SANKALP SHARMA

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Education

University of Southern California
PhD in Economics — *August 2023 - 2028 (Expected)*

Madras School of Economics — Central University of Tamil Nadu
Master of Arts in Economics, First Division (GPA: 8.89/10), Batch Rank 1 — *July 2019 - May 2021*
– *Masters' Thesis: Two Essays on Employment in India*

University of Delhi
Bachelor of Arts with Honors in Economics, First Division — *July 2015 - July 2018*

Peer-Reviewed Publications

– **COVID mortality in India: National survey data and health facility deaths**; *Science (2022)* (with Paul Novosad, Aditi Bhowmick, Prabhat Jha, Chinmay Tumbe, Yashwant Deshmukh, Wilson Suraweera, Sze Hang Fu, Leslie Newcombe, Hellen Gelband, Patrick Brown)

Work-in-Progress

– The Missing Skyline: Causal Evidence on Upzoning from India's National Capital (draft available on request)
– Geometric Microfoundations of Rural Land Assembly
– Distance and Government Performance (with Jeff Weaver)
– Inheritance and Culture: Legal Reform and Women's Land Ownership (with Prerna Kundu)
– Short-and Medium-Term Effects of the COVID-19 Pandemic on Developmental Screening Results of Infants and Toddlers in Low-Income Families in the US (with Maria Prados, Dorian Traube and Allison Kemner) (draft available on request)

Research Grants

– **Institute for Humane Studies** ($3000)
– **University of Southern California Department of Economics** ($5,000): 3rd Year Summer Research Grant
– **University of Southern California Lusk Center for Real Estate** ($10,595): Skylines of Change
– **Weiss Fund for Research in Development Economics** ($11,541): Skylines of Change
– **Azim Premji Foundation** ($6,600): Dynamics, determinants and welfare implications of informal employment in India (with Dr. Sowmya Dhanaraj and Dr. Vidya Mahambare)

Conference Presentations

– 2026: World Bank, London School of Economics
– 2025: Indian Statistical Institute, Management Development Institute
– 2022: Asian Development Bank
– 2021: Jindal School of Government and Public Policy, Indian Institute of Foreign Trade, Delhi School of Economics, Indian Statistical Institute

Experience

Research Associate — Development Data Lab
PIs: Dr. Paul Novosad and Dr. Sam Asher — *October 2020 - June 2023*
– Jointly led a research project that leverages 700 million names from the 2011 Socio-Economic Caste Census to estimate intergenerational mobility in India across space and time.
– Jointly led the development of SHRUG 2.0, a high-resolution open data platform for India. Also integrated large-scale satellite and remote sensing data (night lights, NDVI/EVI, forest cover, pollution) into the platform.
– Assembled the first complete and standardized open-source maps for India's 600,000 villages and 8,000 towns with standardized administrative location identifiers using bespoke geospatial algorithms.
– Assisted the technical development of National Data Analytics Platform (NDAP) with Government of India.
– Assisted the development of the DDL COVID open-access platform to provide granular COVID-19 case/vaccination data as well as further demographic and economic data. Open access COVID mortality data for India hosted on the platform was used by the WHO to revise global excess mortality estimates.

Data Science Intern — Accenture AI
Supply Chain Advanced Analytics Practice — *May 2020 - June 2020*
– Developed end-to-end technical capability and a product dashboard built for an Indian mining industry client.
– Built bespoke optimization models using Pyomo, a Python-based, high-level algebraic programming language (AMPL). Deployed open-source solvers such as GLPK and MindtPy to solve a mixed integer non-linear programming (MINLP) use-case.

Research Assistant Indian Statistical Institute, Delhi
Prof. Mudit Kapoor *Sept. 2018 - June 2019*
- Created Bayesian models using STAN, a probabilistic programming language (interfaced in R) to obtain posterior predictive distributions for neonatal mortality and also update prior estimates derived using Sample Registration System data
- Provided consulting to NITI Aayog to rank 731 District Hospitals in India. Drafted the methodology of ranking hospitals and used Principal Component Analysis to generate a systematic and comprehensive ranking using proprietary HMIS (Health Management and Information System) data

Research Intern Brookings India
Adviser: Dr. Shamika Ravi *July 2018 - August 2018*
- Created the Maternal Health Index using real-time HMIS data to generate insights on the spatial and temporal impact of maternal health inputs on the maternal mortality ratio.
- Developed a comprehensive Financial Inclusion Index based on NFHS-4 household data on bank accounts, mobile phones, and Aadhaar Cards. Eventually published as a part of Brookings India Impact Series.
- Compiled child mortality estimates from NFHS-4 using synthetic cohort life table approach at national, state, and district level as well as disaggregated estimates by wealth quintile, religion, number of daughters, etc.

Research Intern Abdul Lateef Jameel Poverty Action Lab
Principal Investigator: Dr. Madeline McKelway (Dartmouth) *December 2017 - February 2018*
- Worked on a multi-stage Randomized Controlled Trial to understand the impact of a psychosocial intervention on women's self-efficacy, agency, and labor supply.
- Conducted primary data analysis to identify spillover effects of improved psychological outcomes on income, consumption, savings, and education decisions.

Research Intern PRS Legislative Research
Adviser: Anviti Chaturvedi *March 2017 - April 2017*
- Undertook empirical analysis of the environmental policy framework in India using sectoral data on regulatory clearances and delays in regulatory approvals in critical sectors.
- Wrote a policy white paper on the state of the Environmental Impact Assessment (EIA) framework in India and its effects on forest cover and tribal welfare.

Head of Entrepreneurship Development Asmat NGO
Founding Project Member *January 2017 - September 2017*
- Adopted a village in Sirsa District, Haryana as part of a fully student-run NGO and carried out holistic rural development initiatives by generating policy awareness and information dissemination.
- Conducted a comprehensive survey to challenge the validity of the Open Defecation Survey conducted by the Government of Haryana and reported the findings to the District Administration, which led to an audit of existing survey data.

Honors and Awards

- Outstanding 2nd Year Empirical Paper Award, USC Department of Economics
- Awarded USC Center for Economic and Social Research/Dornsife Doctoral Fellowship
- Awarded the MSE Merit Scholarship (INR 25,000) for securing first rank in the Masters program
- Regional Winner (South Zone) of Reserve Bank of India Policy Challenge 2020 (awarded INR 15,000)
- Selected for the 2019 cohort of the Young India Fellowship awarded by Ashoka University with scholarship (did not avail)

Programming Skills

- **Languages:** Python, R, Bash, C++, Swift, LaTeX, SQL
- **Software:** STATA, MATLAB, QGIS
- **Tools/Libraries:** Emacs, Git, Snakemake, Tesseract OCR, Python Dash, Pyomo, PuLP, Gurobi, STAN, PyMC, SurveyCTO, Qualtrics

Extracurricular Activities

- Parliamentary debating, Model UN (winner at national and international conferences), Trekking (backpacked across Ladakh, Spiti, Western Himachal Pradesh), photography, long-distance biking

Other

- Citizenship: India
- F1 Visa holder (USA)
- Languages: English, Hindi (Native)