BHAVYAA SHARMA

Department of Economics
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Education

University of California, Santa Cruz
Ph.D. Economics, 2025 (expected)
Indira Gandhi Institute of Development Research, Mumbai, India
M.S. Economics, 2015
Miranda House, University of Delhi
B.A. Economics, Honors, 2013

Fields

Macro-Finance
Climate Economics

References

Dr. Galina Hale
gbhale@ucsc.edu

Dr. Grace Weishi Gu
grace.gu@ucsc.edu

Dr. Brenda Samaniego de la Parra
bsamanie@ucsc.edu

Dr. Alonso Villacorta
avillaco@ucsc.edu

Research and Professional Experience

Short-Term Consultant, World Bank, 2024
Thomas J. Sargent Dissertation Fellow, Federal Reserve Bank of San Francisco, 2023
Ph.D. Intern, Federal Reserve Bank of New York, 2023
CSWEP Dissertation Fellow, Board of Governors of The Federal Reserve, 2022
Graduate Student Researcher, UCSC, 2020 – 2024
Research Fellow, National Institute of Public Finance and Policy, New Delhi, 2017 - 2019
Experienced Associate, PricewaterhouseCoopers - U.S. (Advisory), 2015 - 2016
Graduate Intern, Department of Economic and Policy Research, Reserve Bank of India, 2014
Research Fellow, Innovation Project Scheme, University of Delhi, 2012 - 2013
Undergraduate Intern, Reserve Bank of India, Chandigarh, 2012

Publications

God is in the Rain: The Impact of Rainfall-Induced Early Social Distancing on Covid-19 Outbreaks (with Dr. Ajay Shenoy, Guanghong Xu, Rolly Kapoor, Haedong Rho, and Kinpritma Sangha), Journal of Health Economics, 2021.

Government Expenditure in India: Composition and Multipliers (with Dr. Ashima Goyal), Journal of Quantitative Economics (Springer Publications), 2018.

Working Papers

Information about climate transition risk and bank lending (Job Market Paper)
Do banks price their borrowers' exposure to climate transition risk? I find that in the E.U., firms negatively exposed to climate transition risk face higher lending rates by banks specialized in their borrowers' industry. However, I also find evidence of lower lending rates to more exposed firms after an oil supply news shock relevant for energy-intensive firms, especially during periods of high aggregate financial stress. Interpreting bank specialization as a source of heterogeneity in costs of private information acquisition, I develop a bank lending model with competitive lending, costly information acquisition, and non-Bayesian belief updating. Because of screening, specialized banks can better distinguish between borrowers' risk exposure, resulting in relatively higher lending rates to more exposed firms. However, this interest rate differential decreases in favor of more exposed borrowers when banks underreact to relevant public information. This effect is more pronounced during periods of poor borrower quality or increased financial stress. These results imply that lowering banks' cost of acquiring firm-level transition-risk exposure information is crucial to reduce green firms' financing costs, even when there is high quality public information and communication about decarbonization.

How climate-awake are financial markets? (with Galina Hale and Anirban Sanyal)
Climate risks are now acknowledged by policymakers, financial market practitioners, and academics as a potentially material threat to financial markets and financial stability. As physical manifestations of climate change become more apparent, shall we expect massive asset repricing and financial destabilization? The answer to this question crucially depends on whether climate risks are properly priced-in already in different asset classes. Climate-related events are unique in that they are drawn

from a distribution that shifts and becomes more disperse over time, making belief formation a crucial component of asset pricing. We simulate the response of asset prices to climate disasters using the rare events asset pricing framework based on Gabaix (2012) to quantify "fully priced in" response in various structures of subjective belief formation. We survey the empirical literature on the pricing of physical climate risk in equity and fixed income markets to evaluate whether the estimates imply fully priced-in response across different belief formation structures.

How Much is a Formal Job Worth? Evidence from Mexico (with Dr. Brenda Samaniego de la Parra)
Can informality be explained by labor market frictions or by the preferences of workers? The answer and its welfare implications are intrinsically related to the value that households place on the characteristics and benefits that accompany a formal job, net of the costs that employers incur to formalize their workers. Using a new employer-employee-household matched panel dataset that includes both formal and informal workers and exploiting variation in formal sector employment resulting from over 600,000 work-site inspections in Mexico, we estimate the distribution of the value of formal jobs. Work-site inspections result in a transition into the formal sector for many previously informal workers, which we use to estimate the effect of formality on household labor supply. The monetary value of a formal job, which derives from social benefits only eligible to formal sector workers, can then be inferred using a model of household labor supply. Contrary to the previous literature, we find that low income households have a high valuation for formal jobs. However, due to regressive labor taxation, the value of formality net-of-taxes is negative for households in the bottom decile of the wage distribution.

Papers in Progress

Large disasters and changes in climate risk perceptions: Evidence from the United States
This paper examines the nature of belief updates about individuals' exposure to damages from climate change. I use county-level survey data on beliefs related to potential damages from climate risk and evaluate how the survey responses change at the county level after a 'billion-dollar' disaster in the state. Controlling for county demographics, income, educational attainment levels, political affiliation, and long-term temperature and precipitation anomalies, I find evidence for prior conformity. In counties with a high average risk perception, a state-level large disaster is associated with a higher risk perception. However, the post-disaster beliefs are still strongly anchored to those recorded a decade before the disaster occurred. The relevance of large disasters in subjective expectation formation is further indicated by the evidence that monetary damages from crop and property loss are not strongly associated with belief updates. These results highlight the information channels that individuals pay attention to while forming expectations about climate change, which has important implications for household adaptation to climate risks.

Disaster rebuilding costs and climate adaptation and mitigation: Are we building back better? (with Galina Hale and Ted Liu)
This project determines the effect of financial constraints on household resilience and adaptation to climate change. Using county-level data on disaster declarations, factors affecting household preparedness, household income, and financial distress information, along with agency data on ex-ante and ex-post disaster mitigation and assistance programs, we focus on both the information channel (i.e., the lack of availability of relevant information) and financial constraints channel for vulnerable households, and how policies overlooking these challenges might increase adaptation inequity.

Currency Risk and Global Banks (with Grace Weishi Gu and Isha Agarwal)

Climate Risks and Credit Allocation (with Galina Hale, Grace Weishi Gu, and Jinhong Wu)

Political Misallocation of Electricity in India (with Meera Mahadevan and Ajay Shenoy)

Grants, Fellowships and Awards

Coastal Climate Resilience Pilot Funding Grant (PI - Dr. Galina Hale; Co-investigator - Ted Liu), UCSC, 2023
Milam-McGinty-Kaun Teaching Excellence Award, UCSC, 2023
Graduate Division Fall Travel Grant, UCSC, 2023
Economics Department Travel Grant, UCSC, 2023
Hammett Fellowship, Environmental Sciences Department, UCSC, 2022
Graduate Student Grant, Dolores Huerta Research Center for the Americas, UCSC, 2022
Dissertation Research Grant, Economics Department, UCSC, 2022
TA Quarterly Award, Economics Department, UCSC, 2022
Regents Fellowship, Department of Economics, UCSC, 2019

The President's Gold Medal for highest CGPA in M.S. Economics, IGIDR, 2015
Smt. Mallan Devi Bhalla Award for Best Student in First Year Economics, Miranda House (University of Delhi), 2011

Seminars and Conferences

2025: IBEFA-ASSA Meeting, San Francisco, University of Houston - Bauer College of Business, Federal Reserve Board**, William & Mary University*, University of Texas – Arlington*, Colgate University*, Future of Financial Information Conference (Scheduled)
2024: ASSA meeting, San Antonio; Macroeconomics Workshop, UCSC; UCSC CAFIN Financial Market Solutions for Funding Green Transition and Climate Resilience Conference; NYU NY Fed Climate Finance Conference Poster Session; IBEFA Summer Meeting, Seattle; NAS Workshop on Macroeconomic Implications of Decarbonization Poster Session; 4th FINPRO Conference
2023: IPWSD, Columbia University; Federal Reserve Bank of New York; Federal Reserve Bank of San Francisco; Western Economics Association International Annual Conference, San Diego; Southern Economics Association, New Orleans; Macroeconomics Workshop, UCSC
2022: Board of Governors of The Federal Reserve, Washington D.C.; LACEA-LAMES, Lima; Macroeconomics Workshop, UCSC; NBER Behavioral Macroeconomics Bootcamp (Participant)
2020: Discussant, Emerging Markets Finance Conference
2015: Tenth Annual International Conference on Public Policy and Management, Indian Institute of Management, Bangalore

****- Received and accepted employment offer in Jan 2025; Accepted offer withdrawn by the Federal Reserve Board with no explanation on Feb 24, 2025.**
***-Scheduled but cancelled after considering and accepting the offer at the Federal Reserve Board.**

Teaching

Instructor

Econ 294 A (M.S. R Programming), UCSC, 2023; 2024
Programming in R for MSQE students, ISI (Delhi), 2018

Teaching Assistant

M.S. APEF Capstone TA, UCSC, 2024
Econ 1 (Introductory Microeconomics), UCSC, 2024
Econ 233 (M.S. Finance), UCSC, 2021; 2022
Econ 202 (M.S. Macroeconomics), UCSC, 2022
Econ 131 (International Financial Management), UCSC, 2021; 2022
Econ 149 (Economies of East and South-East Asia), UCSC, 2021
Econ 113 (Introductory Econometrics), UCSC, 2020
COWL 52 (Personal Finance), UCSC, 2020; 2021
Econ 197 (Economic Rhetoric), UCSC, 2020
Econ 2 (Introductory Macroeconomics), UCSC, 2020

Academic Service

Referee: AER Insights, Macroeconomics and Finance in Emerging Market Economies

University and Public Service

Science Internship Program, Mentor, UCSC, 2024
Grad School Mentor for Undergraduate Students, GradPath, UCSC, 2023
Graduate Student Representative, Strategic Planning Committee on Climate Change, UCSC, 2022
Wildfire Shelter Volunteer, Volunteer Center of Santa Cruz County, Aug 2020
Contributor, Punjab Working Group Report, 2020
Weekend Primary and College Education Volunteer, Udaan India Foundation, 2015 - 2016

Languages

English (Fluent), Hindi (Native), German (Beginner)

Software skills

R, Matlab, Stata, Python