

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.
- BA (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 (UCLA), Saurabh Khanna (University of Amsterdam), and Prashant Loyalka (Stanford University)

Revise and Resubmit, *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 (UCLA), Mridul Joshi (Stanford university), Saurabh Khanna (University of Amsterdam), and Prashant Loyalka (Stanford University)

Abstract: We provide 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 (University of Pennsylvania), Derek Rury (Oregon State University), and Sofia Shchukina (University of Chicago)

Gender, STEM, and Confirmation Bias: An Experimental Investigation

The Relationship between School Segregation and Learning Outcomes: Evidence from India with Moumita Das (UCSC), Shreya Dutt (Boston University), and Kartik Srivastava (Harvard University)

Teaching and Mentoring Experience

Instructor of Record, Department of Economics, UCSC Summer 2024
Intermediate Microeconomics (Online Asynchronous)

Teaching Assistant, Department of Economics, UCSC 2020-2025

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

Graduate Pedagogy Fellow, Teaching and Learning Center, UCSC 2022-2025
Assisted in developing teaching strategies for economics graduate students in their role as teaching assistants. Conducted 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
Developed equity-minded course learning outcomes, assessment plans, and an engaging course structure. Lead discussions on effective teaching strategies, giving feedback to students, and navigating classroom challenges. Facilitated 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, IGIDR	2015-17

Conferences and Summer Schools

Socio-Economic Mobility and Inequality, Harris School of Public Policy, University of Chicago	2024
Southern Economic Association, 93rd Annual Meeting, New Orleans	2023
Biennial Conference on Development, Indira Gandhi Institute of Development Research	2022
Theory-Driven Experiments, Center for Theoretical and Experimental Social Sciences, CalTech	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 L^AT_EX

References

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

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