presented their work, followed by a discussion by panellists, Dr Arunabha Ghosh, CEO, Council on Energy, Environment and Water, Delhi; Dr Tilman Altenburg, German Development Institute, Bonn; Prof Ambuj Sagar, Head, School of Public Policy, Indian Institute of Technology (IIT) Delhi; and, Mr René Van Berkel, Director, Regional Office in India, United Nations Industrial Development Organization (UNIDO). The roundtable was moderated by Prof Nagesh Kumar, Director, ISID.



## 5. Popular Articles / ISID in Media

- Nagesh Kumar, India's Evolving Industrial Policy is Critical for Realizing Its Development Vision, *promarket.org*, George J. Stigler Center for the Study of the Economy and the State, Chicago University, March 21, 2023
- Nagesh Kumar, New industrial policy for New India, *The Hindu Business Line*, January 26, 2023
- Nagesh Kumar (2022), "For growth, bolster the manufacturing sector", *Hindustan Times*, December 31.
- Nagesh Kumar and Reji K Joseph (2022), "Petty Patents Can Boost R&D," *The Hindu*, June 20.
- Nagesh Kumar (2022), "Should India choose manufacturing over services? (interviewed by Prashanth Perumal J.), *The Hindu*, September 16, 2022.
- Nagesh Kumar (2022), "Experts welcome caution on large blocs like IPEF, *Financial Express*, September 14, 2022.
- Nagesh Kumar (2022), Indian economy to grow by 7-7.8% in FY23 despite global headwinds: Experts, (Interviewed by PTI), *Indian Express*, June 23.
- Nagesh Kumar (2022), "US' Trade Initiative Promises Gains, but Challenges Remain: Analysts" (interviewed by Banikinkar Pattanayak), *Financial Express*, May 25.

- Nagesh Kumar (2022), “New Delhi, Moscow explore alternate payment gateway Mir amid Western Sanction” (interviewed by R. Suryamurthy), *The Telegraph*, August 22.
- Nagesh Kumar (2022), “India to seek consensus on strategy for global recover, inflation control, Banikinkar Pattanayak, *Financial Express*, July 27, 2022.
- Nagesh Kumar (2022), “With China Running on Fumes, Time for India to Go Full Steam Ahead, Say Experts”, interview by Santosh Chaubey, *CNN-News18*, October 20.
- Nagesh Kumar & Reji K. Joseph (2022), “Stumbling ‘Bloc’: Why India is Yet to Join The Biggest Trading Group of Nations”, interview by Santosh Chaubey, *CNN-News18*, November 17.
- Nagesh Kumar, FDI equity inflows hit by global slump, interviewed by Surabhi, *Financial Express*, March 10, 2023
- Nagesh Kumar, Per capita income doubles since '14 but uneven distribution a challenge, interviewed by PTI, *Business Standard*, March 5, 2023
- Nagesh Kumar, Brainstorming on future-oriented infrastructure development (reporting views of), *The Pioneer*, January 17, 2023
- Ajit Kumar Jha, “Why are India’s Poorest People Left Behind?”, Interview by “The Stream”, *Al Jazeera channel*, February 7, 2023.
- Ajay Shankar, Hydrogen Mission needs solid implementation, *The Hindu BusinessLine*, March 27, 2023
- Shishu Ranjan and Ajit Kumar Jha, “Mega Air India deal will boost growth and employment in India and abroad”, *India Vs Disinformation*, March 1, 2023.
- Ajit Kumar Jha, “One District One Product”, interview by Shubhra Sharma, *Udyog Patrika*, March 14, 2023.
- Akhilesh K Sharma and Sushil K Rai (2022), “In Pandemic Shock, Critical Lessons for MSMEs,” *The Hindu*, April 12.
- Beena Saraswathy (2022), “The Digital Market Competition with Multisided Markets: A Case of Indian E-Commerce,” *Maastricht University Blog*, June 20.
- Reji K Joseph (2022), “The curious case of India’s rising trade deficit with China in pharmaceuticals”, *Express Pharma*, October 6.
- Reji K Joseph, India’s R&D estimates are an incomplete picture, *The Hindu*, February 24, 2023
- Reji K Joseph (2022), Increase in Drug Prices Will Hit People Hard – Need for Re-orienting Drug Pricing and Production Policy, *NEWS Click*, April 5.
- Reji K Joseph (2022), The great medicines migration: How China took control of key global pharmaceutical supplies, *NIKKEI Asia*, April 5.
- Reji Joseph (2022), “Connecting the dots to boost the patent ecosystem”, *The Hindu*, September 14.
- Satyaki Roy (2022), Jobs for 18-21 age group not so easy to get any more, shows data, (Interviewed by Ishaan Gera), *Business Standard*, July 5.
- Pradeep S Mehta (2022), Is it time for India to go for competitiveness legislation, *LiveMint*, June 1.
- Pradeep S Mehta and Shiksha Srivastava (2022), Can India become competitive while pursuing climate resilient development? Difficult but possible, *The Economic Times*, May 8.

## VII. Outreach Activities

### Nagesh Kumar, *Director*

- Delivered a Keynote Address on SDGs and Sustainable Industrial Transformation: Key Policy Priorities and Opportunities for India at the Second Biennial Conference on Development 2022 of the Indira Gandhi Institute of Development Research (IGIDR) in Mumbai, on December 22, 2022.
- Delivered the Valedictory Address in the Thirteenth South Asia Economic Summit (SAES), organised by RIS at India Habitat Centre, New Delhi on April 20, 2022.
- Esteemed Speaker in the programme on “Expectations from the New Industrial Policy of India” organised by PHD Chamber of Commerce and Industry, New Delhi on June 16, 2022.
- Attended an online brainstorming discussion on “Finalising the Industry Vision 2047, Mission and Action Plan with Timelines”, Chaired by the Secretary, DPIIT, Ministry of Commerce and Industry on July 1 and August 25, 2022.
- Esteemed Speaker in the Interactive Session 14 on “Reconciling Industrial Revolution 4.0 with Young Demographics” at Kautilya Economic Conclave 2022-23 - Redefining the Future, jointly organized by the Institute of Economic Growth (IEG) and Ministry of Finance, Government of India on July 10, 2022.
- Made a presentation on Multilateral Trade Rules and Green Transition: The Case of India at the workshop on Toward a Green and Just Energy Transition organized by the Boston University Global Development Policy Center, in Boston, USA on November 3, 2022.
- Participated in the peer review meeting of the firm-level survey findings from the National Manufacturing Innovation Survey 2021, for policy-focused mapping of the innovation landscape in India, jointly undertaken by DST and UNIDO on September 21, 2022.
- Nominated as the Co-Chair of Taskforce-6 on Accelerating SDGs of the Think-20 Engagement Group of the G20 India Presidency.
- Keynote Speaker on Emerging through the Crises: The Way Forward at the Nepal Economic Forum, 7<sup>th</sup> NewBiz Conclave & Awards organised by New Business Age, at Hotel Radisson, Kathmandu on 12 December 2022.
- Distinguished Speaker at the Opening Commemorative Symposium on Korea-India Cooperation in the Indo-Pacific Era: Opportunities and Challenges organized by Korea Institute for International Economic Policy (KIEP), Delhi Office on March 6, 2023 at The Grand Hotel, New Delhi.
- Participated in the Board meeting of the South Asia Centre for Policy Studies (SACEPS), New Delhi on April 19, 2020.
- Key Speaker in the session on “Economic Impact and Opportunities of Sustainability” in the Vivekananda Sustainability Summit, organised by Vivekananda Youth Connect Foundation (VYCF), New Delhi on April 19, 2022.



- Guest of Honour in the 17<sup>th</sup> Annual National Conference of Uttar Pradesh-Uttarakhand Economic Association (UPUEA), hosted by the School of Business Studies, Sharda University, Greater Noida, on April 22, 2022.
- Chaired the session on “SDG Implementation and MSMEs Participation” in the Seventh Roundtable on Post-Covid-19 Recovery: Regional Cooperation Agenda for ASEAN-India Partnership, organised by ASEAN-India Network of Think-Tanks (AINTT) on May 12–13, 2022.
- Participated in the Meeting with the Leading Think Tanks under the Chairmanship of the Vice Chairman, NITI Aayog on May 18, 2022.
- Distinguished panellist at the Policy Dialogue on Economic and Social Survey of Asia and the Pacific 2022: Building Forward Fairer Economic Policies for an Inclusive Recovery and Development, organised by United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) on May 31, 2022.
- Attended the Fifty-third Foundation Day Lecture of ICSSR on “Bridging the Last Mile in Pro-Poor Public Welfare,” delivered by Shri Amarjeet Sinha, IAS (Retd) and former Advisor to the Prime Minister of India, at India International Centre, New Delhi on June 1, 2022.
- Delivered the Inaugural Address in the National Symposium of VELS Institute of Science, Technology & Advanced Studies (VISTAS), Department of Economics on June 3, 2022.
- Key Speaker on Building a Competitive Manufacturing Sector in India at the National Seminar on Building a Self-Reliant and Globally Competitive India: Prospects and Challenges Ahead, organised by Arun Jaitley National Institute of Financial Management (AJNIFM), Faridabad, Haryana at India Habitat Centre on June 7, 2022.
- Participated in the discussion on Sansad TV’s Perspective Programme on “Big Employment Push” on June 15, 2022.
- Attended Arun Jaitley Memorial Lecture by Hon’ble Mr Tharman Shanmugaratnam, Senior Minister, Government of Singapore, chaired by Prime Minister of India at Vigyan Bhawan and organised by the Ministry of Finance, Government of India on July 8, 2022.
- Attended the meeting of the Research Advisory Council (RAC) of RIS on July 21, 2022.
- Participated in the Annual Strategic Meeting of South Asia Network on the Sustainable Development Goals (SANS), organised by UNESCAP-SSWA held virtually on July 28, 2022.
- Addressed a brainstorming meeting on “The New Global Order: The International Finance Architecture—Indian Perspective” organized by Council for International Economic Understanding (CIEU) on July 29, 2022.
- Served on the Selection Committee Chaired by Dr Suman Bery, Vice Chairman, NITI Aayog for selection of Sr Adviser/Adviser in the area of Industrial Policy and Foreign Investment on August 10, 2022.
- Participated in the brainstorming G20 Presidency session chaired by India’s G20 Sherpa, Shri Amitabh Kant, G20 Division, Ministry of External Affairs, and contributed a note on “Trade for Growth and Prosperity” on September 14, 2022.
- Key Speaker in the online session on “India’s Innovation System and Sustainable



Development: Contemporary Challenges and Way Forward for Inter-linking evolutionary actors, organization and institutions” in the 8<sup>th</sup> edition of Science Summit around the

- 77<sup>th</sup> United Nations General Assembly (UNGA77) held on September 15, 2022.
- Delivered a lecture on “India’s Industrial Transformation: Opportunities and Challenges”, at the 55<sup>th</sup> Refresher Course in Economics Administration and organized by HRDC-JNU, New Delhi on September 28, 2022.
- Addressed the Online Roundtable Discussion on The Trade Policy India Needs, organised by CUTS on October 14, 2022.
- Participated in discussions around collaborative activities on industrial transformation-related issues at the United Nations and UNDP Headquarters, New York on November 7-9, 2022.
- Participated in the 20<sup>th</sup> Meeting of the Trustees of the Indian Trust for Rural Heritage and Development, November 21, 2022.
- Addressed the Roundtable on India’s Agenda for G20, organized by the Council for International Economic Understanding (CIEU), at the Imperial Hotel, New Delhi on November 25, 2022.
- Delivered a key presentation on Industry, Infrastructure and Innovation: Status, Issues and Partnerships at the UNESCAP’s 6<sup>th</sup> SSWA SDG Forum held in Islamabad, (jointly with Dr Shiladitya Chatterjee), online on December 6, 2022.
- Moderated the panel discussion on Policies for Promoting Women Entrepreneurship in the High-level Policy Dialogue on E-Commerce and Digital Marketing: Challenges and Opportunities for Women-led SMEs in South Asia, organized by UNESCAP, SANS, and EIF on December 15, 2022, New Delhi.
- Delivered the Valedictory lecture on India’s National Innovation System @75 at the IndiaLics International Conference organized by School of Humanities and Social Sciences, IIT Indore on December 23, 2022.
- As co-chair of the T20 Task Force 6 - Accelerating SDGs: Exploring New Pathways participated in periodic virtual meetings held on January 3, February 6, and February 9, 2023.
- Participated in the Think20 Inception Conference held on January 13-14, 2023 in New Delhi including in the breakout sessions as co-chair of the T20 Taskforce 6 on Accelerating SDGs
- Distinguished panellist at the plenary session on Financing Resilient Infrastructure and Sustainable Transition at the Think-20 Special Event on Global Governance with LiFE Values and Wellbeing: Fostering Cooperation in Frameworks, Finance, and Technology, Bhopal, January 16-17, 2023
- Participated in a Discussion on Expectations from the Union Budget 203-24 at Sansad TV held on January 27, 2023.
- Distinguished panellist at the 2<sup>nd</sup> Budget Seminar hosted by the Department of Economics, Shiv Nadar Institute of Eminence in collaboration with India Habitat Center on February 8, 2023,
- Served as the Member of the Selection/



Interview Panel of CAS Promotion Interview at Centre for Development Studies (CDS), Thiruvananthapuram, Kerala, February 15, 2023

- Addressed the first 2023 SANS brainstorming session at UNESCAP South and South-West Asia Office (ESCAP-SSWA) on February 15, 2023,
- Participated in Interactive Session/ Roundtable discussion with Professor Jeffrey Sachs, organized by RIS at India Habitat Centre, New Delhi on February 23, 2023.
- As a Co-chair, participated in the Meeting of the T20 Task Force 6 - Accelerating SDGs: Exploring New Pathways to the 2030 Agenda held on March 3, 2023 on the sidelines of the Raisina Dialogue held in New Delhi, March 2-4, 2023 and in the T20 Global Townhall on March 5, 2023.
- A panellist in the discussion on Infrastructure and Investment: PM Gati Shakti Masterplan at the Sansad Television held on March 4, 2023
- Attended the ICSSR Technical Committees of NASSDOC at ICSSR Headquarters, held on March 9-10, 2023.
- Attended the Meeting of the Technical Committee of the ICSSR Data Services on March 14, 2023 at ICSSR HQ, New Delhi.
- Delivered a lecture on Reducing Inequality Globally and Nationally and interact with the participants in the e-ITEC Capacity Building Programme on 'Sustainable Development Goals' organized by RIS on March 14, 2023.
- Interviewed in the Sansad TV Programme Arthniti on Industrial Production and Economy, held on March 16, 2023.
- Addressed as the Guest of Honour, the Seminar on Industrial Policy for Sustainable Economic Growth organised by PHD Chambers of Commerce and Industry, at PHD House, New Delhi on March 22, 2023.
- Panellist in Surya Foundation's Webinar on "Laying a Strong Foundation for India's Rapid Growth Trajectory FY 2025-29" on Thursday, March 23, 2023.
- Distinguished Speaker at the 21<sup>st</sup> Asian Security Conference (ASC) on Towards Reformed Multilateralism in the Era of Indo-Pacific on March 28, 2023 organized by the Manohar Parikkar Institute for Defence Studies and Analyses, New Delhi.



### *Ajit Jha, Assistant Professor*

- Delivered an online lecture on "Macroeconomic Impact of COVID-19" at Jindal Global Business School on April 2, 2022.
- Delivered a lecture on "Publishing Research on MSMEs" in the 2nd International Conference on Management of MSMEs held at IIM Amritsar on January 22, 2023.
- Panellist in the session on 'Social Protection for Informal Workers' at the Inception Meeting of L20 held in Amritsar on March 19, 2023.
- Discussant in the workshop on 'Leaving No One Behind -Towards Universal Social Protection System' held at V.V Giri National Labour Institute, Noida on March 27, 2023.
- Delivered a lecture on "Issues and Challenges in the Growth on MSMEs" in Advanced Management Development Program Sponsored by MSME, Government of India at NIT Jamshedpur on March 25, 2023.

*Akhilesh Kumar Sharma, Assistant Professor*

- Presented a paper entitled “Impact of Economic Disruptions Caused by COVID19 on the Sectoral Employment in India” in the 62<sup>nd</sup> Annual Labour Economics Conference of the Indian Society of Labour Economics (ISLE) held at IIT Roorkee from April 11–13, 2022.
- Presented a paper entitled “Understanding Impact of Covid-19 on MSMEs in India: Lessons for Resilient and Sustained Growth of the MSME Sector” in the ‘Paper Development Workshop on Rethinking Cities for Resilience and Growth in the Post-COVID-19 World’ organized by ADBI virtually on May 19, 2022.
- Presented a paper titled “Construction of Input-Output Tables and Multipliers” (Co-authored with Prof Basant K Pradhan and Naman Jain) at the IEG Brown Bag Seminar, New Delhi on November 10, 2022.
- Presented a research paper entitled “Do Micro Enterprises Need a Separate Policy Attention?” at the National Conference (ONLINE) on Contribution of MSME Sector towards Growth of 5-Trillion Indian Economy, organised by School of Business Management, Chhatrapati Shahu Ji Maharaj University on January 10-11, 2023.
- Presented virtually a research paper entitled “Impact of Pandemic on Firm Performance in India across Size and Sectors” (jointly with Vanshika Jain) at the 6<sup>th</sup> SANEM Annual Economists’ Conference (SAEC) 2023 on Building Resilience to Shocks: Priorities, Challenges and Prospects organised by South Asian Network on Economic Modelling (SANEM) at Dhaka, Bangladesh on February 4-5, 2023.
- Presented virtually a research paper entitled “Understanding the Firm Transition across Size in India – An Overview” (jointly with Tripti) at the International Conference on Research Innovations & Challenges (ICRIC) held on January 19-21, 2023, organised by CRT, NFED, Coimbatore, Tamil Nadu, India.
- Presented a research paper entitled “Does Access to Finance Influence MSMEs Performance? Evidence from Developing Countries” at the Fifteenth Biennial Conference on Entrepreneurship held at Entrepreneurship Development Institute of India (EDII), Ahmedabad, India, during February 22-24, 2023.
- Delivered a lecture on the topic “Application of Social Accounting Matrix Framework in Social Science Research” in the ICSSR-sponsored One-week Research Methodology Course organised by Vivekananda Institute of Professional Studies, New Delhi on February 8, 2023.
- Panellist and speaker on “Union Budget 2023-24 and Its Implications for the MSME Sector” in the Panel Discussion on ‘Union Budget 2023-24: Challenges and Prospects’ organised by the Department of Economics at the Faculty of Behavioural and Social Science (FBSS), Manav Rachna International Institute of Research and Studies (MRIIRS), Faridabad on February 20, 2023.

*Anjali Tandon, Associate Professor*

- Made an online presentation on “Understanding Malaysia’s NTMs on India” (co-authored with Ittika Takkar and Mahua Bhattacharjee) in the 3<sup>rd</sup> International Conference on Building Resilience and Sustainability for India for Ever Changing Turbulent World – A vision for 2030, organised by Institute of Management Studies from April 21–22, 2022.
- Delivered a lecture on “A Run-Up to the Post Pandemic India: Prognosis and Way Forward” in the lecture series on Economic ramifications of the Covid-19 pandemic at Atma Ram Sanatan Dharma College, the University of Delhi on July 6, 2022.
- Attended a two-week course on “Climate-smart Trade and Investment for Sustainable Development” organized by ESCAP, UNEP, and UNCTAD from July 18 to August 2, 2022.
- Attended and completed an eight-week course on “Economic Analysis of Non-Tariff Measures”, jointly organized by UNCTAD and UNESCAP on October 17 to December 11, 2022.
- Presented a Paper titled “Changing industrial structure and exports: Effects of global financial

crisis” (co-authored by Manmohan Aggarwal), at the 8<sup>th</sup> EIITF International Conference at IIFT, New Delhi during December 15-16, 2022.

- Discussant in the Technical Session on Financial Development & Trade at the 8<sup>th</sup> EIITF International Conference at IIFT, New Delhi during December 15-16, 2022.
- Panellist in the session titled ‘Future of work or Future of Workers? Global and national scenario’ at the Conference on ‘Future of Work’ organized by Consortium of Nordic Universities and Institute of Public Policy, New Delhi on March 1, 2023.
- Chaired two technical sessions titled (i) ‘Climate change, blue economy and sustainable energy’ and (ii) ‘Good health and quality education’ at the National Seminar on Atmanirbhar Bharat: Developing a Sustainable and Inclusive Economy organized by the Department of Economics, Gurugram University, Gurugram on March 14, 2023.

#### *Beena Saraswathy, Assistant Professor*

- Made an online presentation on “The Digital Market Competition with Multisided Markets: A Case of E-Commerce Market in India,” in the Hybrid Conference of Institute for Globalisation and International Regulation (IGIR) and Metro, the Institute for Transnational Legal Research on Competition & IP in Digital Markets: A Comparative & Inter-disciplinary Perspective (#COMPinDigiMarkts2022), organised by Maastricht University, Brussels from June 23–24, 2022.
- Delivered the keynote lecture at the National Seminar on Competition Regulation in India organised by the Department of Economics, Ideal Arts & Science College, University of Calicut on March 31, 2023.

#### *Dinesh Kumar, Consultant*

- Participated in ADB-NITI Aayog Virtual Workshop on Input-Output Analysis, Global Value Chains Analysis, and Social Accounting Matrix, held from June 21–24, 2022.

#### *Isha Chawla, Consultant*

- Participated in ADB-NITI Aayog Virtual Workshop on Input-Output Analysis, Global Value Chains Analysis, and Social Accounting Matrix, held from June 21–24, 2022.

#### *Mahua Paul, Assistant Professor*

- Presented a paper titled “Agglomeration and Convergence; Evidence from Indian Organized Manufacturing” at 41<sup>st</sup> Annual Conference of Indian Association for Research in National Income and Wealth - held at Scope Complex- New Delhi, March 17-18, 2023.

#### *K Seenaiah, Assistant Professor*

- Delivered an online talk titled “Education and Innovation: Opportunities and challenges” at Shri Vishnu Engineering College for women (SVECW), Bhimavaram, Andhra Pradesh on the eve of National Education Day, Nov 11, 2022. The event was organized by the Department of Electrical and Electronics Engineering in association with the Institute Innovation Cell (IIC) of SVECW.

#### *R Rijesh, Assistant Professor*

- Discussant in the Technical session on Innovation Systems: Focus on Money, Banking and Public Finance at the IndiaLics International Conference, 2022 on the theme ‘India’s Innovation System @ 75: Achievements, Limits and Way Forward’ organized by School of Humanities and Social Sciences, IIT Indore on December 23, 2022.

*Ramaa Arun Kumar, Assistant Professor*

- Made an online presentation on “Trade Liberalization in India: Industry Level Effect” at the International Peace Conference organized by Pir Panjal Foundation for Peace & Communal Harmony in Collaboration with NSS Unit/NCC Units Shri Krishan Chander Government Degree College Poonch & NSS Unit GDC Surankote & Chanakya IAS Academy, Jammu on July 23, 2022.
- Chaired a technical session in the International Peace Conference organized by Pir Panjal Foundation for Peace & Communal Harmony in Collaboration with NSS Unit/NCC Units Shri Krishan Chander Government Degree College Poonch & NSS Unit GDC Surankote & Chanakya IAS Academy, Jammu on July 24, 2022.
- Presented a paper “Reducing Import Dependence on APIs in the Indian Pharmaceuticals Sector: An Analysis of Early Experience of the PLI 1.0” (co-authored by Dr Reji K Joseph) on November 25, 2022 during the National Consultation on Intellectual Property and Access to Medicines organised by the Third World Network at New Delhi held on November 25-26, 2022.
- Presented a paper titled “India’s Self-Reliance in Manufacturing Sector in the Post Pandemic Era: Trade Perspective” in the International Conference 2023 on Contemporary Economy in Post-Covid Era organised by the Department of Economics, BJB Autonomous College, Bhubaneswar on February 17-18, 2023.
- Chaired a technical session on ‘Post-Pandemic Agriculture in Indian Economy, Food Security and Energy’ in the International Conference 2023 on Contemporary Economy in Post-Covid Era organised by the Department of Economics, BJB Autonomous College, Bhubaneswar on February 17-18, 2023.
- Delivered a lecture on “Basic Data Analysis and Interpretation for Beginners” at the Department of Economics, Lakshmi Bai College, University of Delhi on March 24, 2023.

*Reji K Joseph, Associate Professor*

- Delivered a lecture on “Patents and Access to Medicines” for the Certificate Course on Intellectual Property Rights conducted by the School of International Relations and Politics, Mahatma Gandhi University, Kottayam on September 19, 2022.
- Delivered an online lecture on “Patents, Innovation, and Economic Development” in the 55<sup>th</sup> Refresher Course in Economics organized by UGC-HRC, Jawaharlal Nehru University, New Delhi on September 27, 2022.
- Panellist in the Data Interpretation Working Group Meeting of Experts for the National Manufacturing Innovation Survey 2021 (with reference to the pharmaceuticals sector) organized by DST, Govt. of India, and UNIDO at the India International Centre, New Delhi on September 28, 2022.
- Participated as a subject expert in the Doctoral Advisory Committee meeting of Ms Kirti Tyagi (PhD Topic: Global, National, and Regional Determinants of Tuberculosis Policy Ecosystem) at CSIR-NIScPR on August 22, 2022.
- Presented the study “Strategy for Leveraging ASEAN FTA and Trade Potential with the Middle East Countries for Pharma Sector in India” at the Department of Pharmaceuticals, Government of India, New Delhi on November 30, 2022.
- Delivered a lecture on “Role of Industrial Policy in the Emergence of the Indian Pharmaceutical Industry” on December 12, 2022 in the 5-day workshop on Access to Medicines, TRIPS and Patents jointly organised by Interuniversity Centre for IPR Studies, Cochin, University of Science and Technology (CUSAT) and Third World Network during December 10-14, 2022 at CUSAT, Cochin.
- Presented a paper “Reducing Import Dependence on APIs in the Indian Pharmaceuticals Sector: An Analysis of Early Experience of the PLI 1.0”, (co-authored by Ramaa Arun Kumar)

on November 25, 2022 during the National Consultation on Intellectual Property and Access to Medicines organised by the Third World Network at New Delhi on November 25-26, 2022.

- Member, editorial committee constituted by National Pharmaceutical Pricing Authority (NPPA), Government of India for preparing the 'Coffee Table Book' showcasing the story of the Indian pharmaceutical industry as part of the G-20 related activities.



82<sup>nd</sup> Meeting of the Board of Governors in progress

### *Sangeeta Ghosh, Assistant Professor*

- Presented a paper titled “Exploring New Trends in Organised Manufacturing Sector through Employment Elasticities” in the 62<sup>nd</sup> Annual Labour Economics Conference of the Indian Society of Labour Economics (ISLE) held at IIT Roorkee from April 11–13, 2022.
- Presented a paper titled “Looking through Employment Elasticities: A Study of the Organised Manufacturing Sector in India” in the International Conference on the State of Employment in India held at Goa Institute of Management, Centre for Public Policy and Governance, Goa from May 12–13, 2022.
- Participant at the FLAIR 4 Big Data Summer School on Econometrics and Machine Learning, IGIDR, Mumbai, June 7–11, 2022.
- Presented a paper titled, “MSMEs in the GST Regime: Insights from a Field Survey” at the Conference on Impact of GST on Indian Economy organised by National Institute of Public Finance and Policy, New Delhi on November 28-29, 2022.
- Discussant at IIFT Report Launch and Stakeholders’ Consultation for the report on “E-Commerce Majors, SSI retailers, and the Indian Economy: Theory and Empirics” held at Indian Institute of Foreign Trade, New Delhi on November 14, 2022.

### *Sanjaya Kumar Malik, Assistant Professor*

- Delivered a webinar on “Harnessing the Potential of Industry 4.0 Technologies: Evidence from Indian Start-ups” at the Centre for Technology, Innovation and Economic Research (CTIER), Pune on September 14, 2022.
- Delivered a webinar on “Technological Change in India’s Spinning and Weaving Machinery Manufacturing” at 2022 Philippine Textile Congress organised by the Philippine Textile Research Institute, Department of Science and Technology, Taguig City, Philippines on November 17, 2022.
- Presented a paper on “Technology Transfers from FDI to Local Firms in Indian Manufacturing Industries” at XV Annual Conference of Forum for Global Knowledge Sharing (Knowledge Forum) held at ISID, New Delhi during December 16-17, 2022.

*Satyaki Roy, Associate Professor*

- Delivered a talk on 'Emerging Trends in Manufacturing Sector and its Impact on Employment in India' at Delhi College of Arts and Commerce, Delhi University on September 22, 2022.
- Delivered a talk on 'New Technology: Changing Dimensions of Capital's Control and Problems of Diffusion' organized by Department of Economics, University of Hyderabad, on October 17, 2022.
- Delivered a talk on 'Is there any Mismatch between the Growth Trajectory and 'Pre-mature Deindustrialisation' in India?' at the symposium on Self-reliance on Science and Technology and Development organized by All India Peoples' Science Forum, New Delhi on November 13, 2022.
- Delivered four lectures on "Capitalism, Colonial Question and Uneven Development"; "Conceptualising 'Underdevelopment': Dependency; Unequal Exchange and its Critique"; "Neo-liberalism and Value Capture in Global Production Networks"; and "Informality' and Dimensions of Global Peripheral Labour" at the global classroom of Advanced Certificate Programme on Research in Political Economy organized by International Development Economics Associates (IDEAS), New Delhi on October 20, October 26, November 17 and November 24, 2022.
- Panellist in the discussion on 'Contemporary Development Challenges: Emergent Realities and Perspectives' organised by IDEAS at New Delhi on December 18, 2022.
- Presented a paper (online) titled "Heterogeneous Labour in Neoliberal Regime and Class Formation" in the international seminar organised by Sam Moyo African Institute for Agrarian Studies and Agrarian South Network Summer School, Harare on January 20, 2023.
- Presented a paper titled "Capital Accumulation and Heterogeneous Labour under Neo-liberalism and Materiality of the 'Collective Subject'" in the 26<sup>th</sup> Annual Conference of Indian Political Economy Association, Visakhapatnam held on February 17-18, 2023.
- Panellist and speaker on "Structural Change in Employment and the Challenges to Income Security" at the National Workshop on Leaving No One Behind-Towards Universal Social Protection System organised by the V V Giri National Labour Institute, Noida on March 27-28, 2023.
- Made a presentation on "Methodological Aspects of Political Economy of Health Infrastructure Fragmentation" at the Protocol Development Workshop organised by Jindal Global University at ISID, New Delhi on March 16-17, 2023.
- Panellist in the discussion on 'Union Budget 2022-23' organised by Council for Social Development, New Delhi on February 10, 2023.

*Seema Goyal, Professor*

- Conducted three sessions on "Planning and Analysing Socially Relevant TVCs", "Production Planning and Story Boarding for (Public Service Advertisements) PSAs" and "Content Analysis and Critiquing of PSAs" for the Indian Information Services Group 'A' Officer Training programme held at the Indian Institute of Mass Communication (IIMC), New Delhi on August 29, September 6 and September 19, 2022.

*Shailender Kumar Hooda, Associate Professor*

- Chaired a session on "COVID-19 Impact on Health and the Indian Economy" in the International Conference on Indian Economy during Pandemic: New Challenges and Opportunities, organised by Department of Economics, Chaudhary Ranbir Singh University, Jind, Haryana from April 28-29, 2022.
- Delivered a lecture on 'Diversity and Disparities in Healthcare in India' in the Health Communication Module at PG Diploma in Patient Navigation (Kevat) program organized by

Tata Memorial Centre, Mumbai on July 1, 2022.

- Presented a paper titled “State of Vaccine Manufacturing Capacity of the Public Sector and Its Implications” on December 13, 2022 in the 4<sup>th</sup> Annual conference of India Public Policy Network (IPPN) on State Capacity: What Is It and Why Is It Needed? organised by JSW School of Public Policy, Indian Institute of Management, Ahmedabad (IIM-A) on December 12-14, 2022.
- Presented a paper titled “India in the Global Vaccine Market Prior to and During COVID-19: Some Structural Issues” on December 23, 2022 in the IndiaLics International Conference, 2022 on the theme ‘India’s Innovation System @ 75: Achievements, Limits and Way Forward’ organized by School of Humanities and Social Sciences, IIT Indore on December 21-23, 2022
- Delivered a lecture on “Diversity and Disparity in Healthcare in Indonesia and India” on December 8, 2022 in a yearlong Health Communication- CPN Indonesia Training Program (2022-23) organised by KEVAT Patient Navigation Program, Tata Memorial Hospital, Mumbai in collaboration with Indian Institute of Mass Communication (IIMC), New Delhi.
- Presented a paper (online) titled “Vaccine Manufacturing Industry of India: Structure, Size and Competitiveness” at the 6<sup>th</sup> SANEM Annual Economists’ Conference (SAEC) 2023 on Building Resilience to Shocks: Priorities, Challenges and Prospects organised by South Asian Network on Economic Modelling (SANEM) at Dhaka, Bangladesh on February 4-5, 2023.
- Presented a paper titled “Decentralisation Experiences in Health in Haryana” at a Conference on Role of Decentralisation in Health organised by Health Systems Transformation Platform (HSTP) at The Ashok Hotel, New Delhi on February 27-28, 2023.
- Delivered a lecture on “Vaccine Manufacturing and Access” on March 21, 2023 in a Two-weeks Refresher Course (online) on Human Rights, Legal Systems and Societal Development organised by HRDC, BPS Mahila Vishwavidyalaya, Sonipat on March 14-27, 2023.
- Delivered three lectures on “Large Survey Data for Social Science Research” on March 29, 2023 in a Two-Week Research Methodology Workshop organised by the Centre for Professional and Allied Studies, Maharshi Dayanand University, Gurugram on March 18-31, 2023.
- Panellist in the technical session on ‘Manufacturing Industry of Uttarakhand’ on March 17, 2023 in the International Conference on Industrial Road Map of Uttarakhand: Vision 2025 organized by the Centre for Public Policy, Doon University, Dehradun on March 17-18, 2023.
- Presented a paper on “Health Insurance and Access to Health Care–Challenge” on March 27, 2023 at the National Workshop on Leaving No One Behind –Towards Universal Social Protection



ISID Faculty

System organised by the V V Giri National Labour Institute, Noida on March 27-28, 2023.

- Panellist in the Technical Session on 'Building Social Protection Floors: Universalising Health and Old Age Protection' at the National Workshop on Leaving No One Behind-Towards Universal Social Protection System organised by the V V Giri National Labour Institute, Noida on March 27-28, 2023.
- Member, Research Advisory Committee at the Department of Economics, Doon University, Dehradun, Uttarakhand.

#### *Swati Verma, Assistant Professor*

- Made two online presentations on "Import Dependence of Foreign Subsidiaries in Capital Goods Sectors of India: A Case Study" and "Tax Havens linked FDI flows: A Case Study of India" in the International Conference on Foreign Direct Investment & Trade: Emerging Economies Perspective, held at Management Development Institute, Gurgaon, India on June 20, 2022.
- Presented a paper titled "Import Dependency in Manufacturing Sector of India: An Evaluation of Trade Pattern of Foreign Subsidiaries" at the 6<sup>th</sup> Annual Economics Conference on Macroeconomic Policy Making: Prospects and Challenges organized by Sarla Anil Modi School of Economics in collaboration with The Indian Econometric Society (TIES) held at NMIMS, Mumbai on March 25, 2023.
- Discussant in a technical session at the 6<sup>th</sup> Annual Economics Conference on Macroeconomic Policy Making: Prospects and Challenges organized by Sarla Anil Modi School of Economics in collaboration with The Indian Econometric Society (TIES) held at NMIMS, Mumbai on March 25, 2023.

## VIII. ISID Team

### Director



**Prof Nagesh Kumar**

*PhD (Delhi School of Economics)*

*Research Interests:* Foreign Direct Investments and International Trade; Regional Economic Integration and Industrial Restructuring in Asia; South Asian Cooperation; Industrial Policy, Competitiveness and Technology and Innovation Policies; Sustainable Development.

### Core Faculty



**Dr Ajit Kumar Jha**

*PhD (Jawaharlal Nehru University)*

*Assistant Professor*

*Construction and Real Estate Sector; Labour, employment and Migration.*



**Dr Akhilesh Kumar Sharma**

*PhD (Banaras Hindu University)*

*Assistant Professor*

*Small enterprises, unorganised sector, labour and employment.*



**Dr Anjali Tandon**

*PhD (Jamia Millia Islamia)*

*Associate Professor*

*International trade, FDI, industry, and energy.*



**Dr Beena Saraswathy**

*PhD (Centre for Development Studies)*

*Assistant Professor*

*Market competition, M&As, business groups, pharmaceutical industry.*



**Dr Dinesh Kumar**

*PhD (Jawaharlal Nehru University)*

*Consultant (02.03.22 to 31.08.2022)*

*International trade and trade related issues an industrial issues.*



**Dr Isha Chawla**

*PhD (Delhi School of Economics)*

*Consultant*

*Foreign Direct Investment, Firm Productivity & Global Value Chains.*



**Dr K Seenaiiah**

*PhD (IIT, Hyderabad)*

*Assistant Professor*

*Industrial organisation, economics of technological change.*



**Dr Mahua Paul**

*PhD (Banaras Hindu University)*

*Assistant Professor*

*International trade, econometrics.*



**Dr R Rijesh**

*PhD (Jawaharlal Nehru University)*

*Assistant Professor*

*International trade, economics of technology, industrial development.*



**Dr Ramaa Arun Kumar**

*PhD (Delhi School of Economics)*

*Assistant Professor*

*International trade and industrial issues, macro-economics.*



**Dr Reji K Joseph**

*PhD (Jawaharlal Nehru University)*

*Associate Professor*

*International trade and investment, intellectual property rights and Indian pharmaceutical industry.*



### Dr Sangeeta Ghosh

PhD (Jawaharlal Nehru University)  
Assistant Professor  
Political economy of development,  
industrialisation, regional  
development, informal economy.



### Dr Sanjaya Kumar Malik

PhD (Centre for Development Studies)  
Assistant Professor  
Innovation and technological  
change, FDI and labour economics.



### Dr Santosh Kumar Das

PhD (Jawaharlal Nehru University)  
Assistant Professor  
Macroeconomic theory,  
industrial finance, financial  
liberalisation, political economy.



### Dr Satyaki Roy

PhD (University of Calcutta)  
Associate Professor  
Small enterprises, unorganised  
sector, and labour and employment.



### Prof Seema Goyal

Masters, Fine Arts (American University)  
& MA (Jamia Millia Islamia)  
Women studies and audio-visual media.



### Dr Shailender Kumar

PhD (Jawaharlal Nehru University)  
Associate Professor  
Health economics and policy, vaccine  
and medical device industry.



### Dr Surya Tewari

PhD (Delhi School of Economics)  
Assistant Professor  
Regional Industrialisation;  
Urban Issues.



### Dr Swati Verma

PhD (Jawaharlal Nehru University)  
Assistant Professor  
FDI, international trade,  
transfer pricing.

## Visiting Faculty



### Mr Ajay Shankar

Former Industry Secretary



### Mr Ashish Kumar

Former Director General, Central  
Statistics Office and Former Director,  
UN-SIAP, Japan



### Dr Ludovico Alcorta

Former Director, United  
Nations Industrial Development  
Organization



### Prof Manmohan Agarwal

Formerly of Jawaharlal Nehru  
University



### Dr Rajat Panwar

Oregon State University, USA



### Dr Shiladitya Chatterjee

Formerly of Asian Development  
Bank



### Prof Suma Athreye

Essex Business School, UK

### Ad-hoc Project Staff

Ms Khushboo Ahuja, *Research Associate*  
(09.05.2022 - 30.09.2022)  
Mr Biswajit Bar, *Research Assistant*  
(15.06.2022 - 14.08.2022)  
Ms Vanshika Jain, *Research Associate*  
Ms Tripti, *Research Associate*  
Ms Pooja Kaushal, *Research Associate*  
Dr Veerpal Kaur, *Research Associate*  
Shri Smruti Ranjan Sahoo, *Research Associate*  
Shri Krishan, *Research Associate*  
Shri Benito G Lyndon, *Research Associate*

### Research Support & Library

Shri Bhupesh Garg, *System Analyst*  
Shri Sudhir Aggarwal, *Programmer*  
(Superannuated on 28.02.2023)  
Shri B Dhanunjai Kumar, *Media Designer*  
Shri Amitava Dey, *Assistant Librarian*  
Shri Sunil Kumar, *Sr D P Asstt & Doc Asstt*  
Shri Rakesh Kumar Gupta, *Sr D P Asstt & Doc Asstt*  
Mrs Renu Verma, *Documentation Assistant*  
(Superannuated on 30.04.2023)  
Mrs Sultan Jahan, *Documentation Assistant*  
Shri Bahadur Singh, *Lib Cum Doc Asstt*  
Mrs Preeti Saxena, *D P Assistant (Upto 21.03.2022)*  
Ms Puja Mehta, *Editing & Publication*  
*Professional (Upto 30.06.2022)*  
Shri Ashok Kumar, *Maintenance Assistant*  
Shri Manohar Lal, *Maintenance Assistant*

### Administration

Shri Y P Yadav, *Senior Administrative Officer*  
Shri Jeet Singh, *Accounts Officer*  
Mrs Usha Joshi, *Personal Assistant*  
Shri Umesh Kumar Singh, *Office Assistant*  
Shri Sandip Pokhriyal, *Junior Office Assistant*  
Shri Amit Kumar, *Driver*  
Shri Lalit Kumar Bairwa, *Driver (Upto 16.08.2022)*  
Shri Munna, *Maintenance Assistant*  
Shri Shambhu Kamti, *Maintenance Assistant*

### Maintenance

Shri Bharat Chander, *Electrical Supervisor*  
Shri Shiv Kumar, *Services Supervisor*  
(Superannuated on 31.08.2022)  
Shri Vinod Dhoundiyal, *Electrician*  
Shri Krishna Mohan, *Maintenance Assistant*  
Shri Dinesh Kumar, *Maintenance*  
*Assistant (Guest House)*  
Shri Durga Singh, *Maintenance Assistant*  
Mrs Sushila Devi, *Maintenance Assistant*  
Shri Satyanarayan, *Maintenance Assistant (Gardener)*  
Shri Munnu Lal, *Maintenance Assistant (Gardener)*  
Shri Lalai, *Maintenance Assistant (Gardener)*  
Shri Achhe Lal, *Maintenance Assistant (Electrical)*  
Shri Amar Singh, *Maintenance Assistant (Electrical)*  
Shri Brijesh Kumar, *Maintenance Assistant (Plumber)*  
Shri Sumit Sharma, *Maintenance*  
*Assistant (Carpenter)*  
Shri Madan Lal, *Maintenance Assistant (Mason)*  
Shri Jagbir Singh, *Maintenance Assistant (Cook)*



ISID Admin Team with Director

# IX. Statement of Accounts

H.S. AHUJA & Co  
CHARTERED ACCOUNTANTS



Off. F-212, Competent House  
Connaught Circus, New Delhi-110 001  
Tel: +91 11 4587 4900-05, 2332 2581  
Fax: +91 11 4306 5194  
Email: cakalra@hsaco.in

## Independent Auditor's Report

To,  
The Members of the Board of Governors,  
Institute for Studies in Industrial Development  
Vasant Kunj, New Delhi-110070

### Report on the Audit of the Financial Statements Opinion

We have audited the accompanying financial statements of INSTITUTE FOR STUDIES IN INDUSTRIAL DEVELOPMENT (the entity), which comprise the Balance Sheet as at March 31, 2023 and the Income & Expenditure Account for the year then ended, and notes to the financial statements, including a summary of the significant accounting policies.

In our opinion and to the best of our information and according to explanations given to us, the said accompanying financial statements of the entity are prepared, in all material respects, in accordance with the Society Registration Act, 1860.

- (a) In case of the Balance sheet, of the state of affairs of the entity as at 31<sup>st</sup> March, 2023; and
- (b) In case of the Income and Expenditure Account, of the excess of Income over Expenditure for the year ended on that date.

### Basis for Opinion

We conducted our audit in accordance with the Standards on Auditing (SAs) issued by ICAI. 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 of the entity in accordance with the ethical requirements that are relevant to our audit of the financial statements, and we have fulfilled our other responsibilities in accordance with these requirements. 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.

### Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation of the financial statements in accordance with the Society Registration Act, 1860, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the entity'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.

Those charged with governance are responsible for overseeing the entity's financial reporting process.

## 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.
- Obtain an understanding of internal financial controls relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's 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 entity's ability 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 the entity to cease to continue as a going concern.

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.

For H.S. Ahuja & Co.  
Chartered Accountants  
(Firm's registration number: 000099N)

(Jaswant Singh)  
Partner

Place: New Delhi  
Dated: 13.09.2023

Membership. No. 095483  
UDIN:23095483BGVOEV5639

**Institute for Studies in Industrial Development, New Delhi**  
**Balance Sheet as at March 31, 2023**

(Figures in Rupees)

As at March 31, 2022	Liabilities	Sch.	As at March 31, 2023	Assets	Sch.	As at March 31, 2023
1,00,07,977.18	Corpus Fund	A	1,00,14,910.18	Fixed Assets	H	48,05,19,880.18
500.00	Membership Fund		500.00	Investments	I	4,36,80,518.18
46,07,80,459.38	Capital Fund	B	48,05,19,880.18	Investment of Leave Salary Fund	J	2,18,41,575.00
2,40,22,868.04	Reserve Fund	C	87,01,021.31	Current Assets	K	1,18,63,712.40
6,36,905.00	Research & Publications Fund	D	7,11,905.00	Grants Receivable	G	21,96,541.00
5,49,60,675.00	Advances & Security Deposits	E	4,07,11,116.00	Cash & Bank Balances	L	2,51,00,548.91
2,06,62,560.00	Leave Salary Fund		2,18,41,575.00			
1,73,46,273.00	Current Liabilities	F	2,05,29,887.00			
27,66,899.00	Un-Utilised Grants	G	21,71,981.00			
<b>59,11,85,116.60</b>	<b>Grand Total</b>		<b>58,52,02,775.67</b>	<b>Grand Total</b>		<b>58,52,02,775.67</b>

As per our report of even dated examined and found correct.

**For M/s H.S. Ahuja & Co.**

*Chartered Accountants, New Delhi*

Jaswant Singh)

Partner

Mem. No. 095483

Dated: 13.09.2023

(Jeet Singh)  
Accounts Officer

(Nagesh Kumar)  
Director

(S K Misra)  
Chairman

**Institute for Studies in Industrial Development, New Delhi**  
**Income and Expenditure Account for the Year ended March 31, 2023**

(Figures in Rupees)

For the Year ended 31-03-2022	Expenditure	Sch	For the Year ended 31-03-2023	For the Year ended 31-03-2022	Income	Sch	For the Year ended 31-03-2023
7,72,92,388.00	Establishment Expenses	M	7,55,28,570.00		Recurring Grant from ICSSR:		
9,68,200.00	Research Programme, Seminars & Conferences		6,73,486.00	2,80,00,000.00	a) Salary (OH-36) - General / SC/ ST		2,99,00,000.00
2,08,646.00	Journals & Periodicals		1,97,869.00	11,00,000.00	b) Development - General (OH-31)		50,00,000.00
2,51,45,130.48	Administrative Expenses	N	3,64,70,484.31	32,01,606.00	Interest & others Income		61,03,176.38
1,77,000.00	Audit Fee		1,77,000.00	46,46,252.00	Grants for Research Programme		1,03,86,964.07
	Provisions and Transfers:			5,48,36,741.00	License Fee	O	6,78,26,700.00
--	a) Capital Fund		20,50,000.00	1,04,75,000.00	Donation		--
--	b) Reserve Fund		40,00,000.00	20.00	Other Receipts		--
--	c) Research & Publication Fund		75,000.00				
--	d) Staff Welfare & Medical Fund		25,000.00				
--	Excess of Income over Expenditure transferred to Balance Sheet		19,431.14	15,31,745.48	Excess of Expenditure over Income transferred to Balance Sheet		
<b>10,37,91,364.48</b>			<b>11,92,16,840.45</b>	<b>10,37,91,364.48</b>			<b>11,92,16,840.45</b>

As per our report of even dated examined and found correct.

**For M/s H.S. Ahuja & Co.**  
Chartered Accountants, New Delhi

Jaswant Singh)  
Partner  
Mem. No. 095483

(Jeet Singh)  
Accounts Officer

(Nagesh Kumar)  
Director

(S K Misra)  
Chairman

Dated: 13.09.2023

Institute for Studies in Industrial Development, New Delhi  
Receipts and Payments Account for the period from April 1, 2022 to March 31, 2023

(Figures in Rupees)

SN Receipts		Amount		SN	Payments	Amount
1	Opening Balance :			1	Establishment Expenses:	
a)	Cash in Hand		10,845.72	a)	Salary & Allowances	6,32,77,362.00
b)	UCO Bank SB A/c		8,460.00	b)	NPS with PFRDA	69,72,001.00
c)	UCO Bank SB A/c		1,18,574.00	c)	Contribution to Gratuity Fund	14,41,496.00
d)	UCO Bank (Corpus Fund SB A/c)		7,977.18	d)	Contribution to Leave Salary Fund	5,62,593.00
e)	UCO Bank (PFMS SB A/c)		21,59,800.74	e)	Medical/Insurance Expenses	27,63,960.00
f)	UCO Bank (IMPRESS SB A/c)		10,295.15	f)	Children Education Allowance	3,03,850.00
g)	UCO Bank - Current Account		77,22,924.40	g)	LTC / HTC	2,07,308.00
h)	HDFC Bank Ltd - SB A/c		67,11,411.00	2	Journals & Periodicals	1,97,869.00
i)	HDFC Bank Ltd - Current Account		1,02,879.65	3	ICSSR - Institutional Doctoral/Senior Fellowships	10,53,672.00
2	Recurring Grants from ICSSR:			4	Research Programme Expenses	48,48,871.00
a)	Salary (OH-36) - General / SC/ ST		2,99,00,000.00	5	Seminars/Conferences /Workshops & Training Programmes	7,39,169.00
b)	Development - General (OH-31)		50,00,000.00	6	Energy & Utilities Charges	50,11,461.69
3	Interest from Corpus Fund		8,71,933.00	7	Security & Housekeeping Services	60,07,153.00
4	Interest on FDRs		20,54,111.00	8	Building Repairs & Maintenance	19,48,818.00
5	Interest from Savings Bank & others		27,30,142.38	9	Maintenance of Services:	
6	Interest on Income Tax Refund		2,98,323.00	a)	DG Sets	1,79,859.00
7	Research Programme Grants:			b)	Lifts	8,91,520.00
a)	Explaining the Conundrum of Service-Led Growth in India: Changing Composition of Demand and Income Distribution - ICSSR, Ministry of Education, Government of India		2,40,000.00	c)	Electric Sub-Station	3,51,788.00
	Carried Over		5,79,47,677.22			9,67,58,750.69

SN	Receipts	Amount	SN	Payments	Amount
	<b>Brought Over</b>	5,79,47,677.22			9,67,58,750.69
b)	Strategy for Leveraging ASEAN FTA and trade potential with the Middle East Countries for Pharma Sector in India" Department of Pharmaceuticals, Ministry of Chemical and Fertilizers, Government of India		d)	Other Office Equipment	24,99,032.00
			10	Computer Media Software & Maintenance	3,80,099.00
			11	Printing & Stationery	1,79,412.00
		9,10,000.00	12	Office Expenses	1,47,407.00
c)	Financing India's Industrial Transformation; Some Policy Lessons from International and National Experiences, NITI Ayog, Govt. of India		13	Telephones & Postage	1,30,676.00
		14,65,200.00	14	Vehicles: Fuel & Maintenance	2,94,784.00
d)	Fostering India's Industrial Transformation: India Industrial Development Report - ICSSR, Ministry of Education, Govt of India		15	Travel & Local Conveyance	59,664.00
		4,00,000.00	16	Professional Fee	98,05,592.00
e)	Trends in Inter-Regional Disparities in Indian Manufacturing - ICSSR, Ministry of Education, Government of India		17	Advertisement	65,818.00
		3,20,000.00	18	Ground Rent to DDA	2,03,855.00
f)	Liberalisation, International Trade and Industrial Productivity: A Case Study of organized Manufacturing Sector in India - ICSSR, Ministry of Education, Government of India		19	License Fee to DDA	52,25,278.00
		3,20,000.00	20	Rates, Fee & Taxes	10,51,259.00
			21	Audit Fee	1,77,000.00
g)	Towards Resilient and Sustained Growth of the MSME Sector in India: Lessons from the Covid-19 Pandemic - ICSSR, Ministry of Education, Government of India		22	Other Interest & Bank Charges	4,585.62
		3,36,000.00	23	Property Tax	9,73,441.00
			24	Purchase of Assets	
h)	Under the Firm-level survey reporting of 'National Manufacturing Innovation Survey': Chapter on Innovation in India - UNIDO		a)	Computer Equipment	4,16,122.00
		2,81,941.65	b)	Office Equipment	50,458.00
8	Seminars, Workshops & Training Programme Grants:		c)	Furniture and Fixtures	2,93,820.00
			d)	Library Books	20,224.00
a)	Research Methodology Course for M.Phil/Ph.D/ PDF scholars in Social Sciences - ICSSR, Ministry of Education, Govt. of India		e)	Air-Conditioning System	12,39,000.00
		49,550.00	25	Advances Paid/Adjusted	89,79,717.53
	<b>Carried Over</b>	6,20,30,368.87			12,89,55,994.84

SN	Receipts	SN	Amount	SN	Payments	Amount
	<b>Brought Over</b>		<b>6,20,30,368.87</b>			<b>12,89,55,994.84</b>
b)	Capacity Building Programme for Young Social Science Faculty - ICSSR, Ministry of Education, Govt. of India	26			Refund of Security Deposit to IBM India Pvt.Ltd.	2,04,54,375.00
		27	21,850.00		TDS Recoverable	8,97,851.20
c)	Seminar on "Technology and Economy" - ICSSR, Ministry of Education, Govt. of India	28			TCS Recoverable	1,042.16
		29	2,81,250.00		GST TDS Recoverable	1,27,470.00
d)	ISID-UNESCO Session on "Leveraging E-Commerce and Digital Marketing for Women-Led MSMEs at the Sixth International Conference on Women Led MSME's as Catalysts of Transformation	30			Investment in FDRs	5,85,623.00
		31			Closing Balances:	
		a)			Cash in Hand	15,878.72
		b)	3,07,707.42		UCO Bank SB A/c	8,680.00
9	License Fee	c)	5,22,52,775.00		UCO Bank SB A/c	1,21,681.00
10	Hostel and other Charges	d)	38,53,650.00		UCO Bank (Corpus Fund SB A/c)	5,910.18
11	Maintenance Charges	e)	1,17,20,275.00		UCO Bank (PFMS SB A/c)	6,29,617.74
12	On-line Database Usage	f)	92,89,980.00		UCO Bank (IMPRESS SB A/c)	10,491.35
13	Overhead from Research Projects	g)	2,76,000.00		UCO Bank - Current Account	6,08,546.74
14	ICSSR - Institutional Doctoral/Senior Fellowship	h)	9,10,000.00		HDFC Bank Ltd - SB A/c	2,36,59,889.71
15	Refund of Income Tax	i)	50,04,933.00		HDFC Bank Ltd - Current Account	45,763.65
16	Advances Received/Adjusted		34,43,940.00			
17	Encashment of FDRs		1,74,81,514.00			
18	Sale of Assets		1,88,972.00			
20	Security Deposit from IGL		89,10,000.00			
21	Other Receipts		1,55,600.00			
<b>Total</b>		<b>Total</b>	<b>17,61,28,815.29</b>			<b>17,61,28,815.29</b>

(Jeet Singh)  
Accounts Officer(Nagesh Kumar)  
Director(S K Misra)  
Chairman

Dated: 13.09.2023

## Institute for Studies in Industrial Development, New Delhi

### Schedule-P Significant Accounting Policies and Notes Forming Part of Accounts for the year ended March 31, 2023

1. The books of accounts have been maintained on mercantile system of accounting.
2. The value of paper, stationery, computer media and other maintenance items have been charged as expenditure at the time of their purchase/incurrence.
3. No depreciation on the fixed assets has been provided in the accounts as per the guidelines of the Indian Council of Social Science Research (ICSSR), Ministry of Education, Government of India.
4. The various grants for research projects/seminar/workshop received and expenditure incurred during the year are charged to the respective grants and any unutilised grant or grant recoverable are shown separately in the Balance Sheet.
5. Books/reports received on complimentary basis for Rs. 2,294/- have been capitalised during the year. There are certain un-priced books/reports and the value of which have been taken at Rs. 1/- per book/report.
6. New Air-Conditioning System was installed at Rs. 12.39 lakhs by adjusting the cost of old Air-Conditioners. The book value of old Air-Conditioners written off Rs. 12.00 lakhs has been debited to the capital fund account.
7. Temporary Building of Rs. 5,34,517.07 appearing as Fixed Assets has been written off by debiting to capital fund account as there is no such building existence as on date.
8. The overhead charges wherever due to the Institute under the research studies and fellowships are taken to the Income and Expenditure account.
9. An amount of Rs. 1,93,41,277.87 has been transferred from Reserve Fund to Capital Fund matching with the cost of fixed assets.
10. The Institute implemented the revised pay scales based on 7<sup>th</sup> CPC / UGC-PRC recommendations with the approval of Finance Committee and Board of Governors w.e.f. from 01/01/2016. Accordingly, the Institute paid its share of 55% (Fifty five percent) pay arrears for the period 01/01/2016 to 31/08/2019 and started paying full salary on revised pay scales w.e.f. September 1, 2019 to the employees. However, the share of 45% (Forty five percent) the pay arrears for the period 01/01/2016 to 31/08/2019 would be paid to the employees after receipt of sanction and funds from the ICSSR to the Institute. The ICSSR is yet to convey the sanction of revised pay scales based on 7<sup>th</sup> CPC/ UGC-PRC recommendations.
11. a) A provision for Rs. 20,50,000/-, Rs. 40,00,000/-, Rs. 75,000/- and Rs. 25,000/- towards Capital Fund, Reserve Fund, Research & Publication Fund and Staff Welfare & Medical Fund respectively, has been made in the Income and Expenditure Account during the year, which needs approval of the Finance Committee/Board of Governors.  
b) After making the provisions, there is an excess of Income over Expenditure of Rs. 19,431.14 during the year 2022-23, which has been transferred to the Balance Sheet
12. A Writ Petition filed against his termination by Dr. Jesim Pais, former Assistant Professor, in the High Court of Delhi against the ISID during the year 2016-17 is still pending in the court. However, contingent liability has not been ascertained.
13. Reconciliation of Fixed Assets is to be done.
14. The balances outstanding in the name of various parties are subject to confirmation.

15. The accounting standards issued by ICAI are not mandatorily applicable to charitable trusts. However, they are complied to the extent possible.
16. The previous year's figures have been regrouped, rearranged and reclassified wherever considered necessary to confirm to this year's classification.

**For M/s H.S. Ahuja & Co.**

*Chartered Accountants, New Delhi*

(Jaswant Singh)  
Partner  
Mem. No. 095483

(Jeet Singh)  
Accounts Officer

(Nagesh Kumar)  
Director

(S K Misra)  
Chairman

Dated: 13.09.2023

### ISID Corpus Fund

The Department of Economic Affairs, Ministry of Finance (MOF), Government of India has provided a Corpus Fund of Rs 1,00,00,000/- (Rupees one crore only) to the Institute in March, 1995. The Corpus is managed by a Corpus Fund Management Committee constituted by the Board consisting representative of MOF and the Institute's nominees as members. As per the Rules of the Corpus Fund the amount shall be kept intact and only the interest income from investments be used to match the ICSSR grants and for research and development expenditure of the Institute. Accordingly, Fund is currently invested in a Fixed Deposit Receipt (FDR) with PNB Housing Finance Limited in October 8, 2022 for a period of 60 months carrying an interest rate of 7.40 per cent per annum.



The Institute for Studies in Industrial Development (ISID) is a public-funded, non-profit, autonomous institution dedicated to conducting policy research, advocacy, capacity-building, and outreach activities to foster the industrial transformation of India.

Registered on October 7, 1986, under the Indian Societies Registration Act 1860, ISID in 1988, became one of the institutions that are supported by the Indian Council of Social Science Research (ICSSR), (Government of India), through grants-in-aid. Since 2006, the Institute operates from its own well-appointed campus located in the Vasant Kunj Institutional Area in South Delhi.

The research themes and key projects are classified under following broad thematic areas,

- Industrial Structure, Employment, and Policies
- Corporate Governance and Industrial Financing
- Leveraging MSMEs and Start-ups for Industrial Transformation
- Globalization, FDI, and Trade
- Technology, Innovation and Industry 4.0
- Green Industrialization
- Spatial Dimensions of Industrial Development and Industrial Infrastructure
- Sectoral Studies on Competitiveness of Indian Manufacturing

ISID is recognized as a Scientific and Industrial Research Organization (SIRO) by the Government of India. It is also listed on DARPAN portal of NITI Aayog (India's Planning Agency) as a recognized think-tank. It is also a member of the Asia-Pacific Research Network on Trade (ARTNet) and the South Asia Network on SDGs (SANS) of the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). ISID's Databases and e-resources are accessed by the academic community across the country through the Information and Library Network (INFLIBNET) Centre of the University Grant Commission (UGC).

**ISID** Institute for Studies in Industrial Development  
An institution of Indian Council of Social Science Research (Ministry of Education)

**Policy Research to Foster India's Industrial Transformation**

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