

DEEPSHIKHA BATHEJA
RESEARCH FELLOW
ONE HEALTH TRUST (FORMERLY CDDEP)

CONTACT INFORMATION

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OHT ADDRESS

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RESEARCH POSITIONS AND AFFILIATIONS

2020- Research Fellow, One Health Trust, Bengaluru
2023- Programme member of the Just Transitions for AMR working group
2023- Member of WHO's global experts panel on AMR and gender
2023- Part of the roster of economists at the International Centre For Antimicrobial Resistance Solutions
2021- Consultant at the World Bank

EDUCATION

University of California, Riverside: PhD in Economics (2014 to 2020)
Thesis advisors: Anil Deolalikar, Sarojini Hirshleifer
TERI University: M.Sc. Economics, specialization in Environmental & Resource Economics(2010-2012)
Thesis advisors: Badal Mukhopadhyay, Soumendu Sarkar
University of Delhi: B.A. (Hons.) Economics (2006 to 2009)

FIELDS

Fields: Development, Health and Labor Economics; Field Experiments
Research Interests: antimicrobial resistance, economics of gender, firm and employee productivity, human capital accumulation, environment, economics of organization, mental health, climate change

GRANTS, HONORS AND FELLOWSHIPS

2023: MSD Fellowship for Global Health (*35,000 USD*) (with Giridara Gopal & Ramanan Laxminarayan)
Penn Global Research and Engagement Grants (*150,000 USD*) (with Jere Behrman, Subha Mani, Vinay Nadkarni and others)
2022: British Academy Global Convening Award (*1.8 million USD*) (Co-Investigator with Sonia Lewycka, Phaik Yeong Cheah and others)
MSD Fellowship for Global Health (*35,000 USD*) (with Giridara Gopal & Ramanan Laxminarayan)
2021: MSD Fellowship for Global Health (*29,831 USD*) (with Jyoti Joshi & Ramanan Laxminarayan)
China-India Visiting Scholars (CIVS) Fellowship- Ashoka University (*4,752 USD*)
2020: JPAL's PPE Initiative Fund (*45,500 USD*) (with Sarojini Hirshleifer and Opinder Kaur)
2019: Dissertation Year Program Fellowship (*15,400 USD*)
2018: Small Projects Grant, International Growth Center (IGC) (*25,000 GBP*)
BLUM Initiative Grant, UC Riverside (*4,000 USD*)
2014: Dean's Distinguished Fellowship Award, UC Riverside (until 2019)

ACADEMIC PAPERS: HEALTH POLICY

Peer Reviewed Published Research

[18] Carcamo, C., Shilton, S., Mallma Salazar, P.S., Osos, P.P., Slimming, P.A.T., **Batheja, D.**, Banerji, A., Reipold, E.I., and Martínez-Pérez, G.Z. "[SARS-CoV-2 Self-Testing in Peru: A Survey of Values and Acceptability of the General Population](#)" BMJ Open

[17] Thomas, C., Shilton, S., Thomas, C., **Batheja, D.**, Goel, S., Mone Iye, C., Ivanova, E. and Martínez-Pérez, G.Z. (2022) “[Values and preferences of the general population in Indonesia in relation to rapid COVID-19 antigen self-tests: A cross-sectional survey](#)” published in Tropical Medicine & International Health.

[16] Martínez-Pérez, G.Z., Shilton, S., Saruê, M., Cesario, H., Banerji, A., **Batheja, D.**, Cunha, J.P., Baptista, R., Schirmer, J., Reipold, E.I. and Dias, A.M., (2022) “[Self-Testing for COVID-19 in São Paulo, Brazil: Results of a Population-Based Values and Attitudes Survey](#)” published in BMC Infectious Diseases

[15] Manguro, G., Shilton, S., Omenda, S., Owira, P., **Batheja, D.**, Banerji, A., Chabeda, S.V., Temmerman, M., Jako, W., Ndungu, J. and Luchters, S., (2022) “[Are Kenyans Likely to Use COVID-19 Self-Testing Kits? Results From a Cross-Sectional Survey](#)” published in International Journal of Public Health.

[14] Folayan, M., Shilton, S., Undelikwo, V., Alaba, O., Amusan, R., Ibrahim, M., Ogbozor, P.A., Mojisola, O., **Batheja, D.**, Banerji, A. and Reipold, E.I., (2023) “[People’s willingness to use COVID-19 self-testing in Nigeria: a cross-sectional survey.](#)” BMJ Open

[13] Brumwell, A.N., Babatunde, G.A., Wilson, M.W., Roux, K., Marks, M.M., Adam, J.K., Ivanova, E., **Batheja, D.**, Goel, S., Shilton, S., and Martínez-Pérez, G.Z. (2023) “[Values Relating to COVID-19 Self-Testing Among the Urban and Rural South African General Population: A Cross-Sectional Survey](#)” Preventive Medicine Reports

[12] **Batheja, D.**, Kurian, V., Buteau, S., Joy, N. and Nair, A., “[Role of Oxygenation Devices in Alleviating the Oxygen Crisis in India](#)” PLOS Global Public Health

Working Papers

[11] **Batheja, D.**, Fransman, W., Goel, S., and Laxminarayan, R., “Understanding the Value of Biobanking using Conjoint Analysis” *Submitted*

[10] Martínez-Pérez, G.Z., Shilton, S., Daguiso, J., Cruz, D., **Batheja, D.**, Goel, S., Reipold, E.I., and Rosadiño, D. “General Population’s Values and Attitudes of SARS-Cov-2 Self-Testing: A Cross-Sectional Survey in the Philippines” *Submitted*

[9] Shilton, S., Sharma, T., Martínez-Pérez, G.Z., Dash, G., Sah, A., Singh, R., **Batheja, D.**, Goel, S., Reipold, E.I. “Public’s Values and Attitudes towards SARS-CoV-2 Self-Testing as a COVID-19 Case Detection Tool: Findings from a multi-State Survey in India” *Submitted*

[8] Joshi, J., **Batheja, D.**, and Lamkang, S.A. “A Qualitative Study on Non-prescription Sale of Antibiotics in Pharmacies of New Delhi: Perspectives from Pharmacists, Dispensers and Consumers” *Submitted*

[7] Goel, S., Joshi, J., Duong, P., Panarello, D., Parab, V., and **Batheja, D.** “The Educational and Health Impact of COVID-19 on Children with Special Needs: A Systematic Review” *Submitted*

[6] **Batheja, D.**, Bhagwati, R., Goel, S., Jain, D., Mullins, J. and Zhou, D., “Mental Health of Working Women in China and India: A Mixed Method Study” *Submitted*

Works in Progress

[5] **Batheja, D.**, Goel, S., and Laxminarayan, R., “Gender, Norms and Antimicrobial Resistance”

[4] Joshi, J., **Batheja, D.**, and Laxminarayan, R., “Impact of COVID-19 on Children with Disabilities in India: A Mixed Method Study”

[3] **Batheja, D.**, Chatterjee C. and Narayanan, R., “Effect of Pollution and Temperature on Eye Health: Evidence from India”

[2] **Batheja, D.**, Gopal, G., Bhagawati, R., Manoff. S., and Sapre., A. Banerji, A., and Laxminarayan, R., “Drivers of COVID-19 Vaccine Hesitancy in India: Evidence from a Mixed Method Study”

[1] **Batheja, D.**, Pascual, M.M., Wimberly, M.C., Nandi, A., and C.C. Murdock. “Redefining Thermal Suitability for Urban Malaria Transmission in the Context of Humidity”

ACADEMIC PAPERS: ECONOMICS

Working Papers

[10] “Gender Peer Effects in the Workplace: A Field Experiment in Indian Call Centers”

Featured in [World Bank Development Impact Blog](#) , [Ideas for India](#), [IGC Blogpost](#) and [Hindustan Times](#)

Several theories suggest that gender integration in the workplace may have negative effects in gender-segregated societies. This paper presents the results of a randomized controlled trial on the effect of gender integration on work productivity. The study was implemented in call centers located in five Indian cities. A total of 765 employees were randomized to either mixed gender teams (30-50% female peers) or control groups of same gender teams. I find precisely estimated zero effects on both productivity (intensive margin) and share of days worked during the study period (extensive margin) of being assigned to a mixed gender team. However, there is an overall increase in the secondary outcome of peer monitoring and team support for women assigned to mixed gender teams relative to the control team. For male employees, I find that conditional on being assigned to mixed gender teams, men with progressive gender attitudes have higher productivity than men with regressive gender attitude. There is an overall increase in the secondary outcomes of knowledge sharing, dating and comfort with the opposite gender for male employees in mixed gender teams, relative to all male teams.

Best Paper Award, Women in the Economy Workshop: 3rd Annual Workshop, Indian Statistical Institute

[9] “[Effect of Co-residence with Parents-in-law on Female Labor Force Participation](#)” (with Anil Deolalikar and Abhik Banerji)

We study the impact of co-residence with mother-in-law and father-in-law on woman’s labor force participation in India. We use two rounds of IHDS panel data for the analysis taking death of healthy parent-in-law as the exogenous source of variation. Our results show that co-residence with father-in-law has a significantly negative effect on women’s labor supply. Depending on the specification, losing one’s father- in-law increases the labor force participation of women by approximately 9 to 12 percentage points, compared to a similar household where the father-in-law still co-resides in the second round. This effect is driven by increased autonomy for women, by 3 to 3.3 percentage points, after the death of father-in-law.

[8] **Batheja, D.**, Nandi, A., Banerji, A., Summan, A., and Laxminarayan, R. “[COVID-19 and Women’s Age at Marriage: New Evidence from India](#)”

The COVID-19 pandemic has been hypothesized to have influenced household decision making on the age of marriage. Using data from the National Family Health Survey of 2019-2021 of India (NFHS-5), we explore how COVID-19 impacted age at marriage for women using household and district fixed effects models and matching methods. Contingent on the model and specification, we find a significant increase in age at marriage for women who got married after the onset of the pandemic compared to those married before the pandemic, by 0.76 to 3.67 years, approximately a 3.6% to 19.5% increase from pre-COVID-19 levels.

[7] "[More than particulate matter matters: Pollution and productivity in Indian call centers](#)" (with Sarojini Hirshleifer and Jamie T. Mullins)

We measure the impact of air pollution on daily labor productivity in call centers in five Indian cities. A one standard deviation increase in PM2.5, a pollutant that has been widely studied in the literature, decreases intensive margin productivity by 0.15σ . The equivalent impacts for carbon monoxide and ozone, however, are 0.14σ and $.09\sigma$, respectively. Furthermore, carbon monoxide is responsible for more than half of the total productivity lost from pollution in our sample. We consider the potential productivity impacts of a national policy in India that targets PM2.5 alongside a counterfactual policy that targets a broader range of pollutants.

Works in Progress

[6] "Does Signalling College Quality Matter? An Experimental Study in India" (with Sarojini Hirshleifer and Opinder Kaur)

[5] "COVID-19 and Mental Health: Experimental Evidence from India" (with Jere Behrman, Ramanan Laxminarayan, Subha Mani, and Arindam Nandi)

[4] **Batheja, D.**, Mani, S., Nandi, A., Behrman, J., and Laxminarayan, R. "Birth Order, Gender and Learning Outcomes in India"

[3] Why does Pollution affect Productivity? Understanding mechanisms in the context of Indian call centers" (with Sarojini Hirshleifer and Jamie Mullins)

[2] "Birth Order, Gender and Learning Outcomes in India" (with Jere Behrman, Ramanan Laxminarayan, Subha Mani, and Arindam Nandi)

[1] "Physical and Mental Health Crimes against Women: Experimental Evidence from Urban Indian Slums" (with Jere Behrman, Subha Mani, Vinay Nadkarni and others)

OTHER PUBLICATIONS AND POLICY REPORTS

[5] Varadan, S. R., Chandler, C. I. R., Weed, K., Ahmed, S. M., Atuire, C., **Batheja, D.**, ... & Lewycka, S. (2023). [A just transition for antimicrobial resistance: planning for an equitable and sustainable future with antimicrobial resistance](#). *The Lancet*.

[4] "Adolescent Girls in Gujarat: The Key to Gujarat's Goal of being a Trillion Dollar Economy." World Bank Report 2023 (Forthcoming)

[3] "Demographic Change and Implications for Human Development Outcomes and Strategies in Tamil Nadu." World Bank Background Paper, 2022

[2] "Rajasthan 2040: Towards Gender Inclusive Growth." World Bank, Background Paper, 2022

[1] "Efficiency Comparison of Bus Operators in Delhi" published in *Journal of Transport Literature*, Volume 9, Number 1, January 2015.

INVITED PRESENTATIONS AND CONFERENCES

2023: Faculty of Law, The University of Hong Kong

IHOPE Seminar, L.V. Prasad Eye Institute, Hyderabad, India

Global Distinguished Scholar Lecture Research, Shanghai Jiao Tong University, China

The British Academy: A Just Transitions framework for equitable and sustainable mitigation of antimicrobial resistance, London, United Kingdom

- 2022: Royal Economic Society Annual Conference at Ashoka University, New Delhi, India,
2nd Annual IHOPE Conference, L.V. Prasad Eye Institute, Hyderabad, India
The INAMRSS/CeBIL Copenhagen AMR Workshop: Solutions to AMR from the Social Sciences,
University of Copenhagen, Denmark
- 2021: Women in the Economy Workshop at Indian Statistical Institute, Delhi
Women in the Workforce at IGC India webinar
16th Annual Conference on Economic Growth and Development at Indian Statistical Institute, Delhi
- 2020: Pacific Conference for Development Economics (PacDev), University of California, Berkeley
- 2019: UC Irvine Applied Brownbag
- 2018: Indian Society of Labor Economics (ISLE) at Indira Gandhi Institute of Development Research
UCR Econometrics Brownbag on power calculations in RCTs
UCR Applied Brownbag on pre-analysis plan of job market RCT paper
- 2017: The Ronald Coase Institute
International Association for Feminist Economics (IAFFE)
Association for Public Policy Analysis and Management (APPAM) Regional Student Conference
- 2014: National Conference for the Indian Association for Women's Studies

NEWSPAPER, POPULAR PRESS AND MEDIA

- "Antimicrobial Resistance and Gender" on CDDEP's Blog, March 08, 2022 (with Srishti Goel)
- "Does the gender of your co-worker matter? Evidence from call centres" in Ideas for India, October 05, 2020
- "The ripple effect of gender inclusivity on India's economy" in the Hindustan Times, August 02, 2021
- "Women must 'lean in' to be taken seriously in the political sphere" in the Hindustan Times, April 30, 2014 (with Devaki Jain)
- "Women's voices in India-China talks" in Gateway House Indian Council on Global Relations, Nov 8, 2013 (with Devaki Jain)
- "Need progressive masculinities to get feminist view" in *The Tribune*, August 23, 2012
- "Strengthening SME sector will open up a new strategy of broad-based, fast growth," *The Economic Times*, Sep 22, 2012 (with Devaki Jain)

Podcast: "[Gender Inequality and Superbugs](#)" (Host: Maggie Fix, One Health Trust)

OTHER EMPLOYMENT

Teaching Experience at University of California, Riverside (August 2015-March 2020)

- As Instructor:
 - Economic Development: Theory and Policy (Summer 2016)
 - Women's Labor and the Economy (Fall 2017)
- As Teaching Assistant:
 - Introduction to Microeconomics (5 times)
 - Introduction to Macroeconomics (3 times)

Research Assistant to Dr. Joseph Cummins, Assistant Professor at UC Riverside (July 2017 to September 2017)

- Replicated published economics papers which use synthetic control methodology

Research Assistant to Dr. Devaki Jain, Honorary Fellow at Oxford University (January 2012 to June 2014)

- Co-authored several conference papers on the role of women in India, which were presented in National Workshop: Center for Women's Development Studies, Gendering a state plan: Government of Karnataka, Global Bihar Summit: Government of Bihar

PROFESSIONAL SERVICE

Reviewer

- Journal of Labor Research, Journal of Quantitative Economics, Pakistan Journal of Applied Economics, PLOS One Global Public Health, Journal of Asian and African Studies

Service Responsibility

- Serving on WHO's global panel on "Gender and Antimicrobial Resistance"
- Leading the design of OHT's PhD program in collaboration with BITS Pilani on Data Sciences for Global Health
- Served as interviewer for the M.Sc. Economics program at TERI University, New Delhi (2021)

REFERENCES

Anil Deolalikar Founding Dean, Public Policy UC Riverside anil.deolalikar@ucr.edu	Sarojini Hirshleifer Assistant Professor of Economics UC Riverside sarojini.hirshleifer@ucr.edu	Chirantan Chatterjee Reader (tenured faculty) in Economics University of Sussex Business School C.Chatterjee@sussex.ac.uk
Arindam Nandi Visiting Fellow, OHT Associate II, Population Council anandi@popcouncil.org	Subha Mani Associate Professor of Economics Fordham University smani@fordham.edu	