

# Nina Caroline Buchmann

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## PERSONAL DETAILS

Department of Economics  
Stanford University  
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## EDUCATION

**Ph.D. in Economics**, Stanford University Expected: 2024  
**M.A. in International and Development Economics**, Yale University 2015  
**A.B. in Economics** (*Phi Beta Kappa*), Harvard University 2013

## REFERENCES

**Pascaline Dupas** (co-primary advisor)  
Dept. of Economics, Princeton University  
[pdupas@princeton.edu](mailto:pdupas@princeton.edu)

**Muriel Niederle** (co-primary advisor)  
Dept. of Economics, Stanford University  
[niederle@stanford.edu](mailto:niederle@stanford.edu)

**B. Douglas Bernheim**  
Dept. of Economics, Stanford University  
[bernheim@stanford.edu](mailto:bernheim@stanford.edu)

**Alessandra Voena**  
Dept. of Economics, Stanford University  
[avoena@stanford.edu](mailto:avoena@stanford.edu)

**Marcel Fafchamps**  
Freeman Spogli Institute, Stanford University  
[fafchamp@stanford.edu](mailto:fafchamp@stanford.edu)

## RESEARCH FIELDS

Development Economics, Behavioral & Experimental Economics, Gender

## PUBLISHED PAPERS

**A Signal to End Child Marriage: Theory and Experimental Evidence from Bangladesh**  
with Erica Field, Rachel Glennerster, Shahana Nazneen, and Xiao Yu Wang  
*American Economic Review*, Forthcoming, 2023

## JOB MARKET PAPER

**Paternalistic Discrimination** with Carl Meyer and Colin Sullivan

Women in South Asia struggle to access the labor market, especially in male-dominated occupations, despite recent progress in education and training. We conduct a two-sided field experiment in Dhaka, Bangladesh, to identify a novel form of discrimination, which we term *paternalistic discrimination*: the preferential treatment of male workers to protect female workers from tasks or jobs perceived as difficult or harmful. We observe real hiring and application decisions for a night-shift job that provides safe worker transport home at the end of the shift. We experimentally vary the perceived welfare of the workers by varying whether we inform employers about this amenity before they make their hiring decisions or whether we inform applicants about this amenity before they make their application decisions. Not informing employers decreases the demand for female labor by 25%—suggesting that employers discriminate paternalistically—while not informing applicants decreases the female labor supply by 16%. Combining the results of the two experiments in an equilibrium model, we demonstrate that completely eliminating paternalistic discrimination would reduce the experiments' gender employment and wage gaps.

## WORKING PAPERS

**The Good Wife? Reputation Dynamics and Financial Decision-Making Inside the Household** with Pascaline Dupas and Roberta Ziparo

*Revision Requested, American Economic Review*

We study reputation dynamics within the household in a setting where women regularly receive transfers from their husbands for household purchases. We propose a signaling model in which wives try to maintain a good reputation in the eyes of their husbands to receive high transfers. This leads them to (a) avoid risky purchases (goods with unknown returns); and (b) knowingly over-use low-return goods to hide bad purchase decisions—we call this the *intra-household sunk cost effect*. We present supportive evidence for the model from a series of experiments with married couples in rural Malawi.

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**The Lifesaving Benefits of Water Infrastructure: Quantifying the Mortality Impact of Abandoning Shallow Tubewells in Bangladesh** with Erica Field, Rachel Glennerster, and Reshmaan Hussam

We document the consequences of a public health campaign that led to the sudden abandonment of local water infrastructure by one-fifth of Bangladesh's population. Households who experienced quasi-randomly distributed arsenic contamination, and thus were likely to abandon their shallow tubewells, saw 28% greater child and 47% greater elderly mortality post-campaign than those not motivated to shift. Verbal autopsy data reveal that the sudden mortality increases are driven by diarrheal disease. Mortality changes depend on the distance to alternative clean water infrastructure: those with an (arsenic and pathogen-free) deep tubewell within 300 meters of their home experience no increase in mortality, but mortality rises as households are forced to walk further for arsenic-free water. Our results quantify the mortality benefits of water infrastructure and underscore the importance of physical proximity to pathogen-free water sources.

**The Effects of Large Group Meetings on the Spread of COVID-19: The Case of Trump Rallies** with Doug Bernheim, Zach Freitas-Groff, Sebastián Otero

We investigate the effects of large group meetings on the spread of COVID-19 by studying the impact of eighteen Trump campaign rallies. To capture the effects of subsequent contagion within the pertinent communities, our analysis encompasses up to ten post-rally weeks for each event. Our method is based on a collection of regression models, one for each event, that capture the relationships between post-event outcomes and pre-event characteristics, including demographics and the trajectory of COVID-19 cases, in similar counties. We explore a total of 24 procedures for identifying sets of matched counties. For the vast majority of these variants, our estimate of the average treatment effect across the eighteen events implies that they increased subsequent confirmed cases of COVID-19 by more than 250 per 100,000 residents. Extrapolating this figure to the entire sample, we conclude that these eighteen rallies ultimately resulted in more than 30,000 incremental confirmed cases of COVID-19. Applying county-specific post-event death rates, we conclude that the rallies likely led to more than 700 deaths (not necessarily among attendees).

**Power vs. Money: Alternative Approaches to Reducing Child Marriage in Bangladesh, a Randomized Control Trial** with Erica Field, Rachel Glennerster, Shahana Nazneen, Iman Sen, and Svetlana Pimkina

A clustered randomized trial in Bangladesh examines alternative strategies to reduce child marriage and teenage childbearing and increase girls' education. From 2008, girls in treatment communities received either i) a six-month empowerment program, ii) a financial incentive to delay marriage, or iii) empowerment plus incentive. Data from 4.5 years after program completion show that girls eligible for the incentive for at least two years were 24% less likely to be married under 18, 15% less likely to have given birth under 20, and 25% more likely to be in school at age 22. Girls eligible for the empowerment program were 11% more likely to be in-school at age 22. We also find significant and large effects of the empowerment program on income-generating activities (IGAs): an increase in an IGA index by 0.5SDs.

**Cost-Benefit Analysis of Strategies to Reduce Child Marriage in Bangladesh** with Erica Field, Rachel Glennerster, and Kyle Murphy

In much of the developing world, early female marriage—defined as marriage before the age of 18—remains widespread despite age of consent laws banning the practice, government and NGO efforts to curtail it, increasing education levels, and economic growth. Bangladesh suffers from the fourth highest rate of early female marriage in the world, which has remained very high despite large-scale efforts to combat the problem. As marriage and education are closely linked in many contexts, we calculate the education benefits of delayed marriage. We perform comprehensive comparative cost-benefit analyses of six interventions from South Asia, Latin America, and Sub Saharan Africa which have demonstrated significant impacts on marriage age and/or early marriage. We estimate the educational benefits by converting delayed marriage effects into additional schooling using a conversion factor from Bangladesh. We find that a program which provides girls with financial incentives conditional on marriage status is the most cost-effective way to avert child marriages and has the highest benefit-cost ratio and net present value per \$1,000 spent.

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**The Marriage Market Value of Bride Age and Education: A Vignette Approach to Decomposing Marriage Transfers in Rural Bangladesh** with Erica Field and Rachel Glennerster

Data from a carefully crafted hypothetical survey of 750 professional matchmakers in rural Bangladesh enable a novel analysis of how demographic characteristics of brides and grooms, including wealth, education and age, influence marriage market prices (dowry and denmeher). While a standard Hedonic approach to decomposing marriage market prices is likely to be biased by selection on unobservables, hypothetical price questions circumvent this issue by varying key demographic features of the bride while holding constant all other characteristics of both spouses. This is akin to a stated preference approach to demand elicitation, but because we survey third-party negotiators rather than potential buyers, our approach is less prone to standard concerns of bias in stated preference techniques. Analysis of survey responses reveals education, labor market participation, and youth are valued in the marriage market and that parents of educated, working, and young brides can negotiate a higher denmeher/dowry ratio. These findings are in contrast to observational data which finds no consistent return to education or labor market participation in the marriage market.

SELECTED WORK IN  
PROGRESS

**The Economics of Domestic Violence - Evidence from Bangladesh**

**Intimate Partner Violence and the Emergence of Social Norms - A Randomized Control Trial** with Paula Lopez Pena, Sakib Mahmood and Atonu Rabbani

**The Effect of Reducing Schooling on Education and Labor Market Outcomes in Germany** with Nicola Fuchs-Schuendeln

**How Changing the School System Affected Women's Labor Market Outcomes** with Muriel Niederle and Nicola Fuchs-Schuendeln

**Champions of Change - Changing Gender Attitudes and Behaviors through Social Targeting** with Yasmine Bekkouche, Sarah Deschênes, and Rozenn Hotte

**Know Your Place - Employment Decisions Among Couples** with Adrian Blattner, Pascaline Dupas, and Muriel Niederle

**Long-Term Impacts of Adolescent Girls' Empowerment Programs in Bangladesh** with Erica Field and Rachel Glennerster

RESEARCH GRANTS

**Total grant funding: \$3,383,611; out of which as one of primary PIs: \$2,708,738**

**Paternalistic Discrimination:** *G<sup>2</sup>LM|LIC*, National Science Foundation, Stanford King Center on Global Development, International Growth Centre, CEGA PEP Funding, Weiss Fund for Research in Development Economics, Structural Transformation and Economic Growth, George P. Shultz Research Fellowship

**A Media Experiment to Reduce Intimate Partner Violence in Bangladesh:** Agency Fund, USAID Development Innovation Ventures, Grand Challenges Canada Stars in Sexual and Reproductive Health and Rights, SVRI World Bank Group Development Marketplace Award for Innovation on Gender-Based Violence Prevention and Response, Stanford Center on Global Poverty and Development Graduate Student Research Funding

**The Economics of Domestic Violence:** CEGA PEP Funding, Graduate Research Opportunity Funding, George P. Shultz Research Fellowship, Stanford King Center on Global Development Graduate Student Research Funding, Weiss Fund for Research in Development Economics, National Science Foundation

**Champions of Change - Changing Gender Attitudes and Behaviors through Social Targeting:** Fund For Innovation in Development

**Long-Term Impacts of Adolescent Girls' Empowerment Interventions in Bangladesh:** *G<sup>2</sup>LM|LIC*, J-PAL Learning For All Initiative

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AWARDS & FELLOWSHIPS	King Center Graduate Student Fellowship	2023 – 2024
	SIEPR Graduate Student Fellowship	2023 – 2024
	NBER Gender in the Economy Pre-Doctoral Fellowship	2021 – 2022
	Women in Asia Fellowship	2020
	Sean Buckley Memorial Award for the Best 2nd Year Paper	2019
	German National Merit Foundation Scholar	2014 – 2016
	Recipient of Germany’s ERP Scholarship	2014
	Recipient of the Haniel Scholarship for Economics (not taken)	2014
	Phi Beta Kappa, Alpha Iota Chapter of Massachusetts	2013
	Harvard College Scholar for Superior Academic Achievement	2010
RELEVANT POSITIONS	<b>Department of Economics, Stanford University</b>	2018 – 2020
	Research Assistant for Muriel Niederle	
	<b>Duke Development Lab</b>	2015 – 2017
	Research Fellow	
	<b>United Nations, Debt and Development Finance Branch (UNCTAD)</b>	2014 – 2015
	Survey Data Analyst	
	<b>European Central Bank</b>	2013 – 2014
	Trainee in the International Policy Analysis Group	
TEACHING EXPERIENCE	<b>Department of Economics, Stanford University</b>	
	Teaching Assistant for Marcelo Clerici-Arias, Bing Honors College	2021, 2022
	Teaching Assistant for Marcelo Clerici-Arias, Junior Economics Honors Course	2021
	<b>Graduate School of Business, Stanford University</b>	
	Teaching Assistant for Kathryn Shaw and Giovanna Prennushi, Economic Growth	2020
REFEREEING	<i>Quarterly Journal of Economics, American Economic Review: Insights, The Review of Economics and Statistics, American Economic Journal: Applied Economics, American Economic Journal: Economic Policy, Journal of Economic Behavior and Organization, Journal of Development Economics, Journal of the European Economic Association, Economic Development and Cultural Change, Labor Economics, Economic Modeling, World Development, Global Innovation Fund</i>	
PROFESSIONAL ACTIVITIES	Student Member, Culture Committee, Stanford University, Economics Dept.	2020 – 2021
	Founder and Co-President, WE RISE Student Association, Stanford University	2019 – 2021
	Young African Research Network Mentor, Stanford University	2022
	Pre-Doc Mentor, King Center on Global Development, Stanford University	2021 – 2022
PRESENTATIONS	BRAC Institute of Governance and Development, IGC Resilient and Resurgent Bangladesh Conference, SITE Psychology and Economics, SITE Gender, University of San Francisco, Goethe University Frankfurt, ESA	2023
	CEMFI, American University, ECBE, ESA	2022
	BYEM (Best Paper Award), YES, ADE, University of Ohio, ESA, SITE Experimental Workshop on the Political Economy of Conflict and Crime	2021
	UEA Lab-in-the-field Conference, SEEDEC, CIES	2020
	Post-Primary Education Initiative Donor-Researcher Convening	2019
		2017
LANGUAGES	English (fluent), German (native)	