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Conference on Diversity, Equity and Inclusion in Economics, Finance, and Central Banking

The Unintended Consequences of #MeToo – Evidence from Research Collaborations

Marina Gertsberg

THE UNIVERSITY OF MELBOURNE



Research Question

How did #MeToo impact collaboration between men and women?

Motivation

- Collaboration is crucial for production of output
(Hamilton et al., 2003; Anderson & Richards-Shubik, 2021)
- Collaboration requires social interaction which has a cost
- Gender gap in career outcomes due to differences in collaborations & networks
(e.g., Cullen & Perez-Truglia, 2019; Card et al., 2020; Ductor et al., 2021)
- Events which change costs of collaboration particularly important for women

Motivation



#MeToo movement (Oct 15, 2017)

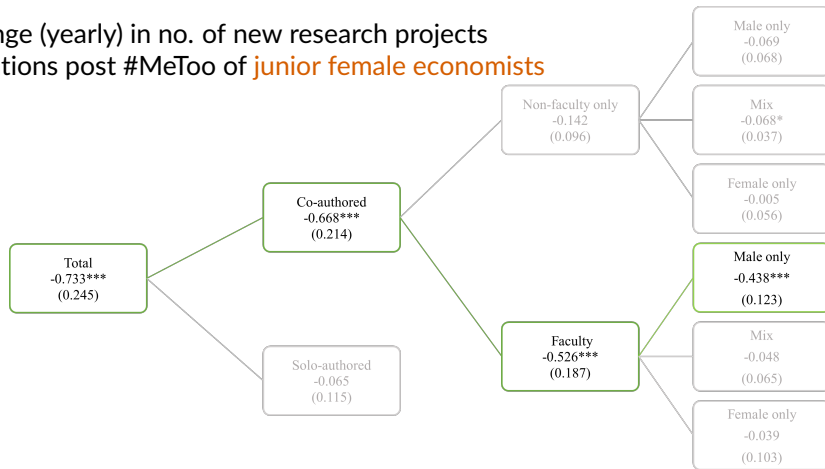
- Create awareness & expose culture where sexual harassment was tolerated
 - Encourage victims to come forward – offer public arena & support
 - Aim to enforce punishment of perpetrators
- ⇒ Create safer work environment for women by altering how women and men interact
- ⇒ Anecdotal & survey evidence: men are concerned about being accused of sexual harassment

Open question:

Did #MeToo on net increase or decrease the costs of collaboration between women and men?

Preview of results: How did collaboration between men and women change around #MeToo?

Change (yearly) in no. of new research projects initiations post #MeToo of **junior female economists**



Decline in productivity largely due to fewer new collaborations with male coauthors

Preview of results: Are men or women backing-off from collaborations after #MeToo?

- Most consistent with a story of men managing an increased perceived risk of sexual harassment accusations after #MeToo
- ⇒ Collaborations are less negatively affected when **sexual harassment policies are clearer in specifying prohibited behaviors** when the reporting probability appears high

Contribution

#MeToo had unintended consequences that disadvantaged the career opportunities of the protected group

- First study to show evidence of negative impact of #MeToo on collaborations between men and women
- Exploit setting where collaborations are crucial but formed voluntarily to observe behavioral response to intervention
- Policy implications: design of clearer policies that govern social interactions in the workplace

Setting: Academia as a lab to observe change in collaborations

Challenge: Identify relevant interactions and measure impact on career-critical outcomes

Academic careers are dependent on collaborations and social interaction

Research projects of junior academics:

- Relevant: pressure to produce research output to get tenure
- Collaborations are vital for productivity and success but are formed voluntarily
- Measurable: publicly disclosed and updated in vita
- Nature of interaction prone to ambiguous social situations: e.g. casual, longer-term
- Women underrepresented in economics

Empirical approach (1/3)

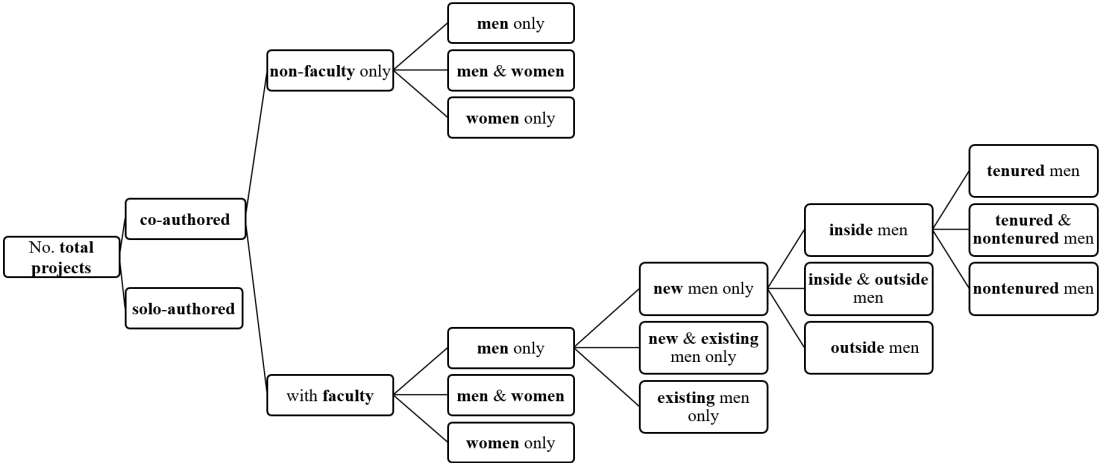
Sample:

- Junior female academics (Ph.D. in/after 2014) on tenure-track in 2017 in top 100 U.S. economics departments
 - Six-year tenure clock, sensitive to career disruptions, update vita, new to profession
- 83 junior female academics, 393 year - person observations, >1,200 projects

Approach:

- Composition of collaborators on working papers from historical CVs around #MeToo (2015-2020)
- Dimensions: male/ female, new/existing, inside/outside university, tenure/nontenured

Empirical approach (2/3): Non-overlapping combinations of coauthors



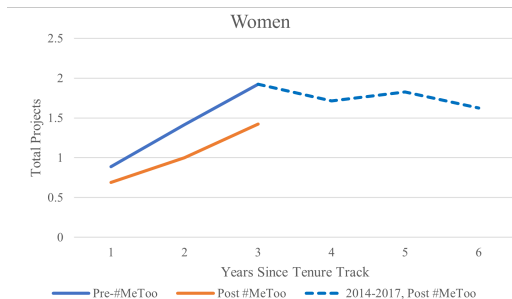
Empirical approach (3/3): Estimation

- **Outcome:** No. of collaborations of each type in year
- **Post:** As of 2018 - how did no. of each collaboration type change?
- **Same junior female academic at same institution** (person - university FEs)
- **Controls** (time-variant):
 - **No. years since start of tenure-track (career-stage specific time trends)**
 - Size of accumulated coauthor network
 - No. of female and male Assistant Professors in same department

$$N_{iu,t} = \alpha_{ct} + \beta_1 Post_t + \beta_2 A_{iu} + \beta_3 C_{iu,t} + \epsilon_{iu,t}$$

How did collaboration between men and women change around #MeToo?

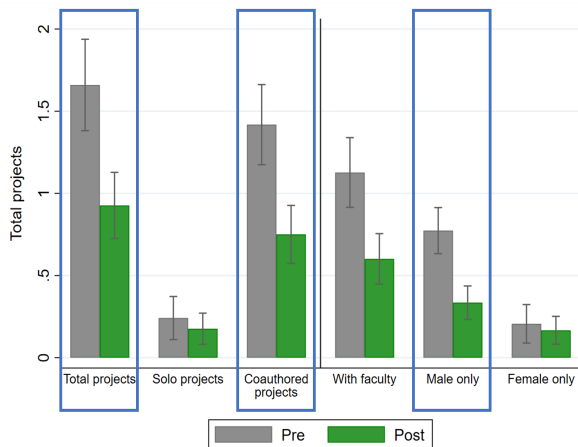
Changes in productivity trends over the tenure cycle



Women's productivity falls behind from the growth trend post #MeToo – men's doesn't

How did collaboration between men and women change around #MeToo?

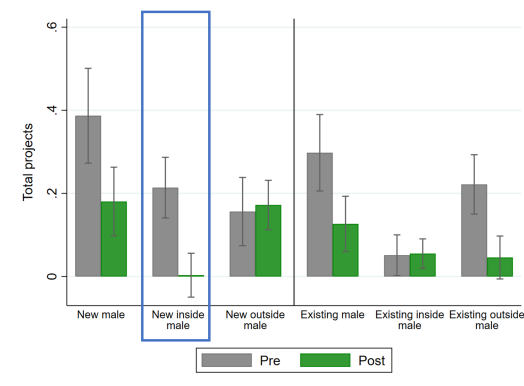
Collaborations of junior women before & after #MeToo (marginal effects)



1. Total productivity decline of 0.7 (-44%) new projects per year
2. Collaborations with male coauthors account for 60% of total decline
3. No increase in collaborations with women or solo projects

How did collaboration between men and women change around #MeToo?

Which group of men drives the decline? Collaborations of junior women with men before & after #MeToo (marginal effects)



Collaborations with new male coauthors at the same institution disappear (29% of decline)

Do women or men change behavior leading to less collaboration?

- Anecdotal and survey evidence that men are concerned about being accused of sexual harassment and intent to stop working with women
 - Public naming & shaming
 - Announcement of zero tolerance policies by organizations
 - Increased reporting and detection (Levy & Mattsson, 2020; Gauthier, 2022)
 - Uncertainty about what constitutes socially appropriate behavior
- ⇒ **Heightened perceived risk of being exposed to sexual harassment accusations**

Do women or men change behavior leading to less collaboration?



Diana D @Diana53999 · 12/8/22 ...

Replying to @marinambgg

Definitely. Husband is senior management. He wouldn't dream of a 1 on 1 lunch with female associate anymore or a closed door meeting. Forget business trips. Not risking our family over a false allegation. Women never lie, do they?

💬 5 ↺ 4 ❤️ 124 ↗



itslolright @itslolright · 12/8/22 ...

Replying to @Jam_mil73 @marinambgg and @Madz_Grant

spot on - no benefit worth the catastrophic loss

no closed door meeting
no riding alone in car
no meals alone

maybe extreme, but so's the cost of allegation (truth doesn't matter)

these things cost me little and provide good protection

💬 1 ↺ ❤️ 91 ↗

Do women or men change behavior leading to less collaboration?

Do men manage a perceived increased risk of sexual harassment accusations post #MeToo?

- #MeToo increased public pressure for institutions to side with accusers
- Decisions about employment continuation made through internal investigations
- A higher perceived risk of sexual harassment accusations when:
 - **Sexual harassment policies** are not specific about which behaviors are considered a violation
 - The probability of reporting appears high (Cheng & Hsiaw, 2020)
- Women's choice to work with men should not be affected by policy clarity

Do women or men change behavior leading to less collaboration?

- ⇒ **Relate ambiguity in definitions of sexual harassment in policies & reporting environment to # of collaborations**

Outcome:

No. of collaboration with new male coauthors at the same institution

Explanatory variables (pre #MeToo on university level):

- **Reporting environment:** accumulated no. of public sexual harassment cases
- **Policy ambiguity:**
 - **No. of examples of behaviors**
 - **Length of sexual harassment definition (words)**

Sexual harassment policies: less clear policy

Sexual harassment consists of unwelcome sexual advances, requests for sexual favors, or other verbal or physical conduct of a sexual nature on or off campus, when: (1) submission to such conduct is made either explicitly or implicitly a condition of an individual's employment or academic standing; or (2) submission to or rejection of such conduct is used as the basis for employment decisions or for academic evaluation, grades, or advancement; or (3) such conduct has the purpose or effect of unreasonably interfering an individual's work or academic performance or creating an intimidating or hostile academic or work environment. Sexual harassment may be found in a single episode, as well as in persistent behavior. All members of our community are protected from sexual harassment, and sexual harassment is prohibited regardless of the sex or gender of the harasser.

Sexual harassment policies: clearer policy

Sexual harassment is unwelcome conduct of a sexual nature, such as unwelcome sexual advances, requests for sexual favors, or other verbal, nonverbal, or physical conduct of a sexual nature, when:

Submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment or academic standing; or

Submission to or rejection of such conduct by an individual is used as the basis for significant employment decisions (such as advancement, performance evaluation, or work schedule) or academic decisions (such as grading or letters of recommendation) affecting that individual; or

The conduct is sufficiently severe or pervasive that a reasonable person would consider it intimidating, hostile or abusive and it adversely affects an individual's educational, work, or living environment.

A partial list of examples of conduct that might be deemed to constitute sexual harassment if sufficiently severe or pervasive include:

Examples of **verbal sexual harassment** may include unwelcome conduct such as sexual flirtation, advances or propositions or **requests for** sexual activity or **dates**; asking about someone else's sexual activities, fantasies, preferences, or history; discussing one's own sexual activities, fantasies, preferences, or history; verbal abuse of a sexual nature; suggestive comments; sexually explicit jokes; turning discussions at work or in the academic environment to sexual topics; and making offensive sounds such as wolf whistles.

Examples of **nonverbal sexual harassment** may include unwelcome conduct such as displaying sexual objects, pictures or other images; invading a person's personal body space, such as standing closer than appropriate or necessary or hovering; **displaying or wearing objects or items of clothing which express sexually offensive content**; making sexual gestures hands or body movements; looking at a person in a sexually suggestive or intimidating manner; or delivering unwanted letters, gifts, or other items of a sexual nature.

Do women or men change behavior leading to less collaboration?

Variables	
Post	-0.053 (0.174)
Post x Log No. incidents (cum.)	-0.325* (0.167)
Post x Log No. behavior examples in policy	-0.052 (0.048)
Post x Log No. incidents (cum.) x Log No. behavior examples in policy	0.100** (0.046)
Time-variant controls and FEs	Yes
Observations	393
R-squared	0.275

When sexual harassment policies are ambiguous & the no. of public sexual harassment incidents is high - the decline in collaborations between men & women is larger

Summary of results

- Women start fewer new projects post # MeToo - largely due to fewer collaborations with men
 - Women don't replace collaborations with men by starting new projects with other women or alone
 - Men don't have a decline in new projects and work more with other men post #MeToo
 - The decline in collaborations between men & women is larger when the probability of reporting seems high and policies are ambiguous
- ⇒ Consistent with men managing an increased perceived risk of sexual harassment accusations post #MeToo

Conclusion & Policy Implications

How did #MeToo impact collaboration between men and women?

Decline in productivity among junior female academics largely due to fewer new collaborations with male colleagues

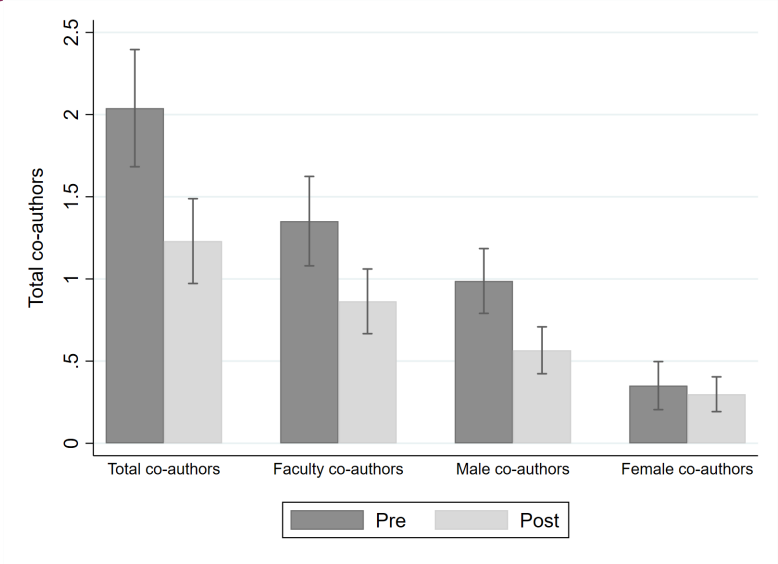
- Organizations need to support #MeToo with internal governance structures: implement clear policies that outline appropriate behavior in the workplace
 - Negative productivity effects for women need to be considered in promotion decisions
- ⇒ **With clear policies we can have the benefits of #MeToo in creating awareness for sexual harassment without hurting women's productivity**

Appendix

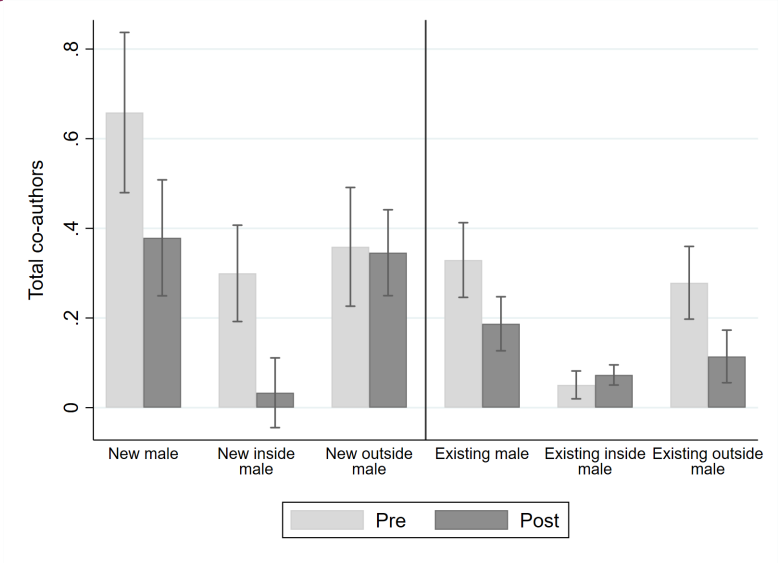
Descriptives

Variables	N	mean	sd	p25	p50	p75
Post	393	0.58	0.494	0	1	1
Years since start tenure track	393	2.145	1.566	1	2	3
Year of PhD	393	2015	1.158	2014	2015	2016
Tenured	393	0.013	0.112	0	0	0
University rank	393	41.753	24.853	21	42	59
Log past no. all faculty co-authors (cum.)	393	1.108	0.716	0.693	1.099	1.609
Log no. female Assistant Professors in department	393	1.283	0.343	1.099	1.386	1.609
Log no. male Assistant Professors in department	393	1.826	0.517	1.609	1.946	2.197

Change in collaborations: Number of total, faculty, male, and female co-authors



Change in collaborations: Number of new and existing male co-authors



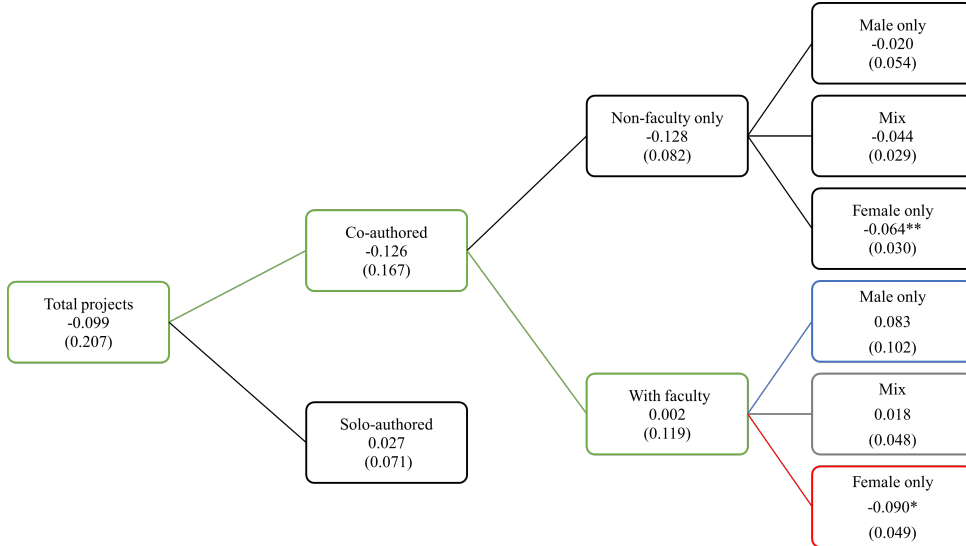
Accounting for COVID-19

[illegible]

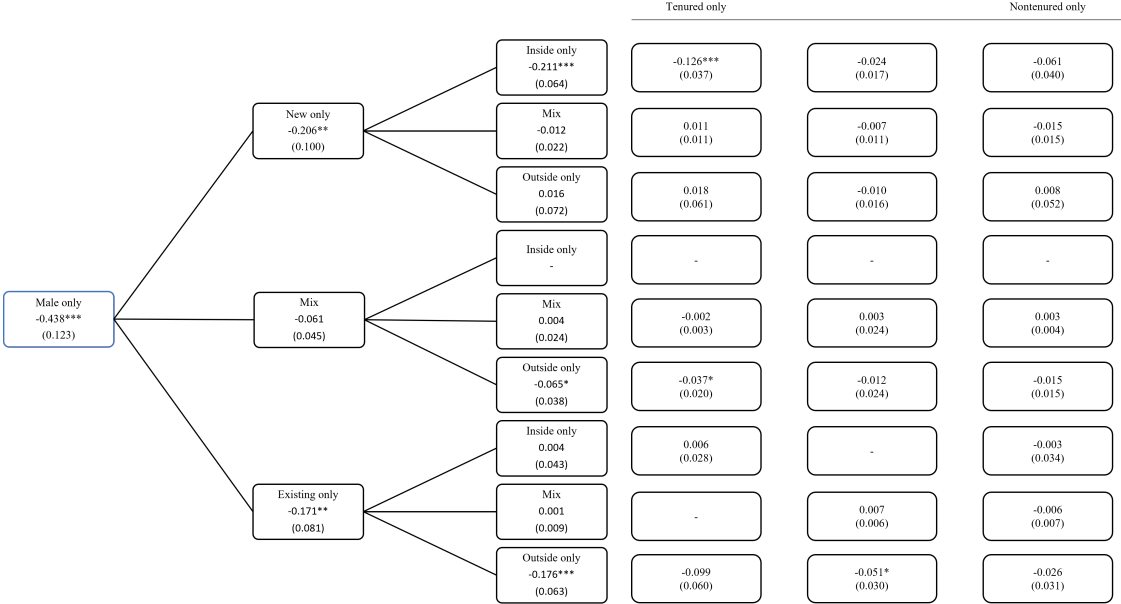
Placebo Test: 2012-2017

Variables	All	Coauthored	Male coauthors	Existing male co-authors only			New male coauthors only		
				All	Inside	Outside	All	Inside	Outside
Post	0.163 (0.224)	0.166 (0.194)	0.200 (0.163)	0.010 (0.095)	0.006 (0.016)	0.003 (0.092)	0.216* (0.128)	0.036 (0.073)	0.162 (0.120)
Tenured	-0.468 (0.724)	-0.392 (0.606)	-0.069 (0.401)	-0.377 (0.286)	-0.056 (0.053)	-0.322 (0.249)	-0.090 (0.415)	-0.086*** (0.026)	-0.016 (0.404)
Time-variant controls and FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	473	473	473	473	473	473	473	473	473
R-squared	0.313	0.340	0.370	0.371	0.272	0.383	0.254	0.235	0.272

Changes in collaborations: Men



Changes in collaborations: Male coauthors



Changes in collaborations: Female coauthors

		Tenured only		Nontenured only	
Female only -0.039 (0.103)	New only -0.050 (0.074)	Inside only -0.046* (0.024)	-0.027 (0.017)	-	-0.019 (0.019)
		Mix -	-	-	-
		Outside only -0.004 (0.068)	0.026 (0.026)	-	-0.030 (0.054)
	Mix -0.016 (0.010)	Inside only -	-	-	-
		Mix -0.008 (0.008)	-	-	-0.008 (0.008)
		Outside only -0.008 (0.011)	-	-0.008 (0.007)	-0.001 (0.009)
	Existing only 0.027 (0.049)	Inside only -0.013 (0.023)	0.003 (0.016)	-	-0.017 (0.017)
		Mix -	-	-	-
		Outside only 0.040 (0.044)	0.033 (0.029)	-	0.008 (0.032)

Changes in collaborations: Mixed-gender coauthors

		Tenured only			Mix			Nontenured only		
Mixed -0.048 (0.065)	New only -0.056 (0.057)	Inside only -0.014 (0.021)	-	-0.014 (0.021)	-	-0.014 (0.021)	-			
		Mix 0.013 (0.024)	-0.008 (0.013)	0.021 (0.021)	-	0.021 (0.021)	-			
		Outside only -0.055 (0.046)	-0.034** (0.016)	-0.003 (0.036)	-0.018 (0.026)	-0.003 (0.036)	-0.018 (0.026)			
	Mix -0.010 (0.019)	Inside only -0.006 (0.006)	-	-	-0.006 (0.006)	-	-0.006 (0.006)			
		Mix 0.002 (0.009)	-	-0.005 (0.006)	0.007 (0.007)	-0.005 (0.006)	0.007 (0.007)			
		Outside only -0.007 (0.014)	-	-0.007 (0.014)	0.000 (0.019)	-0.007 (0.014)	0.000 (0.019)			
	Existing only 0.018 (0.024)	Inside only -	-	-	-	-	-			
		Mix -0.006 (0.007)	-0.006 (0.007)	-	-	-0.006 (0.007)	-			
		Outside only 0.025 (0.023)	0.014 (0.014)	0.002 (0.003)	0.008 (0.019)	0.002 (0.003)	0.008 (0.019)			

Hostile Environment					Quid for pro (Sexual coercion)
Gender Harassment		Unwanted sexual advances			
Impersonal	Personal		Personal		Personal
Verbal/Non-verbal	Verbal	Non-verbal	Verbal	Physical (Non-verbal)	Verbal/Non-verbal
.....	-----	-----	-----	-----	-----
<ul style="list-style-type: none"> • Displaying sexual <ul style="list-style-type: none"> • Objects (1) • Pictures (1) • Images (1) • Displaying <ul style="list-style-type: none"> • Objects (1) • Items of clothing which express sexually offensive content (1) • Wearing <ul style="list-style-type: none"> • Objects (1) • Items of clothing which express sexually offensive content (1) 	<ul style="list-style-type: none"> • Verbal conduct of sexual nature (1) • Sexual flirtation (1) • Asking about <ul style="list-style-type: none"> • Sexual activities (1) • Fantasies (1) • Preferences (1) • Discussing own <ul style="list-style-type: none"> • Sexual activities (1) • Fantasies (1) • Preferences (1) • Verbal abuse of a sexual nature (1) • Suggestive comments (1) • Sexually explicit jokes (1) • Turning discussions to sexual topics (1) 	<ul style="list-style-type: none"> • Non-verbal conduct of sexual nature (1) • Making offensive sounds (1) • Wolf whistles (1) • Invading personal body space (1) • Standing closer than necessary (1) • Hovering (1) • Sexual gestures with <ul style="list-style-type: none"> • Hands (1) • Body movement (1) • Looking in a <ul style="list-style-type: none"> • Sexually suggestive (1) • Intimidating manner (1) • Delivering unwanted <ul style="list-style-type: none"> • Letters (1) • Gifts (1) • Items of a sexual nature (1) 	<ul style="list-style-type: none"> • Unwelcome sexual advances (1) • Requests for sexual favors (1) • Advances for <ul style="list-style-type: none"> • Sexual activity (1) • Dates (1) • Propositions for <ul style="list-style-type: none"> • Sexual activity (1) • Dates (1) • Requests for <ul style="list-style-type: none"> • Sexual activity (1) • Dates (1) 	<ul style="list-style-type: none"> • Physical conduct of sexual nature (1) 	<ul style="list-style-type: none"> • Submission to or rejection used as basis for <ul style="list-style-type: none"> • Significant employment decisions (1) • Advancement (1) • Performance evaluation (1) • Work schedule (1) • Academic decisions (1) • Grading (1) • Letters of recommendation (1)
7	12	13	8	1	7

Total no. behavior examples: 48

Total no. categories without behavior examples: 0

Heterogeneity: Attitudes towards gender

- Attitudes towards gender can influence the magnitude of the impact of #MeToo
 - For social movement to be effective it needs to be in line with prevailing values (Stern et al., 1999) -> larger effect when norms are liberal
 - Social movement effective in changing norms and affect behavior with more scope for change (Bursztyn et al., 2017) -> larger effect when norms are conservative
- Compare collaboration patterns in women's institutions in red (conservative), blue (liberal) and swing states
- Male and female gender attitudes: state-level labour market sexism composite index (Charles et al., 2018)

Heterogeneity: Attitudes towards gender

Variables	Red State	Sexism Index		
		All	Male	Female
Post	-0.241*** (0.069)	-0.214*** (0.065)	-0.220*** (0.065)	-0.210*** (0.065)
Post x Red State	0.111** (0.047)			
Post x Sexism		0.088** (0.037)		
Post x Sexism Male			0.057 (0.034)	
Post x Sexism Female				0.090** (0.036)
Time-variant controls and FEs	Yes	Yes	Yes	Yes
Observations	393	379	379	379
R-squared	0.274	0.276	0.272	0.276

More pronounced effect on collaborations in liberal areas

Heterogeneity: Attitudes towards gender and sexual harassment policies

	Excluding red states			More female-friendly attitudes		
	(1)	(2)	(3)	(4)	(5)	(6)
Post	-0.098 (0.223)	-0.267*** (0.097)	-0.212 (0.286)	-0.222 (0.397)	-0.316** (0.131)	0.205 (0.595)
Post x Log no. incidents (cum.)	-0.505*** (0.168)	-0.087 (0.054)	-0.797*** (0.227)	-0.366* (0.214)	-0.055 (0.062)	-0.743** (0.357)
Post x Log no. examples	-0.071 (0.058)			-0.045 (0.105)		
Post x Log no. incidents (cum.) x Log no. examples	0.165*** (0.048)			0.132** (0.063)		
Post x Log no. categories with examples		-0.069 (0.069)			-0.050 (0.086)	
Post x Log no. incidents (cum.) x Log no. categories with examples		0.145*** (0.048)			0.129** (0.059)	
Post x Log policy word count			-0.024 (0.045)			-0.100 (0.100)
Post x Log no. incidents (cum.) x Log policy word count			0.148*** (0.038)			0.142** (0.063)
Time-variant controls and FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	278	278	278	209	209	209
R-squared	0.293	0.290	0.293	0.331	0.330	0.331

Clear sexual harassment policies are effective in liberal areas