Ravinder

Updated: November, 2025

Economics and Planning Unit
Indian Statistical Institute
7, S.J.S. Sansanwal Marg
New Delhi, Delhi 110016

E-mail: ravinder20r@isid.ac.in
Twitter: @Ravinder2303
LinkedIn: ravinder2303
Webpage: ravinder_webpage

Visiting Fellowships

- Visiting Scholar, Indira Gandhi Institute of Development Research (IGIDR), Mumbai, India.
  September-December 2025

- Visiting Ph.D. Fellow, United Nations University World Institute for Development Economics Research (UNU-WIDER), Helsinki, Finland.
  September-November 2022

Education

- PhD in Quantitative Economics, Indian Statistical Institute, Delhi   2020 - 2025 (Exp.)
  (Thesis Supervisor: Prof. Abhiroop Mukhopadhyay)

- Master in Science in Quantitative Economics (MSQE), Indian Statistical Institute, Delhi
  2018 - 2020

- Bachelor of Arts (honors) Economics, Kirori Mal College, Delhi University
  2015 - 2018

Research Interests

Human Capital, Development Macroeconomics, Economics of Education, Labour Economics, and Rural Economy.

Working Paper

- Castelló-Climent, Amparo, Abhiroop Mukhopadhyay, and Ravinder. Transforming rural economies through tertiary education: Evidence from India. No. 2023/89. WIDER Working Paper, 2023.
  Abstract: This paper analyses the role of tertiary-educated in rural development and shows that skilled workers can have an important impact on rural prosperity. Using census data in India, we find that a one percent increase in the share of village population with tertiary education raises per capita consumption by around 7.2 percent. The results hold with night-light density data and are not driven by lower levels of education, omitted variables, or atypical observations. Skilled workers affect the village economy by promoting agricultural productivity and participating in productive private jobs available in the village and nearby commutable areas.

- Foundational Skills and Labor Market Outcomes: Evidence from India (with Bipul Verma)
  Abstract: This paper investigates the causal impact of foundational literacy and numeracy on labor market outcomes in India. Despite substantial expansion in years of schooling, learning levels remain low, raising concerns about the economic returns to foundational skills. We impute foundational skills for working-age adults by training a machine learning model on test score data from the Indian Human Development Survey and applying it to the Periodic Labour Force Survey. To identify causal effects, we exploit quasi-experimental variation from the District Primary Education Programme within a fuzzy regression discontinuity design. The findings show that higher foundational skills substantially increase earnings, with effects robust to alternative specifications, bandwidth choices, and beyond the contribution of schooling years alone. These results highlight the centrality of learning quality, demonstrating that skill acquisition-rather than enrollment expansion-drives labor market success, and contribute to the broader literature on education, skills, and development.

Work in Progress

- Stream Choice: An Analysis of the Decline in Science Share (with Prachi Joshi)

- Higher Education and Entrepreneurship (with Abhiroop Mukhopadhyay)

- Spatial Distribution of Tertiary Education Institutions and Attainment in Rural Rajasthan: A Granular Village-Level Analysis

Master's Thesis

- Human Capital Inequality and Rural Income - The case of Rural India.
  Abstract: This paper estimates the impact of human capital inequality on rural income for 27 states of India at the village level, taking advantage of Census (2011) and Socio-Economic and Caste Census (2011) data. To address the endogeneity of human capital inequality and mean education, we use the distance to the nearest Catholic and Protestant missionaries (settled in the early 20th century) as an instrument. Our instrumental variable results find a positive effect of human capital inequality and mean education on mean income, while the interaction of these variables shows a negative effect on mean income. The IV results estimate that one standard deviation increase in human capital inequality increases mean income by 221%, and one year increase in mean education increases mean income by 136%. The results are robust to alternative measures of income, such as nightlight intensity. The possible mechanism to explain this relationship is through the occupation structure. Our results are robust and significant at the 1% level.

Other Writing

- Predicting School Education Outcomes in India: A Machine Learning Approach (with Priya Bareja).
  Abstract: Optimal policy design is a three-step approach —qualitatively capturing various dependencies relating input(s) to output(s), converting these qualitative insights into quantitative relationships that predict the output for various combinations of the inputs and finally, using this quantitative relationship to design optimal input combinations. This paper estimates a prediction model to predict the school learning outcomes for a given set of inputs like teacher characteristics, school infrastructure and health indicators of children. We merge

district-level data from four datasets on the National Data and Analytics Platform (NDAP) to get the features and target variables, and train sixteen machine learning algorithms on the data. We use K-fold cross validation and choose the algorithm with the least test error —the Extra Trees Regressor. Thus, learning outcomes produced with a given input combination can be predicted sufficiently accurately by the policymaker.

Award, fellowship and Grants

- Awarded with an OSF Grant to Attend the XXXI meeting of the Economics of Education Association. 2023

- Project (STEM Education and Economic Growth) Grant by Planning and Policy Research Unit (PPRU). 2023

- Visiting Ph.D. fellowship, UNU-WIDER, Helsinki, Finland. 2022

- First prize (with Priya Bareja) for best research paper and visualization using NDAP data organized by Niti Aayog, Govt of India. 2022

- Senior Research Fellowship, Indian Statistical Institute, Delhi. 2022 - ongoing

- Junior Research Fellowship, Indian Statistical Institute, Delhi. 2020 - 2022

- Masters Fellowship, Indian Statistical Institute, Delhi. 2018 - 2020

Conference and Workshop

- Teaching Assistant and Attendee of Workshop on Basics of Statistics & Econometric Methods at the Indian Institute of Public Health, Shillong. 24-28 November 2025

- Presented at Symposium on Gender Inequality in Indian Higher Education, Visva-Bharati University, Santiniketan. 04 November 2025

- Presented at 19th Annual Conference on Economic Growth and Development, Indian Statistical Institute Delhi. 19-21 December 2024

- Teaching Assistant and Attendee of Workshop on Data Analytics and Causal Design at the School of Economics at University of Hyderabad. 16-18 August 2024

- Presented at Recent Developments in Economics Research: Theory and Evidence, a conference hosted by Centre for International Trade and Development, Jawaharlal Nehru University, New Delhi. 07-08 March 2024

- Presented at the Meeting of Young Minds in Frontiers of Economics, a conference hosted by INET-YSI at Indian Institute of Technology Bombay. 20-22 February 2024

- Presented at the Winter School hosted by Delhi School of Economics, University of Delhi. 14-16 December 2023

- Presented at the XXXI Economics of Education Association meeting hosted by Santiago de Compostela University. 29-30 June 2023

- Attendee of the RISE Research Conference on Education Economics, Indian Institute of Management Ahmedabad (IIMA). 24-25 February 2023

- Presented at 17th Annual Conference on Economic Growth and Development, Indian Statistical Institute Delhi. 19-21 December 2022

- Presented in the Advanced Graduate Workshop on Poverty, Development and Globalization, Azim Premji University, Bangalore. 10-23 July 2022

- Teaching Assistant and Attendee of Political Economy Theory and Data Analysis Workshop at GIPE, Pune. 09-11 June 2022

Teaching

- Teaching Assistant for Workshop on Basics of Statistics & Econometric Methods at the Indian Institute of Public Health, Shillong. 24-28 November 2025

- Teaching Assistant for Econometric Method 1 January 2025 - July 2025

- Teaching Assistant for Workshop on Data Analytics and Causal Design at the School of Economics at University of Hyderabad. 16-18 August 2024

- Teaching Assistant for Econometric Method 1 January 2024 - July 2024

- Teaching Assistant for Econometric Method 1 January 2023 - July 2023

- Teaching Assistant for Pol. Eco. Workshop at Gokhale Institute of Politics and Economics (GIPE), Pune 09-11 June 2022

- Teaching Assistant for Econometric Method 1 January 2022 - July 2022

Other Professional Activities

- Discussant at the XXXI Economics of Education Association meeting hosted by Santiago de Compostela University. 29-30 June 2023

- Managing the Planning and Policy Research Unit (PPRU), a research center within the Economics and Planning Unit. January 2023 - Present

- Association for Mentoring and Inclusion in Economics (AMIE) Mentee. July 2022 - June 2023

- Coordinate weekly seminars at Economics and Planning Unit (with Prof. Debasis Mishra, Prof. E. Somanathan, and Vilok). June 2022 - July 2024

Software Skills

STATA, LaTeX, ArcGIS, Python and R.

References

Professor Abhiroop Mukhopadhyay,
Economics & Planning Unit,
Indian Statistical Institute,
7, SJS Sansanwal Marg,
New Delhi-110016, India.
Email: abhiroop@isid.ac.in
Phone: +91-11-4149-3925

Professor Amparo Castelló Climent,
Institute of International Economics,
University of Valencia,
46022 Valencia, Spain.
Email: amparo.castello@uv.es
Phone: +34-96-3828438

Professor Chetan Ghate,
Economics & Planning Unit,
Indian Statistical Institute,
7, SJS Sansanwal Marg,
New Delhi-110016, India.
Email: cghate@isid.ac.in
Phone: +91-11-4149-3938