Gagandeep Sachdeva

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Education

PhD in Economics, University of California, Santa Cruz 2019-Present

- Dissertation: "Essays on Gender, Caste, and Educational Equity"
- Committee Chair: Professor Laura Giuliano (UCSC)

MPhil in Economics, Indira Gandhi Institute of Development Research 2018

MSc in Economics, Indira Gandhi Institute of Development Research 2017

- Awarded the Chancellor's Gold Medal for the Best-Performing Student in The M.Sc. Program.

B.A. (Hons) Economics, University of Delhi 2015

Job Market Paper

Relative Skills in the Classroom: Teachers' Gender-Differentiated Impacts on Test Scores and Course Grades

***Abstract**: The gender gap in academic performance increases as students progress through school; girls outperform boys by large and increasing margins in teacher-assigned course grades and standardized reading tests, and eventually surpass boys in standardized math tests. I investigate if and how teachers affect these patterns, focusing on their gender-differentiated impacts on course grades and standardized test scores in each subject. Using administrative data from North Carolina, I estimate value-added measures of teacher effectiveness for fifth-grade teachers, separately for test scores and course grades, and examine their heterogeneous impacts on boys' and girls' middle school outcomes. I find that teachers with high value-added in test scores disproportionately benefit girls (particularly in math), while teachers with high value-added in course grades disproportionately benefit boys (particularly in reading). These patterns are consistent with a two-factor model in which test scores (course grades) are relatively intensive in cognitive (non-cognitive) skills – and observed gender gaps imply a relative proficiency in cognitive (non-cognitive) skills for boys (girls). Under this framework, teachers improve students most along the dimension where the students have a relative deficiency. This interpretation differs from explanations centered on role-model effects or teacher bias, suggesting that gender-differentiated teacher impacts reflect how teachers' strengths interact with students' underlying skill mixes.*

Working Papers

Affirmative Action, Faculty Productivity, and Caste Interactions: Evidence from Engineering Colleges in India

(with Robert Fairlie, Saurabh Khanna, and Prashant Loyalka)

Revise and Resubmit at Journal of Political Economy, Microeconomics

***Abstract**: Affirmative action programs are often criticized because of concerns that they result in lower worker productivity and efficiency losses. We study the relative productivity of workers benefiting from an aggressive affirmative action policy in a setting where hiring constraints are especially likely to bind. In India, colleges are required to reserve approximately 50 percent of faculty hires for individuals from disadvantaged caste and social class groups. We collect and analyze data from a nationally representative sample of 50 engineering and technology colleges in India, some of which randomly assign students to classrooms. We find that reservation category faculty have lower levels of education, lower professorial ranks and fewer years of experience in academia than general category faculty who are not hired through reservations. Yet, even with lower qualifications, we find no evidence that reservation category faculty provide lower quality instruction across a wide range of measures that include course grades, follow-on course grades, standardized test scores, dropout, attendance, graduate school plans, and graduation. In fact, we find that, at least for immediate effects on course grades, students taught by reservation category faculty perform slightly better than students taught by general category faculty. We find no evidence of positive "teacher-like-me" effects of reservation category faculty on the relative course performance and longer-term outcomes of reservation category students. Furthermore, even in the face of potential discrimination and resentment against faculty hiring quotas, general category students perform slightly better in classrooms taught by reservation category faculty than general category faculty. The findings have implications for the heated debates over affirmative action programs found in many countries around the world and in India.*

A STEM Instructor Like Me: Female Teacher-Student Interactions in Indian Engineering Colleges

(with Robert Fairlie, Mridul Joshi, Saurabh Khanna, and Prashant Loyalka).

***Abstract**: This study provides causal evidence on the impact of exposure to female faculty on female STEM students. We leverage the random assignment of undergraduate STEM students to instructors, which is rarely feasible in higher education settings, to circumvent identification issues arising from non-random sorting of students to classrooms based on instructor or peer characteristics. We find that female students taught by female faculty achieve higher course grades, improving by 2.7 percentile points. Moreover, increasing female faculty exposure by 10 percentage points over two years (from a baseline of 34 percent) yields a 0.03 standard deviation improvement in standardized test scores of female students. Beyond academic performance, we find that exposure to more female faculty leads to a reduction in STEM anxiety among female students and more equitable gender beliefs among male students. These findings suggest that the exposure to female faculty helps improve the performance of female students in STEM through higher academic achievement and reduced anxiety as well help reshape traditionally held gender-based stereotypes in STEM.*

Works in Progress

Friday Night Lights, Monday Morning Grades: How High School Football Success Affects Student Achievement

(with Evan Bennett, Derek Rury, and Sofia Shchukina)

Gender, STEM, and Confirmation Bias: An Experimental Investigation

The Relationship between School Segregation and Learning Outcomes: Evidence from India

(with Moumita Das, Shreya Dutt, and Kartik Srivastava)

Teaching and Mentoring Experience

Graduate Student Instructor, Department of Economics, UCSC — Summer 2024

- Intermediate Microeconomics (Online Asynchronous)

Teaching Assistant, Department of Economics, UCSC — 2020-2025

- Applied Econometrics (Graduate Course)
- Applications in Microeconomics (Graduate Course)
- Intermediate Microeconomics (x5)
- Introductory Microeconomics (x4)
- Introductory Macroeconomics (x2)
- Industrial Organization
- Economic Rhetoric

Graduate Pedagogy Fellow, Teaching and Learning Center, UCSC — 2022-2025

- Assisting in developing teaching strategies for economics graduate students in their role as teaching assistants.
- Conducting professional development workshops for graduate teaching assistants in using active learning in economics classrooms.

Peer Mentor, Summer GSI Support Team, Teaching and Learning Center, UCSC — 2024

- Developing equity-minded course learning outcomes, assessment plans, and an engaging course structure.
- Leading discussions on effective teaching strategies, giving feedback to students, and navigating classroom challenges.
- Facilitating peer feedback on lesson planning, syllabus design, and reflective teaching practices.

Research and Work Experience

Graduate Student Researcher, UC Santa Cruz — 2020-2024

- Prof Laura Giuliano, Department of Economics, UCSC
- Prof Robert Fairlie, Chair, Department of Public Policy, UCLA Luskin School of Public Affairs
- Institutional Research, Assessment and Policy Studies Unit, UCSC

Research Associate, Economic Research Unit, Koan Advisory 2019

Research Assistant, Delhi School of Economics 2017

- Prof Rohini Somanathan, Center for Development Economics, DSE

Grants, Awards, and Fellowships

Dissertation Completion Fellowship, Department of Economics, UCSC 2025-2026

Summer Dissertation Fellowship, Division of Social Sciences, UCSC 2025

Summer GSI Peer Support Fellowship, Teaching and Learning Center, UCSC 2024

Dissertation Research Grant, Department of Economics, UCSC 2024, 2023, 2022

Graduate Pedagogy Fellowship, Teaching and Learning Center, UCSC 2022

Regent's Fellowship, Graduate Division, UCSC 2019-2020

Chancellor's Gold Medal for the Best-Performing Student in The M.Sc. Program 2015-17

Conferences and Summer Schools

Conference and Summer School on Socio-Economic Mobility and Inequality, Harris School of Public Policy, University of Chicago 2024

Southern Economic Association, 93rd Annual Meeting, New Orleans, LA 2023

Second Biennial Conference on Development, Indira Gandhi Institute of Development Research, Mumbai 2022

Summer School on Theory-Driven Experiments, Center for Theoretical and Experimental Social Sciences, CalTech, Pasadena 2022

All-California Labor Economics Conference, UCSC (poster session) 2019

Technical Skills

Data analysis and plotting with STATA, R, SPSS, and Microsoft Excel.

Optimization, computation, and plotting with Wolfram Mathematica.

Typesetting with LaTeX

References

Dr Laura Giuliano, Professor, Department of Economics, UC Santa Cruz lgiulian@ucsc.edu

Dr Robert Fairlie, Distinguished Professor, Public Policy and Economics, UCLA rfairlie@ucla.edu

Dr George Bulman, Associate Professor, Department of Economics, UC Santa Cruz gbulman@ucsc.edu

Teaching References

Dr Carlos Dobkin, Professor, Department of Economics, UC Santa Cruz cdobkin@ucsc.edu

Dr Kendra Dority, Teaching and Learning Center, UC Santa Cruz kdority@ucsc.edu