

Sujaya Sircar

Website: <https://sites.google.com/view/sujayasircar/>

Email : sujaya.sircar@gmail.com

Mobile : +91-9971423415

Economics and Planning Unit
Indian Statistical Institute
7 SJS Sansanwal Marg
New Delhi 110016
India

RESEARCH FIELDS

Labour Economics, Environmental Economics, Development Economics

TEACHING FIELDS

Labour Economics, Environmental Economics, Development Economics, Econometrics, Statistics

EDUCATION

Indian Statistical Institute, Economics and Planning Unit <i>PhD student in Economics (thesis supervisor: Prof. Tridip Ray)</i>	New Delhi, India <i>2016 - current</i>
Jawaharlal Nehru University, School of International Studies <i>M.A. Economics (Centre for International Trade and Development, Specialization in World Economy)</i>	New Delhi, India <i>2014 - 2016</i>
Jadavpur University <i>B.A. Economics (Hons.)</i>	Kolkata, India <i>2011 - 2014</i>

PH.D DISSERTATION

A Weather Eye on Employment and Education: Essays on Employment Polarization, Technology and Human Capital Formation : under the supervision of Prof. Tridip Ray, Professor, Economics and Planning Unit, Indian Statistical Institute, Delhi (submitted for evaluation, July 2022).

WORKING PAPERS

Evolving Occupations or Occupation-status? Employment Polarization in the Context of Developing Countries (with Arka Roy Chaudhuri and Tridip Ray)

Abstract: This paper investigates the phenomenon of job polarization in the context of two developing countries – India and Indonesia. Advanced economies exhibit the phenomenon of job polarization which is characterized by employment rising in low- and high-wage occupations and contraction in middle-wage jobs. Our study provides a novel approach for studying employment polarization by considering organizational factors specific to labour markets in developing economies. We do not find evidence of job polarization, but record *occupation-status polarization* in India and Indonesia where status refers to the type of employment contract. To support our claim, we implement an endogenous clustering technique (mixture model) on Indian workers in 1983 and Indonesian workers in 1993. We show that worker statuses are likely to have different skills even within the same occupation. We posit that occupation-status should be the primary unit of analysis when studying job polarization in developing countries.

Do Clouds have a Silicon Lining for Firms? Contract Hiring and Computer Investment: Evidence from Rainfall Shocks (with Arka Roy Chaudhuri and Tridip Ray)

Abstract: Using Indian firm-level data from 2000 to 2010, we analyze how firms change hiring decisions due to change in computer capital, in the face of exogenous demand shocks, arising from district-level rainfall shocks. We find firms with greater than average share of computer capital, is associated with a decline in hiring or firing by 2.32 contract workers, when exposed to demand shocks. Our results are robust to a wide range of alternative measures such as computer capital share in expenditure, US based measures, among others. We also find that the results are driven by contract workers involved in the main production process (and not for workers carrying out peripheral activities). We conclude that firms investing relatively more in computer capital reduce the number of contract workers hired when exposed to positive demand shocks, suggesting labour-saving impact of technology at play.

The Heat is on: Temperature and Test Scores in India

Abstract: This study investigates the impact of temperature on exam scores. Studies have shown that heat has a negative impact on human cognition and physiology, leading to an adverse effect on economic outcomes such as health, labour productivity and human capital formation. I look at how exam-time temperature affects exam scores from a unique dataset from the Central Board of Secondary Education (CBSE) in India. I find that a one standard deviation increase in temperature leads to a decrease in exam scores by 0.016 standard deviations for the period 2012-2015. As a potential mechanism, I show that the impact on scores is through a physiological channel by comparing the effect on scores between genders. In line with the literature, I find that, compared to females, male students perform relatively worse during exams due to heat, possibly due to physical stress. I also find evidence that adaptation to heat can partially mitigate the effect of temperature on exam scores.

Labour Market Effects of R&D Tax: Evidence from a Quasi-natural Experiment (with Pavel Chakraborty and Rubina Verma)

Abstract: This study investigates the relationship between employment and Research and Development (R&D) investment. We exploit an R&D tax credit scheme on Indian manufacturing undertaken by the Government of India for the period 2001-2010. The scheme offered a tax weighted deduction of 150% for any capital and revenue expenditure incurred by firms on in-house R&D in eight industries (drugs and pharmaceuticals, electronic equipment, computers, telecommunications equipment, chemicals, manufacture of aircraft and helicopters, automobiles, and auto parts). We leverage the variation of eligibility for the scheme across firms in different manufacturing industries, and adopt a simple difference-in-difference framework to estimate the impact of R&D investment on employment. Preliminary results imply that on the intensive margin, the demand for managerial workers increased but there was a decline in demand for non-managerial workers. On the extensive margin, we do not find any impact on employment of managerial or non-managerial workers due to the credit scheme.

TEACHING EXPERIENCE

Teaching Assistant for Finance I taught by Prof. Renuka Sane, Indian Statistical Institute, Delhi, Fall semester 2018, 2017

CONFERENCES AND INVITED SEMINAR PRESENTATIONS

“Evolving Occupations or Occupation-status? Employment Polarization in the Context of Developing Countries”, Research Scholars’ Workshop on Institutions and Development, University of Calcutta, 2021.

“Do Clouds have a Silicon Lining for Firms? Contract Hiring and Computer Investment: Evidence from Rainfall Shocks”, 16th Annual Conference on Economic Growth and Development, Indian Statistical Institute, Delhi, 2021.

“Do Clouds have a Silicon Lining for Firms? Contract Hiring and Computer Investment: Evidence from Rainfall Shocks”, *accepted at the 2022 Asian and Australasian Society of Labour Economics Conference.*

GRANTS

Planning and Policy Research Unit (PPRU) research grant, “Changing Structure of the Labour Market in India: Job Polarization and Informalization,” 2018, INR 401,500 (Co-Principal Investigator).

AWARDS AND SCHOLARSHIPS

Senior Research Fellowship, Indian Statistical Institute, Delhi, 2018-present.

Junior Research Fellowship, Indian Statistical Institute, Delhi, 2016-2018.

Ford Foundation Scholarship (for securing the first position in class), Jawaharlal Nehru University, 2014 - 2016.

Sri Ujjaini Memorial Gold centred Silver Medal Award (for securing the second position in class), Jadavpur University, 2014.

PROFESSIONAL EXPERIENCE

Programme Co-ordinator 15th (December 2019), 14th (December 2018), 13th (December 2017) and 12th (December 2016) Annual Conferences on Economic Growth and Development, Indian Statistical Institute, Delhi.

Head of Events Young Economist Students' Meet, Jadavpur University (December 2013).

SKILLS SUMMARY

Software: Stata, R, MATLAB.

Languages: English, Bengali, Hindi.

REFERENCES

Tridip Ray

Economics and Planning Unit

Indian Statistical Institute

New Delhi

India

Email: tridip@isid.ac.in

Ph: (+91)-9818714484

Webpage: <https://www.isid.ac.in/tridip/>

Arka Roy Chaudhuri

Department of Economics

Shiv Nadar University

Dadri, Uttar Pradesh

India

Email: arka.chaudhuri@snu.edu.in

Ph: (+91)-8826183798

Webpage: <https://sites.google.com/site/arkaecon/>