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CENTRE FOR DEVELOPMENT ECONOMICS

THE TWENTY - NINTH ANNUAL REPORT

(April 2021 - March 2022)

Centre for Development Economics

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1. INTRODUCTION

The Centre for Development Economics (CDE) was established as a non-profit society in 1992. It began effectively functioning from early 1993, with the full range of activities picking up only in late 1993 after it received an endowment grant from the Ministry of Finance, Government of India. It is located at the Delhi School of Economics. The Centre promotes collaboration with other institutions and individuals interested in economics and development policy. It acts as a research adjunct to the Department of Economics, augmenting the infrastructure and providing research support. It hosts visitors, organizes conferences and workshops, houses faculty research projects, offers fellowships to masters and doctoral students, and engages with the government on matters of economic policy.The CDE also runs an active seminar series, holds occasional public lectures in collaboration with the Department of Economics, and publishes a working paper series to disseminate research by its members and their collaborators. A nationally recognized flagship event of CDE is its annual Winter School. It comprises invited lectures by internationally renowned economists including Nobel Laureates, and contributed papers by early career researchers who get an opportunity to be mentored by experts.The Centre has a well-equipped computer lab with latest software and hardware for meeting the research and training needs of MA, MPhil and PhD programs of the Department of Economics. It also has an archive of major data sets and a library for use by local researchers. The Centre is managed by a Council of eight members, elected for a two-year term from among the members of CDE, who are all faculty and ex-faculty of the Department of Economics.

The activities of CDE are funded by interest income from two endowment grants from the Ministry of Finance, from project income, and from contributions by individuals and institutions interested in promoting the goals of the Centre. In addition to the endowment grant in 1993, the Centre received a corpus fund from the Ministry of Finance in 2012 for hosting visitors and awarding fellowships for doctoral and post-doctoral students. It has also received project support from various ministries of the Government of India, the Reserve Bank of India, ICSSR, the European Union, the Bill and Melinda Gates Foundation, and the Research Council of Norway, among others.

During the period April 2021 to March 2022, members of the department continued to contribute to the field of economics and development studies in significant ways. Several faculty members published their research in leading national and international academic journals. They also participated in policy debates through writings in popular journals and newspapers. The Department remains a UGC Centre of Advanced Study. For the ninth consecutive year, it was ranked the highest amongst university economics departments in India by RePEc, a global electronic archive of working papers and publications in economics (https://ideas.repec.org/top/top.india.html). Faculty members also participated in several national and international conferences. During the year under review, despite the dislocation caused by the Covid-19 pandemic, the CDE organized its annual Winter School and maintained its weekly seminar series that brought in many distinguished speakers.

The composition of the current Council for the period 2022-2023 is:

Dibyendu Maiti	**Sugata Bag**
Executive Director	Managing Director
Swati Saini	**Paramjit**
Secretary	Treasurer
Soumendu Sarkar	**Anish Gupta**
Member	Member
Uday Bhanu Sinha	**Surender Kumar**
Member	Member ex-officio (Head, Economics Department)

The following staff members support the activities of CDE:

Deepika Garg	**Rajesh Papnai**
Manager	Senior Office Assistant
Raju Chauhan	**Sonveer Vats**
Systems Administrator	Junior Systems Administrator
Mritunjay Singh Bisht	**Ashok Kumar**
Office Assistant	Junior Office Assistant

CDE accounts are maintained by chartered accounts **Jayaraman & Co**. and are audited by the firm **Thakur, Vaidyanath, Aiyar & Co**. The accounts are periodically audited by the Comptroller and Auditor General of India.

2. CONFERENCES AND WORKSHOPS

WINTER SCHOOL 2021

Winter School 2021 was jointly organized by the Centre for Development Economics (CDE), the Econometric Society, and the Department of Economics at the Delhi School of Economics (DSE), with financial support from EXIM Bank and others. It was held over the period December 15-18, 2021 in virtual mode.

Participants in the Winter School were selected largely from graduate students and junior faculty who responded to a Call for Papers. From about 252 high-quality submissions, 168 were chosen, and their authors were invited to attend the lectures as well as present their papers as contributed, conference talks.

There were approximately eighty participants from Indian institutions, ten from other Asian countries, twenty from U.K, and fifty from USA. Their papers spanned a broad set of fields, including Microeconomic Theory, Game Theory, Macroeconomics, Econometric Theory, Labour Economics, Industrial Organization, International Trade, Choice Theory, Gender Discrimination, Auction, Market Design, Information, Development Economics, Environmental Economics, Education, Pandemic, Monetary Policy, Political Economy, and Public Economics. Thanks to a generous grant from the Econometric Society, prizes were awarded to the best four papers.

The following lectures were given by the invited speakers:

- **Tafyun Sonmez(Boston College):**
  Market Design, Matching Theory
  Webpage: https://www.tayfunsonmez.net/

- **Michael Woodford (Columbia)**
  Behavioural & Experimental, International Macroeconomics, Macroeconomics, Monetary Economics
  Webpage: https://econ.columbia.edu/econpeople/michael-woodford/

- **Whitney Newey (MIT)**
  Econometric Theory
  Webpage: https://economics.mit.edu/faculty/wnewey

- **Mark Rosenzweig (Yale)**
  Development Economics
  Webpage: https://economics.mit.edu/faculty/wnewey

Workshops

Workshop on Spatial Statistics and Spatial Econometrics:
A workshop on the topic "Spatial Statistics and Spatial Econometrics" was conducted by Gaurav Arora (IIITD). This workshop includes Lectures and Practical Sessions on Saturday, 26 June 2021 from 10:00 AM to 2:00 PM IST and on Thursday, 1 July 2021 from 2:00 PM to 6:00 PM IST.

PUBLIC LECTURES

Date	Speaker	Topic
10th June 2021	Melissa Dell Harvard University	Persistence and Transformation in Economic Development

3. FELLOWSHIPS AND SCHOLARSHIPS

POST-DOCTORAL FELLOWSHIP

The CDE instituted a post-doctoral fellowship in 2015. Recent PhD graduates as well as those who have submitted their PhD thesis but are yet to be awarded their degree are eligible. The fellowship helps the candidate engage in research before holding a formal academic position. During 2021-22 the fellowship was awarded to **Dr. Salman Haider (School of Economics, University of Hyderabad).**

DOCTORAL FELLOWSHIPS

The CDE offers monthly stipends to meritorious doctoral candidates who are not in receipt of any other financial support. The fellowship is offered to one student from each cohort for a period of up to five years. This year the fellowship was awarded to Ms. Gunjan Khandelwal from 2021 PhD batch. Also, Ms. Mrinalini Jha, a PhD student from batch 2014 who was awarded with this fellowship has successfully completed and received her degree in 2021.

KRISHNA RAJ TRAVEL FELLOWSHIPS

In 2006, the Sameeksha Trust established the Krishna Raj Summer Travel Fellowships, in memory of the longest serving editor of Economic and Political Weekly (EPW). It has been housed at CDE since its initiation. Under this programme masters' students from Economics, Sociology and Geography conduct fieldwork-based short research projects, either individually or in groups. Inter-disciplinary research collaborations are particularly encouraged. This research is conducted in the summer vacation and is followed by a written report and presentation. Some of the best papers from this fellowship have been published in the EPW over the years. Due to the prevailing situation

which made it impossible to send students out for fieldwork, the fellowships were not awarded in 2021-22.

M.A. SCHOLARSHIPS

CDE houses the Suresh Tendulkar Fund from which two masters' scholarships are awarded annually in memory of the late Prof. Tendulkar. In 2019, the Arjun and Jayashree Sengupta Scholarship was endowed by Mrs. Jayashree Sengupta, in memory of her husband Prof. Arjun Sengupta. It is to be awarded every year to a woman student in the first year of the M.A. class. After Mrs Sengupta passed away in 2020, the scholarship was renamed in both their names at the request of their daughter, Prof. Madhura Sengupta. These scholarships are awarded in consultation with the Department of Economics.

LATE DR. HARSH MALHOTRA MEMORIAL SCHOLARSHIP

CDE houses Dr. Harsh Malhotra Memorial Scholarship from which a student whose paper is accepted for publication in a sufficiently good journal or presented at International Conference will be awarded annually. In 2021-22, the scholarship was awarded to Ms. Jaya Jumrani and Ms. Archana Dang for their Best Papers. These scholarships are awarded in consultation with the Department of Economics.

4. JOURNALS

INDIAN ECONOMIC REVIEW

Indian Economic Review, the journal of the Department of Economics, Delhi School of Economics, published 23 articles in 2021, including 1 Public Lecture, 2 Policy Review papers and 2 book reviews. There were about 75,000 downloads of articles in 2021. A total of 245 submissions were made with 21 days taken for the first decision. In June 2021, the tradition of IER Annual Public Lecture was revived. The lecture titled "Persistence and transformation in economic development" was delivered by Melissa Dell, Professor of Economics at Harvard University and John Bates Clark Medal awardee in 2020. The event was LIVE streamed on YouTube and has been viewed by about 1650 people so far. The two policy review papers published in 2021 are "Central bank equity: facts and analytics" by Sujan Bandyopadhyay, Rishab Devnani, Sudipta Ghosh and Amartya Lahiri (June 2021) and "The long reach of COVID-19: multilateral policy priorities to limit persistent divergences" by Gita Gopinath, Petya Koeva Brooks, and Malhar Nabar (December 2021)

5.ONGOING RESEARCH PROJECTS

5.1 INTERNATIONAL TRADE, UNEVEN GAINS AND THE ROLE OF ICTS

Principal Investigators:	**Dibyendu Maiti (CDE) jointly with Dr. Kenmei Tsubota, Institute of Developing Economics, Japan External Trade Organization, Japan**
Funding agency:	**Indian Council of Social Science Research (ICSSR) India & Japan Society for Promotion of Science (JSPS)**
Project tenure:	**April 2020 - March 2023**

Growing evidences show that that gains from trade are uneven in number of countries. This work proposes to investigate whether access to ICTs reduces uneven gains from trade between regions, locations and income groups. Better understanding of the distributional impact of international trade is one of the crucial tasks pursued in the recent literature of international economics.

5.2 DOES PRIVATIZATION IMPROVE QUALITY OF ROADS? EVIDENCE FROM INDIA

Principal Investigators:	**Ram Singh (CDE), Edward Glaeser (Harvard University) and Andrei Shleifer (Harvard University)**
Funding agency:	**Harvard University**
Project tenure:	**March 2020 – July 2023**

Does private participation improve quality of roads? The project research aims to examine this question and various issues by examining Public Private Partnerships (PPPs) in road construction. Many highway (interstate road) projects in India have been built with private sector firms in the dominant role for building and maintenance of the roads. In a typical 'private' road, the contractor firms take responsibility to build the roads. The contractor firms are required to fund the project upfront. Moreover, the contractors are responsible for the upkeep of the roads during operation and maintenance phase of the project. In other words, private roads are built by delegating to the contracting firms most of engineering, control and management's decision related to building and maintenance of road assets, though the government retains de-jure the ownership rights over the roads. The project investigates the following issues related to privatization of roads. Are private

highways better maintained than public highways? Why might PPP roads be better maintained in India? Do PPP contractors expend effort to destroy values of substitute facilities? What are the key take-aways from the Indian experience with PPPs from a policy view point?

5.3 CHALLENGING INEQUALITIES: AN INDO-EUROPEAN PERSPECTIVE

Principal Investigators:	**Ashwini Deshpande and Rohini Somanathan (CDE); Arunava Sen and Abhiroop Mukhopadhyay (Indian Statistical Institute Delhi); Shabana Mitra (Indian Institute of Management Bangalore).**
Funding agency:	**European Union and ICSSR**
Project tenure:	**January 2019 - December 2022**

This project is based across four countries: India, UK, Norway and France, under the aegis of the EU-India Platform for the Social Sciences and the Humanities (EQUIP). The funding for the Indian component comes from the Indian Council for Social Science Research. Multiple researchers are working collaboratively on a range of sub-themes under the overall theme of inequality, such as measurement of inequality, attitudes towards inequality and fairness, and policies to mitigate inequalities.

Ashwini Deshpande (in collaboration with Veronique Gille and Rajesh Ramachandran) is working on an experiment to gauge attitudes towards affirmative action in order to understand whether beneficiaries are stigmatised on account of their group identity or because of preferential treatment. The project also seeks to understand if beneficiaries of class or means- based AA are as stigmatised by their peers as those receiving group based preferential treatment.

Abhiroop Mukhopadhyay is working on spatial inequalities. This project sought to calculate and understand drivers of local inequalities. Predictions of these spatial inequalities have been completed using machine learningand step-wise regression prediction methods. The latter was found to do better given the data in India. The village level inequalities, predicted by our model, are being currently validated using SECC village data that reports measures of income for one year of the period of our study. Once completed, the project will enter its final phase of understanding the drivers of these inequalities.

Arunava Sen (with Nicolas Gravel and Sarvesh Bandhu) is working on Theoretical Measures of Segregation. Segregation is obviously an important aspect of social relations in a society. It has however, received less theoretical attention than for instance, various forms of inequality. The project is working on developing a segregation index, which would indicate the "lack of

interaction" between communities. The authors are working on analysing the relationships between concrete measures of segregation.

5.4 STUDY VACCINE MARKET MODELS

Principal Investigators:	**Rohini Somanathan and Parikshit Ghosh**
Funding agency:	**Bill and Melinda Gates Foundation**
Project tenure:	**Jan 2020- Dec 2022**

The grant is being used to fund research on policies for providing universal access to affordable vaccines while providing incentives to vaccine manufacturers to invest in capacity and research and development. The theoretical research considers endogenous entry in single object procurement auctions with asymmetric suppliers. The potential suppliers decide to enter the auction before realizing their per-unit cost. Suppliers incur a fixed cost for entry into the auction. We characterize the optimal procurement auction in such an environment. We then study a two-period model, where a single object is procured in every period from the same potential set of suppliers. In the first period, suppliers are symmetric but suppliers who win the contract in the first period get cost (distribution) advantage in the second period. We apply our result to derive sufficient conditions on how cost distribution changes in the second period under which procuring from multiple suppliers (split award) is optimal in the first period.

On the empirical side, a systematic study of episodes of vaccine shortages or declining vaccine prices, globally or in India, will enable us to understand factors that may result in price or quantity shocks. Procurement data from UNICEF, WHO and particular countries will be analysed to understand long-term trends. Finally, using information on procurement policies of different agencies /countries, and their procurement data we will attempt to identify links between policy and outcomes.

6. COMPLETED RESEARCH PROJECTS

6.1 PUBLIC POLICY RESEARCH SUPPORT GRANT

Principal Investigators:	**Mausumi Das, Parikshit Ghosh, and Rohini Somanathan**
Funding agency:	**Bill and Melinda Gates Foundation**
Project tenure:	**November 2017 - December 2021**

The Social Research Hub at the Centre for Development Economics was set up to bring technical knowledge to policy analysis in India. In the last year the activities funded by the grant included research projects and workshops.

On the research front, our research projects have focused on issues related to COVID. A research project was undertaken to examine the impact of Covid on household spending

including expenditure on health, and how it varies across households belonging to different income groups. This study uses Consumer Pyramid Survey (CPHS) conducted by the Centre for Monitoring Indian Economy (CMIE). Another study was undertaken to examine the impact of Covid on households which were affected by the Delhi Riots in February 2020 based on data from primary surveys conducted in various parts of North-East Delhi. The primary motivation of this study was to examine households' coping strategies when faced with adverse income shocks such as the Covid-19 lockdown. Two other papers focus on the impact of the pandemic on global value chains and examine India's welfare architecture in light of the situation created by Covid. Finally, the grant has also been used to start a study that examines how communities with different institutional contexts and socio-economic environments were affected by a massive exogenous shock. This project is in collaboration with the NGO SRIJAN which is currently active in 12 locations that span four districts of Rajasthan, six districts of Madhya Pradesh and two districts of Chhattisgarh.

The grant has also funded a policy report that includes an analysis of conditional cash transfer schemes for the girl child in India. This report studies the evolution and coverage of 132 CCT schemes launched to uplift the status of the girl child in the country between 1980 and 2019.

SERI Workshop 2021: A three-day virtual workshop was held from 17-19 July, 2021 in collaboration with the Institute of Economic Growth (IEG) and the Society for Economic Research in India (SERI). The participants and discussants included many well-known academics across the world. Several public policy papers were presented on themes related to the grant.

6.2 INDUSTRIALIZATION AND SOCIAL UNREST

Principal Investigators:	**Anish Gupta (CDE), Mousumi Biswas (Sri Aurbindo College) and Amulaya Sahoo (Shyama Prasad Mukherjee College)**
Funding agency:	**Indian Council of Social Science Research (ICSSR)**
Project tenure:	**May 2019 - December 2021**

The spurt in industrial disputes and social unrest in Tamil Nadu have had a profound and enduring impact on the industrial development of the state. Though it features in the seven most industrialised states, yet the share in industrial disputes is approximately half of all such contentions registered during the last decade. This has led to rapid closure of industrial units in the state, of which manufacturing units constituted almost 94 percent. Its effects are now evident in the form of the falling share of regular workers, increasing casualisation of labour, fall in the credit to industries, etc. On the other hand, the spiralling of social unrest is leading to stalled developmental projects.

The outcome of this research project is publication of one research paper and one article in a newspaper. Two research papers have been submitted in reputed journals, whose decision is still pending. The report will be published after receiving the reviewer's comments.

6.3 DISAGGREGATED INDUSTRY LEVEL PRODUCTIVITY ANALYSIS FOR INDIA: THE KLEMS APPROACH

Principal Investigators:	**K. L. Krishna (CDE), Deb Kusum Das (Ramjas College, University of Delhi), B N Goldar (IEG), Suresh Aggarwal (University of Delhi), Abdul Azeez Erumban (University of Groningen) and Pilu Chandra Das (Kidderpore College, Kolkata)**
Funding agency:	**Reserve Bank of India**
Project tenure:	**January 2015 – April 2021**

The objective of the project is measurement and analysis of factor productivity in 27 industries comprising the Indian economy since 1980-81. The project uses the KLEMS methodology developed by Dale Jorgenson (Harvard University) and his associates, as part of the World KLEMS Initiative, which has been implemented in many countries across the world. Datasets on measures of output and factor inputs for the years 1980-81 onwards are being constructed for 27 industries, broad sectors and the total economy, using official data sources, such as NAS (National Accounts Statistics), ASI (Annual Survey of Industries), NSS Employment-Unemployment Surveys/Periodic Labour Force Surveys and Input-Output Tables (CSO).

The following outputs are part of the India KLEMS project during the year 2021-22.

1. Indian KLEMS database 2020 and the associated Data Manual were submitted to the RBI, which was later released by the RBI.
2. Two research papers were submitted to the RBI: (1) 'Labour income share in Indian industries: 1980-2017' by Bishwanath Goldar, Suresh Chand Aggarwal and Pilu Chandra Das; (2) 'Internal Rate of Return in Indian Industries: Estimates Using KLEMS Data' by Abdul A Erumban
3. A training program for RBI officers on the construction of the KLEMS database had begun in 2020-2021, and a major part was done during Dec 2020 to March 2021. The remaining part of this training program was completed during April- May 2021.
4. The draft of "India Productivity Report (IPR)" was submitted to the RBI in January 2022. RBI sent the draft to two Referees for comments.

7. HONOURS/DISTINCTIONS

BHATTACHARJEA, ADITYA

- Member, Board of Studies, Economics Division, Indian Institute of Foreign Trade (Deemed University), 2017 – present.
- Member, Board of Studies, Faculty of Economics, South Asian University, 2020 – present.
- Distinguished Fellow (Non-Resident, Honorary) Indira Gandhi Institute of Development Research (IGIDR)
- Member, Editorial Board, *Indian Economic Review*
- Member, Editorial Advisory Board, *Indian Journal of Labour Economics*
- Member, Editorial Board, *Competition Commission of India Journal on Competition Law and Policy.*

DUA, PAMI

- Nishtha Dhriti Satyam Samman, University of Delhi, 2021 (highest honour)
- Distinguished Fellow (Non-Resident, Honorary) Indira Gandhi Institute of Development Research (IGIDR)
- Member, Governing Body (Board of Management), Dayalbagh Educational Institute
- ***Member, Editorial Board***
  - Indian Economic Review
  - Journal of Quantitative Economics
  - Journal of Developing Areas
  - Reserve Bank of India Occasional Papers
  - Journal of Social and Economic Development
  - Journal of Economics and Policy Analysis
- ***Other***
  - Member, Governing Council, Centre for Advanced Financial Research and Learning (CAFRAL)

- Member, Governing Council, Madras Institute of Development Studies

GUPTA, ANISH

- Visitor's nominee in the Court of University of Hyderabad
- Member Executive Council (Visitor's nominee), University of Hyderabad

GUPTA, SHREEKANT

- President, Indian Society for Ecological Economics
- Associate Editor, Indian Economic Review
- Editorial Board, Agricultural and Resource Economics Review
- Editorial Board, Environment and Urbanisation, Asia Journal
- Lead Author, Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report

KUMAR, SURENDER

- Associate Editor, Frontiers in Climate - Climate and Economics, since March 2021
- Associate Editor, Ecology, Economy and Society—the INSEE Journal, Since March 2019
- Member, Editorial Board, Economics of Disasters and Climate Change (A Springer Journal)
- Member, Editorial Board, Indian Economic Review, since 2015

MAITI, DIBYENDU

- Member, Core Group on Policy and EoDB for Ministry of Small and Medium Enterprises under the CII National MSME Council, since 2018
- Associate Editor, Progress in Development Studies, Sage, Sept 2018 - present
- Honorary Professor, University of Fiji, Fiji Islands, 2022
- Member, Board of Studies, Department of Humanities & Social Sciences at the LNM Institute of Information Technology, Jaipur, since April 2021

MEENAKSHI, J V

- Associate Editor, *Indian Economic Review*

SINGH, RAM

- Member, Board of Governors, the Indian Institute of Corporate Affairs, Ministry of Corporate Affairs, Government of India
- Member, Board of Governors, Centre for Development Studies, Thiruvananthapuram
- Chairman, Governing Body, Agriculture Economics Research Centre
- Senior Fellow (Social Sciences), Institute of Eminence, University of Delhi

SINHA, UDAY BHANU

- Editor-in-Chief, *Indian Economic Review*
- Member, Academic Council, Institute of Economic Growth

SOMANATHAN, ROHINI

- Fellow of the Econometric Society
- Fellow of the International Economics Association (IEA)

8. FACULTY PUBLICATIONS

8.1 ARTICLES AND BOOK CHAPTERS

ADITYA BHATTACHARJEA

- "Labour Market Flexibility in Indian Manufacturing: A Critical Survey of the Literature", *International Labour Review*, 160(2): 197-217, 2021.
- "Predatory Pricing in India", *CPI Antitrust Chronicle*, Competition Policy International, January 2022.

- "Neither Crime nor (Much) Punishment: India's Cartel Penalty Practices" (with Oindrila De), forthcoming in Kaushik Basu and Ajit Mishra (eds), *Law and Economic Development: Behavioral and Moral Foundations of a Changing World*, Palgrave Macmillan, 2022.

ANISH GUPTA

- "Covid 19 and Market Failure: An Indian Experience", *Economic and Political Weekly*, Vol. LVII No. 8, 2022 (With Shweta Kohli)

- "Fiscal Space and Union Budget 2020-21", *Economic and Political Weekly*, Vol. LVI No. 21, 2021.

DIBYENDU MAITI

- "Political Stability of West Bengal: Prosperity or Decay?", *Economic and Political Weekly* (forthcoming), Jha, D; Ghatak, S. and Maiti, D. (2022)

- "The COVID-19 Pandemic: A Deadly Threat to Human Livelihoods and Development", *Progress in Development Studies*, 21(4), p 335-40, Maiti, D. and Locke, C. (2021)

- "The Enigma of Trade Creation or Diversion: Decomposition of Regional Trade Flows: A Study of Small Island Economies in the Caribbean and the South Pacific", *Journal of Asian Economic Integration*, 3(2), p. 1-24, Rai, K and Maiti, D. (2021)

- "Economic System, Viral Outbreaks, and the Crisis', Breakthrough" - *A Journal on Science and Society*, 22(1), Maiti, D. (2021).

MANISH KUMAR

- Concept of Development and Hegemonic World Order, in *Economic and Political Weekly*, Vol. 56, Issue No. 44, 30 Oct, 2021.

- Foodstuffs Market Regulation: The Essential Commodities (Amendment) Act, 2020 and after, in *Economic and Political Weekly*, Vol. 56, Issue No. 49, 04 Dec, 2021.

- On Some Aspects of Rural Labour in India at the Current Juncture, in *Labour and Development*, Vol. 28, Issue No. 2, December 2021.

- Smallholders in the rice value chain of Bangladesh and India (Co-authored with Jakir Hossain and Ismail Karatepe), in Ismail Doga Karatepe and Christoph Scherrer (Eds) The Phantom of Upgrading in Agricultural Supply Chains: *A Cross-Country, Cross-Crop Comparison of Smallholders, Nomos Verlagsgesellschaft, Baden-Baden, Germany* 2021.

- Contours of Contract Farming in the Asian Region: Studies from India (Co-authored with Praveen Jha, Nivedita Sharma, Gurpreet Singh, Santosh Verma), in Praveen Jha, Paris Yeros,

Walter Chambati, Freedom Mazwi (Eds) Farming and Working under *Contract: Peasants and Workers in Global Agricultural Value Systems, Tulika Books*, New Delhi, 2022.

- Global Agricultural Value Systems and Women: Field Study Lessons from India (Co-authored with Twinkle Siwach), in Praveen Jha, Paris Yeros, Walter Chambati, Freedom Mazwi (Eds) Farming and Working under Contract: *Peasants and Workers in Global Agricultural Value Systems, Tulika Books, New Delhi*, 2022

PAMI DUA

- "Regime Shifts in the Behaviour of International Currency and Equity Markets: A Markov-Switching Analysis" (with D. Tuteja), *Journal of Quantitative Economics*, 2021, 19, 309-336.
- "Inflation Persistence in India" (with D. Goel), *Journal of Quantitative Economics*, 2021, 19, 525-553

PARAMJIT

- Efficiency Assessment of Sewage Treatment Plants for Treating Wastewater: Case Study of Narela Sewage Treatment Plants in Delhi, India. In: Mishra, R.K., Singh, R.B., Dubey, A. (eds) *Sustainable Climate Action and Water Management. Advances in Geographical and Environmental Sciences. Springer, Singapore*. (With Yadav, S., Anand, S.) (2021).

RAM SINGH

- Equilibria under Negligence Liability: How the Standard Claims Fall Apart (with Allan M Feldman, Brown University, USA), *Review of Law and Economics*, 17 (1), 2021, pp. 1-33.
- Covid-19 and Contractual Disputes in India: A Law and Economics Perspective, (with Utkarsh Leo, NALSAR University), *Economic and Political Weekly, Research Article, Vol. 56*(16), 2021, pp. 37-43.
- Settlements and Resolutions under the Insolvency and Bankruptcy Code (with Hitesh Thakkar, GNLU), *The Indian Economic Journal, 69* (1), 2021, pp 1-16.

ROHINI SOMANATHAN

- "The Impact of Temperature on Productivity and Labor Supply: Evidence from Indian Manufacturing" (with Anant Sudarshan, E. Somanathan and Meenu Tiwari) *Journal of Political Economy* 129(6), 1797-1827.

- Language and learning in ethically mixed communities" (with Hemanshu Kumar and Mahima Vashishth), *Review of Development Economics(forthcoming).*
- "Meritocracy and Representation" (with Rajiv Sethi), *Journal of Economic Literature(forthcoming).*

SHREEKANT GUPTA

- "Introduction and Framing" (With M. Grubb and co-authors). In Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. *Cambridge University Press*. doi: 10.1017/9781009157926.003
- "Summary for Policymakers" (multiple authors). In Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. *Cambridge University Press.* doi: 10.1017/9781009157926.001

SOUMENDU SARKAR

- Optimal mechanism for land acquisition. *Review of Economic Design* 26, 87–116 (2022)

SURENDER KUMAR

- Kumar, S., and Jain, R. K., "CO2 Mitigation and Employment: Evidence from India", *Data Envelopment Analysis Journal (forthcoming).*
- Kumar, S., and Dua, Pratika, "Environmental Management Practices and Financial Performance: Evidence from Large Listed Indian Enterprises", *Journal of Environmental Planning and Management* vol. 65(1), pp. 37-61, 2022.
- **Kumar, S.,** Towards Sustainable Agriculture *(Organic Farming: Economics, Policy and Practices by Hari Ram Prajapati, Sage Publications, 2020), The Book Review, vol. 45, no. 10, October 2021 https://www.thebookreviewindia.org/towards-sustainable-agriculture.*

SWATI SAINI

- "The impact of trade with ASEAN on India's employment in industrial sector", *Journal of the Asia Pacific Economy,* DOI: 10.1080/13547860.2021.1976000 (with Devasmita Jena) (2021).

8.2 BOOKS

- **Dua, P. (ed.),** *Macroeconometric Methods: Applications to the Indian Economy, Springer Nature, Forthcoming.*
- **Somanathan, R.** *Difference without Domination: Pursuing Justice in Diverse Democracies.* University of Chicago Press (2020) (edited with D. Allen).

9. CDE WORKING PAPERS

Downloadable from Working Papers- 2022 (cdedse.org)

Continuing from reports of previous years

PAPER NO	AUTHOR	TITLE
Paper No. 317	Sugata Bag & Anirban Kar	"Made in Heaven, Matched by Parents":Does Arranged Marriage Restrict Labour Market Autonomy and Participation of Women ? Theory and Evidence from India
Paper No. 318	Sudhir A. Shah	Either/Or: Best reply versus dominance
Paper No. 319	Soumendu Sarkar & Dhritiman Gupta	Bargaining for Assembly
Paper No. 320	Soumendu Sarkar	Strategyproof and Budget Balanced Mechanisms for Assembly
Paper No. 321	Harsh Malhotra	Why Healthcare CCTs may not Improve Children's Health: Insights from India's Janani Suraksha Yojana
Paper No. 322	Harsh Malhotra	How Does Caste Shape Vulnerability to Violent Crime in India?
Paper No. 323	Payal Mitra, Soumendu Sarkar, Tarun Mehta & Atul Kumar	Unit Commitment in a Federalized Power Market: A Mixed Integer Programming Approach
Paper No. 324	Abhirupa Das & Uday Bhanu Sinha	Microfinance institution and moneylenders in a segmented rural credit market

10. SEMINARS ORGANISED

Date	Speaker	Topic
1st April 2021	Stefan Voigt University of Hamburg	The economics of emergency constitutions – with a special focus on India
8th April 2021	Anirban Mukherjee Calcutta University	Economic Geography of Contagion: A Study on COVID 19 Outbreak in India
23rd April 2021	Deepti Goel, Azim Premji University, Bengaluru	Drivers of Student Performance: Evidence from Higher Secondary Public Schools in Delhi
8th July 2021	Komal Sahai Indian Statistical Institute, Delhi	What Can (not) Explain the Gap? Evidence and Decomposition of Gendered Stream Choice in India
22nd July 2021	Jaideep Roy University of Bath and Shiv Nadar University	Democracy and the Marginalized
29th July 2021	Kadambari Prasad Vice President, Compass Lexecon	To talk or not? Competitive effects of information exchange between market makers
5th August 2021	Sandra Mortal and Vishal Gupta University of Alabama	Gender and Managerial Job Mobility: Career Prospects for Executives Displaced by Acquisitions
19th August 2021	Pallavi Choudhuri (NCAER) and Sonalde Desai (University of Maryland)	Lack of access to clean fuel and piped water and children's educational outcomes in rural India TBA
17th September 2021	Debopam Bhattacharya University of Cambridge	Incorporating Social Welfare in Program: Evaluation and Treatment Choice
1st October 2021	Sam Asher Johns Hopkins University	The Long-run Development Impacts of Agricultural Productivity Gains: Evidence from Irrigation Canals in India

28th October 2021	Mrinalini Jha (Post-Doctoral Fellow) Azim Premji University and Rahul Lahoti (Researcher) ETH Zürich	Who was Impacted and How? Poverty and Inequality in Covid times in India
2nd December 2021	Anjali Priya Verma Department of Economics, The University of Texas at Austin	Disruptive Interactions: Long-run Peer Effects of Disciplinary Schools
10th December 2021	Sujata Visaria Hong Kong University of Science & Technology	Clientelism and Ideology: The Rise of Hindu Nationalist Politics in a Former Left Stronghold
30th December 2021	Srishti Yadav Department of Economics, University of Manitoba, Canada	Caste, Diversification, and the Contemporary Agrarian Question in India: A Field Perspective
6th January 2022	Rohit Azad Jawaharlal Nehru University	The Indian Green Deal
13th January 2022	Ruhi Sonal IIT Jodhpur	Sequential Entry and Perfect Equilibrium
10th February 2022	Devika Dutt University of Southern California in Los Angeles, California	Exorbitant Privilege or Ultimate Responsibility: Access to the International Lender of Last Resort
24th February 2022	Ranjan Ray Monash University, Australia	Can Cultural Links and Shared Language Transcend Country Divide? Evidence from West Bengal (India) and East Bengal (Bangladesh) on Fertility Rates
17th March 2022	Alex M. Thomas Azim Premji University	Economic Crises and/in Economics Education

11. SEMINAR/CONFERENCE PRESENTATIONS

ADITYA BHATTACHARJEA

- "Economics of Multi-sided Platforms: Implications for Antitrust Enforcement", International Symposium on 'The Digital Economy and Competition Law', Bennett University, July 2021.

DIBYENDU MAITI

- "ICT for Wellbeing and Social Connectivity", World Summit on the Information Society Forum 2022, Geneva, 13th April
- "Contemporary Challenges to Labour Relations in India", Organised by University of Manchester (UK) and Daulat Ram College, 9th April 2022
- 'Post-COVID Recovery and Long-run forecasting of Indian GDP with FECM', Bengal Economic Association, 13 March 2022
- 'Digital India: Prospects and Challenges', Daulat Ram College, University of Delhi, 26th February 2022
- 'Digitalising South Asia: Who Benefits?', South Asia Centre, London School of Economics, 28 Oct 2021
- 'Contemporary Issues of Indian Economic Development', Annual Conference, Bangiya Arthaniti Parishad and Acharya Jagadish Chandra Bose Collage, 8th Sept 2021
- 'Ecological Fiscal Transfer', Indian Institute of Forest Management, Bhopal, 13th Aug 2021

MANISH KUMAR

- 'Agricultural Markets in Bihar: Constraints and Opportunities', hosted by Patliputra School of Economics, Aryabhatta Knowledge University, Patna, 17 December 2021

PAMI DUA

- "Analysis of Synchronization of Cycles of BRICS Economies," BRICS Network University DSE-ISI Conference, November 2021 ;]

SHREEKANT GUPTA

- "Impact of Climate Change on Indian Agriculture" at *Centre* for Social and Economic Progress (*CSEP*), New Delhi, February 2022.

SURENDER KUMAR

- 'Big-tech Firms: emerging market conditions and regulations' Invited seminar, Chaudhari Bansi Lal University, Bhiwani, January 22, 2022.

- 'Getting to Net Zero: India's carbon mitigation strategy' Valedictory address, International Conference on "Replenish, Restructure & Reinvent: Technology Fueled Transformation for Sustainable Future", Vivekananda Institute of Professional Studies, Delhi and College of Information Science and Technology, University of Nebraska, Omaha, USA, January 22, 2022.

- 'India's carbon mitigation strategy' National Symposium on Sustainable Development: Pathways to Save the Planet, BPS Mahila Vishwavidyalaya, Khanpur Kalan Sonipat, December 20, 2021.

- 'Regression and Causality: some concerns in empirical research', Valedictory address, Workshop on Econometric Methods for Economic and Business Research, Indian Institute of Technology, Roorkee, 10 December, 2021.

- 'Modelling pollution generation: theory and empirics', Refresher Course in Economics, Jawaharlal Nehru University, New Delhi, 28 September 2021.

- 'Distributional heterogeneity in climate change impacts and adaptation: Evidence from Indian agriculture' Invited session on 'Effects of Climate Change on the Agricultural Sector and Potential for Adaptation' organized by Professor Madhu Khanna, 31st Virtual International Conference of Agricultural Economics, August 17-31, 2021, International Association of Agricultural Economists.

- 'Economics of Climate Change', Faculty Development Program, UGC-Human Resource Development Centre, Panjab University, Chandigarh, 19 July 2021.

Review Statement of the Annual Report

Introduction and Major achievements of the Institute

The Centre for Development Economics (CDE) was established as a non-profit society in 1992. It began effectively functioning from early 1993, with the full range of activities picking up only in late 1993 after it received an endowment grant from the Ministry of Finance, Government of India. It is located at the Delhi School of Economics. The Centre promotes collaboration with other institutions and individuals interested in economics and development policy. It acts as a research adjunct to the Department of Economics, augmenting the infrastructure and providing research support. It hosts visitors, organizes conferences and workshops, houses faculty research projects, offers fellowships to masters and doctoral students, and engages with the government on matters of economic policy.

The CDE also runs an active seminar series, holds occasional public lectures in collaboration with the Department of Economics, and publishes a working paper series to disseminate research by its members and their collaborators. A nationally recognized flagship event of CDE is its annual Winter School. It comprises invited lectures by internationally renowned economists including Nobel Laureates, and contributed papers by early career researchers who get an opportunity to be mentored by experts.

The Centre has a well-equipped computer lab with latest software and hardware for meeting the research and training needs of MA, MPhil and PhD programs of the Department of Economics. It also has an archive of major data sets and a library for use by local researchers. The Centre is managed by a Council of eight members, elected for a two-year term from among the members of CDE, who are all faculty and ex-faculty of the Department of Economics.

The activities of CDE are funded by interest income from two endowment grants from the Ministry of Finance, from project income, and from contributions by individuals and institutions interested in promoting the goals of the Centre. In addition to the endowment grant in 1993, the Centre received a corpus fund from the Ministry of Finance in 2012 for hosting visitors and awarding fellowships for doctoral and post-doctoral students. It has also received project support from various ministries of the Government of India, the Reserve Bank of India, ICSSR, the European Union, the Bill and Melinda Gates Foundation, and the Research Council of Norway, among others.

During the period April 2021 to March 2022, members of the department continued to contribute to the field of economics and development studies in significant ways. Several faculty members published their research in leading national and international academic journals. They also participated in policy debates through writings in popular journals and newspapers. The Department remains a UGC Centre of Advanced Study. For the ninth consecutive year, it was ranked the highest amongst university economics departments in India by RePEc, a global electronic archive of working papers and

publications in economics (https://ideas.repec.org/top/top.india.html). Faculty members also participated in several national and international conferences. During the year under review, despite the dislocation caused by the Covid-19 pandemic, the CDE organized its annual Winter School and maintained its weekly seminar series that brought in many distinguished speakers.

Objectives

The Centre for Development Economics (hereinafter referred to as "CDE") was established as "Society" under The Societies Registration Act XXI of 1860 vide registration No. S-22900 of 1992 dated 6th May 1992 situated at Delhi School of Economics, University Enclave, Delhi-110007 with the following objectives:

a) To promote scientific research in development economics and related subjects.

b) The Centre promotes collaboration with other institutions and individuals interested in economics and development policy.

c) To act as a research adjunct to the Department of Economics, augmenting the infrastructure and providing research support.

d) To host visitors, organizes conferences and workshops, houses faculty research projects, offers fellowship to masters and doctoral students.

e) To engage with the government on matters of economic policy.

f) To run an active seminar series, holds occasional public lectures in collaboration with the Department of Economics, and publish working paper series to disseminate research by its members and their collaborators.

Grant-in-aid/Endowment

a. Endowment Grant

Endowments Grant received for specific purposes are carried to balance sheet and utilization/application are deducted there from.

Interest earned on Endowment Fund Investments are treated as additional Grants / Endowments to the extent of 50% of such income and the same is carried to Balance Sheet and is re-invested to maintain 'its real value' as per the rules framed by the Governing Body. The remaining 50% of the income is transferred to Income and Expenditure account for meeting the day to day running expenditure of the centre.

b. Corpus Fund

Corpus Fund has been set up with Corpus Grants sanctioned and released by The Government of India, Ministry of Finance, Department of Economic Affairs, during March 2012. As per the stipulations, 50% of the income earned the Corpus Fund Investment is reinvested to maintain 'its real value' and the remaining 50% of the such income is utilized for intended purpose

Dibyendu Maiti

Executive Director