

NATALIA EMANUEL

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EMPLOYMENT

Federal Reserve Bank of New York , Research Economist	2022-
Princeton University , Postdoctoral Researcher in the Industrial Relations Section	2021-2022
Behavioural Insights Team , <i>Research Fellow</i>	2014-2015
National Bureau of Economic Research , <i>Research Assistant for Larry Katz and Claudia Goldin</i>	2013-2014

EDUCATION

Harvard University , Ph.D. in Economics, <i>funded by the National Science Foundation</i> Fields: Labor Economics, Public Finance	2021
Oxford University , M.Sc. in Evidence-Based Social Policy, <i>funded by the Marshall Scholarship</i>	2015
Yale University , B.A. in Economics with Distinction in the Major, Cum Laude	2013

PUBLICATIONS & ACCEPTED PAPERS

Why do Women Earn Less than Men? Evidence from Bus and Train Operators (2022) *Journal of Labor Economics* 40:2. (with Valentin Bolotnyy)

Female workers earn \$0.89 on the male-worker dollar even in a unionized workplace where tasks, wages, and promotion schedules are identical for men and women by design. We use administrative time card data on bus and train operators to show that the earnings gap can be explained by female operators taking, on average, 3 fewer hours of overtime and 4 more hours of unpaid time-off per week than male operators. Female operators, especially those who are unmarried and have dependents, pursue schedule conventionality, predictability, and controllability more than male operators. Analyzing two policy changes, we demonstrate that while reducing schedule controllability can reduce the earnings gap, it can also make female workers worse off.

Tripping Through Hoops: The Effect of Violating Compulsory Government Procedures (Conditionally Accepted) *American Economic Journal: Economic Policy* (with Helen Ho)

Millions of Americans must navigate complex government procedures under the threat of punishment. Violating these requirements can lead to poverty traps or deepening legal system involvement. We use a field experiment to estimate the effect of failing to appear for court on subsequent legal contact. The treatments reduce failure to appear by 39 percent. Using treatment assignment to identify the causal impact of minor procedural violations, we find no effect on arrests. However, for lower-level cases, violations increase fines and fees paid by 60 percent or \$80, equivalent to a high-interest loan, showing that minor procedural violations can be costly.

WORKING PAPERS

Racial Discrimination in Child Protection *Revision Requested by Quarterly Journal of Economics* (with E. Jason Baron, Joseph Doyle, Peter Hull and Joe Ryan)

Ten percent of Black children in the U.S. spend time in foster care—twice the rate of white children. We estimate unwarranted disparities in foster care placement decisions, adjusting for differences in the potential for future maltreatment by leveraging the quasi-random assignment of cases to investigators. Using a sample of nearly 220,000 maltreatment investigations, we find that Black children are 1.7 percentage points (50%) more likely to be placed into foster care following an investigation than white children conditional on subsequent maltreatment potential. This disparity is entirely driven by white investigators and by cases where maltreatment potential is present, in which Black children are twice as likely to be placed as white children (12% vs. 6%). These results suggest white children may be harmed by “under-placement” in high-risk situations via the leniency that white investigators afford to white parents. Leveraging the additional quasi-random assignment of hotline call screeners, we find that both screeners and investigators are responsible for unwarranted disparities in placement, with investigators amplifying the disparity for cases with subsequent maltreatment potential and mitigating it for lower-risk cases. This finding highlights the importance of “systems-based” analyses of inequity in high-stakes decisions, where discrimination can compound across multiple decision-makers.

‘Working’ Remotely? Selection, Treatment and the Market Provision of Remote Work *Revision Requested by American Economic Journal: Applied Economics* (with Emma Harrington)

How does remote work affect productivity and how productive are workers who choose remote jobs? We estimate both effects in a US Fortune 500 firm’s call-centers that employed both remote and on-site workers in the same jobs. Prior to Covid-19, remote workers answered 12 percent fewer calls per hour than on-site workers. When the call-centers closed due to Covid-19, the productivity of formerly on-site workers declined by 4 percent relative to already-remote workers, indicating a third of the initial gap was due to a negative treatment effect of remote work. Yet an 8-percent productivity gap persisted, indicating that the majority of the productivity gap was due to negative worker selection into remote work. Difference-in-differences designs also indicate that remote work degraded call quality — particularly for inexperienced workers — and reduced workers’ promotion rates. In a model of the market provision of remote work, we find that firms were in a prisoner’s dilemma: all firms would have gained from offering comparable remote and on-site jobs, but any individual firm was loathe to attract less productive workers.

The Power of Proximity to Coworkers: Training for Tomorrow or Productivity Today? *Submitted* (with Emma Harrington and Mandy Pallais)

In an increasingly digital world, how does sitting near coworkers affect col- laboration, on-the-job training, and output? We study software engineers at a Fortune 500 firm, whose main campus has two buildings several blocks apart. When offices were open, engineers working in the same building as all their teammates received 23 percent more online feedback on their computer code than engineers with distant teammates. After offices closed for COVID-19, this advantage shrank by 17 percentage points. Sitting near coworkers increases how much junior engineers learn from their senior colleagues — not only in- person but also online. Proximity particularly increases feedback to female engineers and young engineers, who are more likely to quit the firm when proximity is lost. However, sitting together reduces senior engineers’ programming output, suggesting a trade-off between short-term productivity and long-run human-capital development. Even pre-COVID, gaining one distant teammate reduced online feedback among coworkers sitting together: thus, remote-work policies may impact even workers who choose to go into the office.

Firm Frictions and the Payoff of High Pay: Elasticities of Labor Supply and Productivity with Respect to Wages (with Emma Harrington)

How do firms benefit from raising pay for low-wage workers? Focusing on a Fortune 500 retailer, we estimate the impact of higher wages on employee productivity, turnover, and recruitment among warehouse and call-center workers, using the quasi-randomness induced by sticky wage-setting policies. We document finite wage elasticities of turnover (between -3.0 and -4.5) and recruitment (between 3.2 and 4.2), which suggest the firm has some wage-setting power. Yet, on the margin, raising wages by \$1 increases productivity by more than \$1, giving the firm an incentive to pay more, even if they could pay lower wages. These responses to pay emerge both in a setting where the firm discretely raised wages and in a setting where its wages remained constant while other firms raised pay. These effects reflect both changes in worker selection and changes in behavior of existing workers. We estimate that over half of the turnover reductions and productivity increases arise from changes in workers’ behavior. Finally, our estimates suggest considerable gender heterogeneity: Men’s turnover is more responsive to higher wages than women’s. But turnover effects are swamped by women’s stronger productivity response to higher pay. Together, the gender-specific elasticities suggest firms have an implicit incentive to set female wages above male wages and thus firm profits cannot explain the gender pay gap.

FELLOWSHIPS & HONORS

- 2021 Upjohn Institute Dissertation Award Honorable Mention
- 2020 Horowitz Foundation Dissertation Prize
 Lab for Economic Applications and Policy Grant
 FDR Foundation Summer Support
 Institute for Quantitative Social Science Research Grant
 Lab for Economic Applications and Policy Grant – *with Emma Harrington*
 Professional Development Fund
- 2019 Bradley Foundation Award
- 2018 Lab for Economic Applications and Policy Grant – *with Emma Harrington & Hannah Shaffer*
 Rappaport Institute for Greater Boston – *with Valentin Bolotnyy*
- 2017 JPAL North America Pilot Grant – *with Helen Ho*
 JPAL North America Travel Grant – *with Helen Ho*
 Access to Justice Travel Grant – *with Helen Ho*
- 2014 National Science Foundation Graduate Research Fellowship – *3 years full funding for doctorate*
- 2013 Marshall Scholarship – *full funding to study at Oxford*
 Yale Jefferson Award for Public Service
 Charles H. Dickerman Award for best Yale undergraduate thesis in economics
- 2012 Heinz Government Service Fellowship

PUBLICATIONS OUTSIDE ECONOMICS

- State-Level Variation in the Risk of Child Welfare System Contact among U.S. Children, 2008-2018** (2023) *Children and Youth Services Review* 147:106832. (with Youngmin Yi, Frank Edwards, Hedwig Lee, John Leventhal, Jane Waldfogel, and Christopher Wildeman)
- Mortality Among White, Black, and Hispanic Male and Female State Prisoners, 2001-2009.** (2016) *SSM - Population Health* 2:10-13 (with Wildeman, Christopher, E. Ann Carson, Daniela Golinelli, and Margaret E. Noonan)
- State-Level Variation in the Imprisonment-Mortality Relationship, 2001-2010.** (2016) *Demographic Research* 34:359-372 (with Wildeman, Christopher, Margaret E. Noonan, Daniela Golinelli, and E. Ann Carson)
- Cumulative Risks of Foster Care Placement for Danish Children.** (2014) *PLoS ONE* 9(10): e109207 (with Peter Fallesen and Christopher Wildeman)
- The Prevalence of Confirmed Maltreatment Among US Children, 2004-2011.** (2014) *JAMA Pediatrics.* (with Christopher Wildeman, John M. Leventhal, Emily Putnam-Hornstein, Jane Waldfogel, and Hedwig Lee)
- Cumulative Risks of Foster Care Placement for American Children, 2000-2011.** (2014) *PLoS ONE* 9(3): e92785 (with Christopher Wildeman)

PROFESSIONAL SERVICE & TEACHING

- Referee Service:** Quarterly Journal of Economics, Journal of Political Economy, Review of Economic Studies, Management Science, Journal of Public Economics, American Economic Review: Insights, Journal of Policy Analysis and Management, Journal of Labor Economics, Journal of Urban Economics, Journal of the European Economic Association, Oxford Bulletin of Economics and Statistics, Child Maltreatment, Children and Youth Services Review, National Science Foundation
- Harvard Undergrad. Sophomore Seminar: Women in the Workforce, Course Designer & Instructor** Spring 2020
- Harvard Transitioning To Research: Course for PhD Third Years, Course Designer & Co-Instructor** Fall 2020

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