Monopsony and Gender

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Motivation

Large gender wage gaps: India (35%), Brazil (28%)

- Explanations: Productivity differences; compensating differentials; discrimination

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  - *"A type of discrimination may arise when two types of workers (for example, men and women) of the same efficiency are paid at different rates...if their conditions of supply are different"* - Joan Robinson (1933)
- Developing country: safety, sparse networks, propriety

Context

Textile and clothing manufacturing in Brazil

- 90 million workers across developing world
- 35pp gender wage gap

This Paper

1. **Quasi-experiment:** estimate elasticity of residual labor supply to firm

$$w_{gj} = mrpl_{gj} \frac{e_{gj}}{1 + e_{gj}}$$

   - Aside: formally rule out strategic interactions

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2. **Model:** Source of gender difference in monopsony power
   - Women prefer specific employer (commuting frictions, safety)
   - Women have fewer good employers
     - ★ Amenities—maternity leave, flexibility, norms, discrimination
     - ★ Comparative advantage—good at textiles, bad at construction

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   - Women prefer specific employer (commuting frictions, safety) $\rightarrow$ horizontal differences
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2. **Model:** Source of gender difference in monopsony power
   - Women prefer specific employer (commuting frictions, safety) → horizontal differences
   - Women have fewer good employers → vertical differences
     - ★ Amenities—maternity leave, flexibility, norms, discrimination
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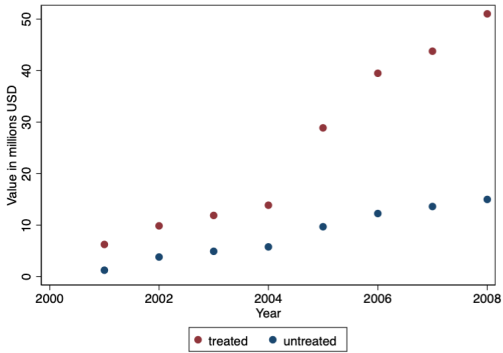
3. **Policy Counterfactuals**
   - Change safety, amenities, productivity

Shock: End of the Multi-Fiber Arrangement

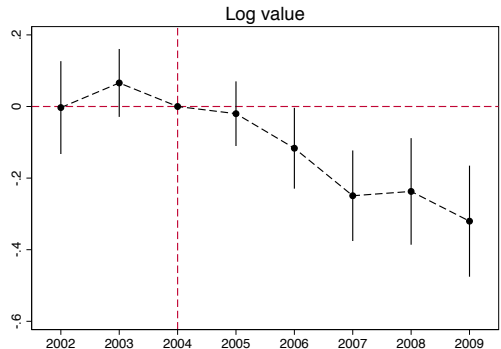
MFA imposed quotas on very specific Chinese exports to US, EU, Canada:

Comparison		**Treated**	
Code	Product name	Code	Product name
620341	Men's or boys' trousers, bib and brace overalls, breeches and shorts of wool or fine animal hair	620461	Women's or girls' trousers, bib and brace overalls of wool or fine animal hair
620510	Men's or boys' shirts of cotton	610910	Men's or boys' t-shirts of cotton
620449	Women's or girls' dresses of other txt materials	620463	Women's or girls' trousers, bib and brace overalls of synthetic fibers
620451	Women's or girls' skirts of wool or fine animal hair	611011	Sweaters, pullovers, sweatshirts, waistcoats of wool or fine animal hair
610839	Women's or girls' nightdresses and pajamas of other textile materials	620811	Women's or girls' slips and petticoats of man-made fibers
621132	Men's or boys' track suits of cotton	620520	Men's or boys' dress shirts of cotton
621142	Women's or girls' track suits of cotton	620821	Women's or girls' nightdresses and pajamas of cotton
621050	Women's or girls' other garments of man-made fibers	620530	Men's or boys' shirts of man-made fibers
610729	Men's or boys' nightshirts and pajamas of other txt materials	610329	Men's or boys' ensembles of other txt materials
620332	Men's or boys' suit type jackets and blazers of cotton	620412	Women's or girls' suit type jackets and blazers of cotton
620333	Men's or boys' suit type jackets and blazers of synthetic fibers	620433	Women's or girls' suit-type jackets and blazers of synthetic fibers
620339	Men's or boys' suit type jackets and blazers of other txt materials	620419	Women's or girls' suits or other txt materials

Chinese exports (million USD)



Brazilian log exports (event study)



- Firm-specific: 2% of establishments, 10% of employment

Preview of Findings

1. **Quasi-experiment:** Gender differences in monopsony power generate 18pp gender wage gap
2. **Model:** Sources
   - Women prefer specific employer: 10pp
   - Good jobs for women concentrated in textile industry: 8pp
3. **Counterfactuals:** Concentration driven by amenities, not productivity
   - Eliminating amenity gaps erodes 8pp gender wage gap
   - Eliminating productivity gaps erodes 4pp

Roadmap

1. Quasi-experiment
2. Facts
3. Model/Estimation
4. Policy Counterfactuals

Roadmap

1. **Quasi-experiment**
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Data Sources

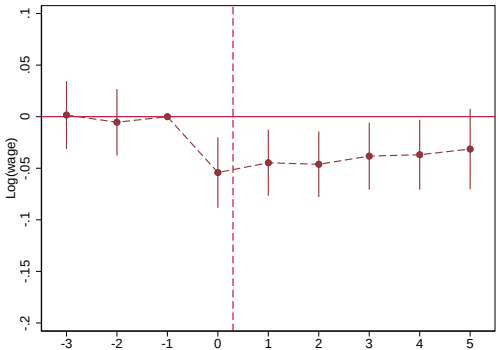
1. **Worker outcomes:** Employer-employee linked admin records (RAIS)
2. **Exports:** Establishment-level customs records
3. **Amenities**: Text of all collective bargaining agreements
   - 137 provisions: maternity leave, childcare, flexibility, absences

Balance on baseline characteristics

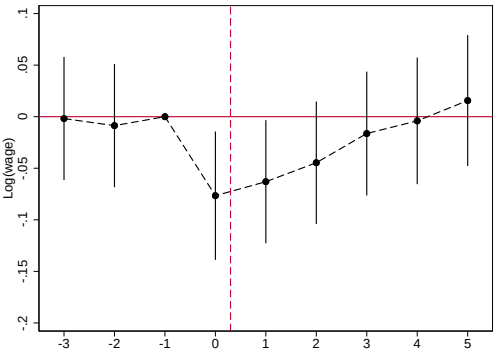
	Women		Men	
	Treated	Control	Treated	Control
Monthly wage	550.856	567.697	1050.331	1114.961
Weekly hours	43.961	43.737	43.647	43.745
Tenure (years)	4.105	4.504	4.661	5.243
Age (years)	33.182	34.251	31.223	33.188
Less than HS	0.758	0.732	0.666	0.679
Occupations (4-digit)				
Tailors	0.51	0.47	0.21	0.17
Spinning operators	0.08	0.09	0.08	0.09
Production line feeders	0.04	0.05	0.07	0.08
N	24260	27273	18381	44291

Both men and women's wages fall, men's recover over five years

Women



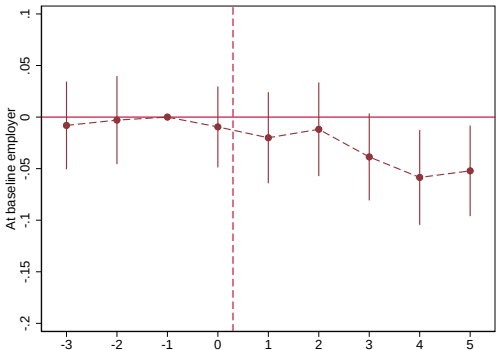
Men



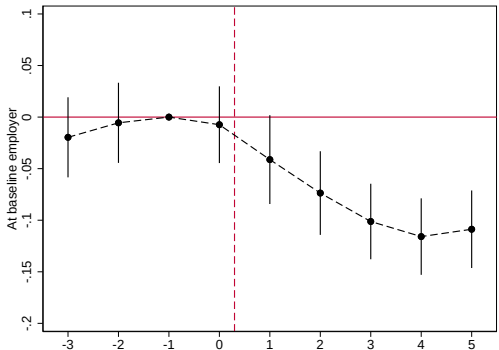
Hours; Nominal wages; Gender differences; Stayer wages

Men leave employers more

Women



Men



Gender differences | Evidence of monopsony

IV to estimate inverse elasticities

$$\Delta lnn_{jg} = \alpha D_j + \gamma_{1mt} + \upsilon_{1jgt}$$
$$\Delta lnw_{jg} = \beta D_j + \gamma_{2mt} + \upsilon_{2jgt}$$

- $e_{gj}^{-1} = (\frac{\Delta lnn_{jg}}{\Delta lnw_{jg}})^{-1}$; j = establishment
- Δlnn_{jg} = change in employment b/w $t = -1$ and $t = 5$
- Δlnw_{jg} = change in stayer wage
- D_j = MFA treatment

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- D_j = MFA treatment

Two notes:

1. Heterogeneous by size
2. Residual labor supply: holding others' response fixed Show no strategic wage spillovers

Results

- **Elasticities**: $\bar{e_f} = 1.23$, $\bar{e_m} = 2.70$
- **Avg. markdown** ($\frac{\bar{e_g}}{1+\bar{e_g}}$): Women: 55pp, Men: 73pp
- **Gender wage gap**: 18pp; explains half the observed 35pp gender wage gap

Roadmap

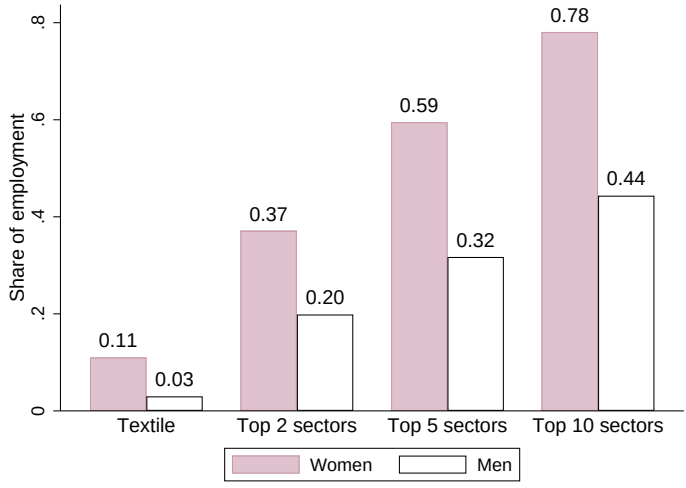
1. Quasi-experiment
2. **Facts**
3. Model/Estimation
4. Policy Counterfactuals

Fact 1: Men switch industries much more than women

	New txt. employer (1)	New industry (2)	New geography (3)
$Treat_i$*$Year_{3to5}$	0.059**	0.040***	0.006
	(0.008)	(0.008)	(0.005)
$Treat_i$*$Year_{3to5}$*F	-0.011**	-0.043***	-0.008
	(0.009)	(0.009)	(0.006)
Observations	765486	765486	765486

- Industry (2-digit): textile, food, construction
- Geography (microregion): commuting zone

Fact 2: Women work in fewer industries



Industries

Fact 3: Industries offer different amenities

Top 20 female clauses	Top 20 male clauses	Rank
Childcare assistance	On-call pay	1
Absences	Life insurance	2
Adoption leave	Strike procedures	3
Other: holidays and leaves	Other: protections for injured workers	4
Seniority pay	Profit sharing	5
Maternity protections	Salary deductions	6
Abortion protections	Work constraints	7
Paid leave	Transfers	8
Night pay	Machine and equipment maintenance	9
Nonwork-related injury protections	Duration and schedule	10
Abortion leave	Working environment conditions	11
Policy for dependents	Salary payment - means and timeframes	12
Extension/reduction of workday	Hazard pay (danger risk)	13
Guarantees to union officers	Safety equipment	14
Renewal/termination of the CBA	CIPA: accident prevention committee	15
Medical exams	Other assistances	16
Unionization campaigns	Death/funeral assistance	17
Health education campaigns	Workday compensation	18
Waiving union fees	Collective vacations	19
Salary adjustments/corrections	Tools and equipment	20

- Corradini et al. (2022): Revealed pref approach + text of collective bargaining contracts.
- **Female amenities: textiles: 6; non-textile: 4**. Details

Fact 4: Gender differences in observed skills do not explain exit

	Control for skill transferability	
	Retention	New sector
	(1)	(2)
$Treat_i$*$Year_{0to2}$*F	0.025**	-0.009
	(0.012)	(0.008)
$Treat_i$*$Year_{3to5}$*F	0.057***	-0.051***
	(0.012)	(0.009)
Skill decile-treat-post FE	Yes	Yes
Observations	850646	850646

- Control for O*NET based distance from local jobs Details.

Summary of data patterns and model implications

1. Men switch to non-textile industries much more than women
2. Women work in fewer industries
3. Industries offer different amenities
4. Gender differences in skill do not explain exit

$\rightarrow$ Industries vertically differentiated

$\rightarrow$ Industry-specific amenities

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Model — Setup

Two forces:

- Women prefer specific employer
- Women have fewer good employers

Model — Setup

- Worker i of group g chooses highest utility employer subject to idiosyncratic draw.

$$u_{igjk} = \underbrace{lnw_{gj} + lna_{gj} + lna_{gk}}_{\text{good employer}} + \underbrace{\epsilon_{igjk}}_{\text{employer-specific preference}}$$

ϵ_{igjk}, nested:

- η_g = cross-employer (safety, commuting frictions)
- θ_g = cross-industry (don't want to upskill)
- λ_g = cross-location (family relocation)
- $\eta_g > \theta_g > \lambda_g$

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  - $\eta_g > \theta_g > \lambda_g$

- Women prefer specific employer: η_g
- Women have fewer good employers: concentration

Model — Summary

Supply Nested logit gives labor supply to employer j

$$n_{gjkr} = \underbrace{\left(\frac{a_{gj} w_{gj}}{\bar{W}_{gk}}\right)^{\eta_g}}_{\textit{employer}} \underbrace{\left(\frac{a_{gk} \bar{W}_{gk}}{\bar{W}_{gr}}\right)^{\theta_g}}_{\textit{industry}} \underbrace{\left(\frac{\bar{W}_{gr}}{\bar{W}_{g}}\right)^{\lambda_g}}_{\textit{location}} a_{gj} a_{gk} N_g$$

Demand Employers maximize profits taking others' emp. as given (Cournot)

$$w_{gj} = mrpl_{gj} \underbrace{\frac{e_{gj}}{1 + e_{gj}}}_{\mu_{gj}}$$

Equilibrium Workers flock to good (high wage & amenity) employers and industries

$$s_{gj} := \frac{w_{gj} n_{gj}}{\sum_{j' \in k,r} w_{gj'} n_{gj'}} = \frac{(a_{gj} w_{gj})^{1+\eta_g}}{\sum_{j' \in k,r} (a_{gj'} w_{gj'})^{1+\eta_g}}; \; s_{gkr} = \frac{(a_{kg} W_{kg})^{1+\theta_g}}{\sum_{k' \in R} a_{k'g}^{1+\theta_g} W_{k'g}^{1+\theta_g}}$$

Elasticity of labor supply to employer j

$$e_{gj} = \left[\frac{1}{\eta_g} + \left(\frac{1}{\theta_g} - \frac{1}{\eta_g} \right) s_{gj} + \left(\frac{1}{\lambda_g} - \frac{1}{\theta_g} \right) s_{gj} s_{gkr} \right]^{-1}$$

- Tiny employer elasticity $= \eta_g$
- s_{gj} = employer size
- s_{gkr} = industry size

Monopsony over the average worker

Inverse avg. markdown for g:

$$\bar{\mu}_{gkr}^{-1} = \frac{mr\bar{p}l_{gkr}}{\bar{w_{gkr}}} = \underbrace{1 + \frac{1}{\eta_g}}_{(horizontal)} + \underbrace{\left(\frac{1}{\theta_g} - \frac{1}{\eta_g}\right) HHI_{gkr} + \left(\frac{1}{\lambda_g} - \frac{1}{\theta_g}\right) s_{gkr} HHI_{gkr}}_{(vertical:\ concentration)}$$

Two forces:

- Women prefer specific employer: η_g
- Women have fewer good employers: within-industry concentration (HHI_{gkr}), cross-industry ($s_{gkr} HHI_{gkr}$)

Validation: elasticities fall as employers grow large, especially when textiles is large

	Large txt sector ($\geq 10\%$)		Small txt sector ($\lneq 10\%$)	
Firm share	Women	Men	Women	Men
	(1)	(2)	(3)	(4)
$s = 0.01$	2.113	x	2.294	3.597
	(0.333)	x	(0.373)	(0.51)
$s = 0.05$	1.377	x	2.068	2.766
	(0.192)	x	(0.287)	(0.380)
$s = 0.1$	0.767	x	1.8	2.105
	(0.097)	x	(0.248)	(0.305)

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Sources of monopsony power

1. Preference for specific employer vs. concentration Aggregation

$$\underbrace{\bar{\mu}_{gk}^{-1}}_{(\textit{average})} = \underbrace{1 + \frac{1}{\eta_g}}_{(\textit{horizontal})} + \underbrace{\left(\frac{1}{\theta_g} - \frac{1}{\eta_g}\right) HHI_{gk} + \left(\frac{1}{\lambda_g} - \frac{1}{\theta_g}\right) s_{gk} HHI_{gk}}_{(\textit{concentration})}$$

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2. Within vs. cross-industry concentration

$$\bar{\mu}_{gk}^{-1} = 1 + \frac{1}{\eta_g} + \underbrace{\left(\frac{1}{\theta_g} - \frac{1}{\eta_g}\right) HHI_{gk}}_{(within)} + \underbrace{\left(\frac{1}{\lambda_g} - \frac{1}{\theta_g}\right) s_{gk} HHI_{gk}}_{(cross)}$$

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3. **Why is the textile sector large for women? (amenities v. productivity)**

$$s_{gk} = \frac{a_{gk}^{1+\theta_g} W_{gk}^{1+\theta_m}}{\sum_{k'} a_{gk'}^{1+\theta_g} W_{gk'}^{1+\theta_g}}$$

Estimating η_g

Taking log differences of inv labor supply:

$$\Delta log w_{gj} = \frac{1}{\eta_g} \Delta log n_{gj} + \left(\frac{1}{\theta_g} - \frac{1}{\eta_g} \right) \Delta log N_{gk,r} + \left(\frac{1}{\lambda_g} - \frac{1}{\theta_g} \right) \Delta log N_{gr} - \frac{1 + \eta_g}{\eta_g} \Delta log a_{gj}$$

Estimating η_g

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Challenge:

- Cannot use firm-specific shock
- Change in market index; spillovers; endogeneous amenities

Estimating η_g

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Challenge:

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- Change in market index; spillovers; endogeneous amenities

Solution:

- η_g = elasticity to tiny employer + assume no Δamenity + show no spillovers

Estimating η_g

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$$\Delta log w_{gj} = \frac{1}{\eta_g} \Delta log n_{gj} + \left(\frac{1}{\theta_g} - \frac{1}{\eta_g} \right) \Delta log N_{gk,r} + \left(\frac{1}{\lambda_g} - \frac{1}{\theta_g} \right) \Delta log N_{gr} - \frac{1+\eta_g}{\eta_g} \Delta log a_{gj}$$

Challenge:

- Cannot use firm-specific shock
- Change in market index; spillovers; endogeneous amenities

Solution:

- η_g = elasticity to tiny employer + assume no Δamenity + show no spillovers
- θ_g = elasticity to large employer in a tiny industry
- λ_g = elasticity to large employer in a tiny geography Moments

Estimates

Parameter	Name	Women	Men
η_g	Cross-employer	2.19	3.89
		(0.402)	(0.890)
θ_g	Cross-industry	0.89	0.87
		(0.355)	(0.421)
λ_g	Cross-location	0.03	0.05
		(0.097)	(0.010)

- η_g = safety, commuting; θ_g = don't want to upskill; λ_g = family relocation.

Alternate estimates; Safety drives horizontal differentiation

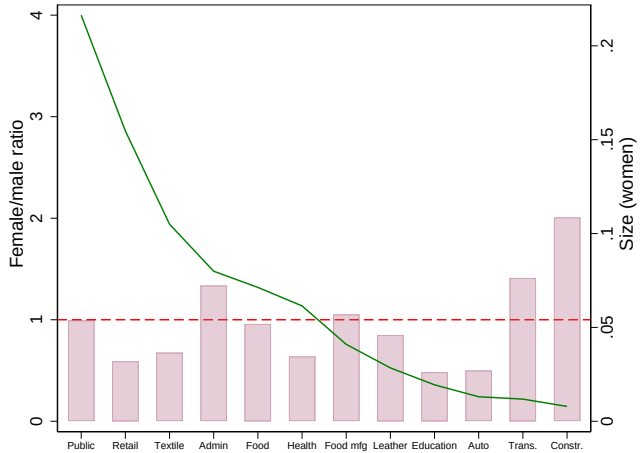
Sources of monopsony power

Step 1. Specific preference vs. concentration Aggregation

$$\underbrace{\bar{\mu}_{gk}^{-1}}_{18\text{pp}} = \underbrace{1 + \frac{1}{\eta_g}}_{\text{(horizontal: 10pp)}} + \left(\frac{1}{\theta_g} - \frac{1}{\eta_g}\right) HHI_{gk} + \left(\frac{1}{\lambda_g} - \frac{1}{\theta_g}\right) s_{gk} HHI_{gk}$$

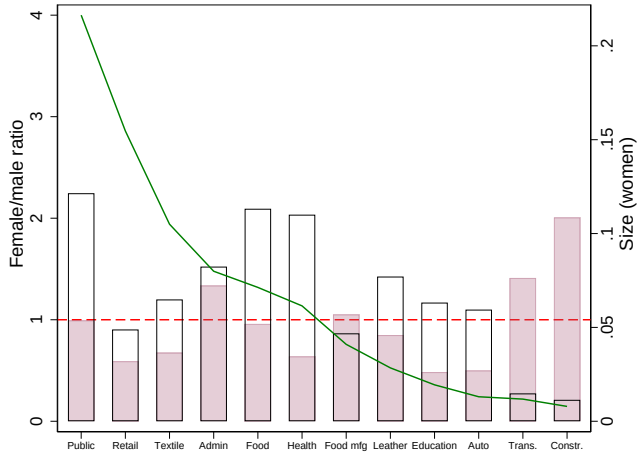
Step 2. Within industry concentration

$$\bar{\mu}_{gk}^{-1} = 1 + \frac{1}{\eta_g} + \left(\frac{1}{\theta_g} - \frac{1}{\eta_g}\right) HHI_{gk} + \left(\frac{1}{\lambda_g} - \frac{1}{\theta_g}\right) s_{gk} HHI_{gk}$$



Step 2. Cross-industry concentration

$$\bar{\mu}_{gk}^{-1} = 1 + \frac{1}{\eta_g} + \left(\frac{1}{\theta_g} - \frac{1}{\eta_g}\right) HHI_{gk} + \left(\frac{1}{\lambda_g} - \frac{1}{\theta_g}\right) s_{gk} HHI_{gk}$$



Sources of monopsony power

Step 1. Specific preference vs. concentration

$$\underbrace{\bar{\mu}_{gk}^{-1}}_{\text{(18pp)}} = \underbrace{1+\frac{1}{\eta_g}}_{\text{(horizontal: 10pp)}} + \left(\frac{1}{\theta_g}-\frac{1}{\eta_g}\right) HHI_{gk} + \left(\frac{1}{\lambda_g}-\frac{1}{\theta_g}\right) s_{gk} HHI_{gk}$$

Step 2. Within vs. cross-industry concentration

$$\bar{\mu}_{gk}^{-1} = 1+\frac{1}{\eta_g} + \underbrace{\left(\frac{1}{\theta_g}-\frac{1}{\eta_g}\right) HHI_{gk}}_{\text{(within: -2pp)}} + \underbrace{\left(\frac{1}{\lambda_g}-\frac{1}{\theta_g}\right) s_{gk} HHI_{gk}}_{\text{(cross: 10pp)}}$$

- Economy: 10pp (horizontal), -2pp (within-industry), 12pp (cross-industry)

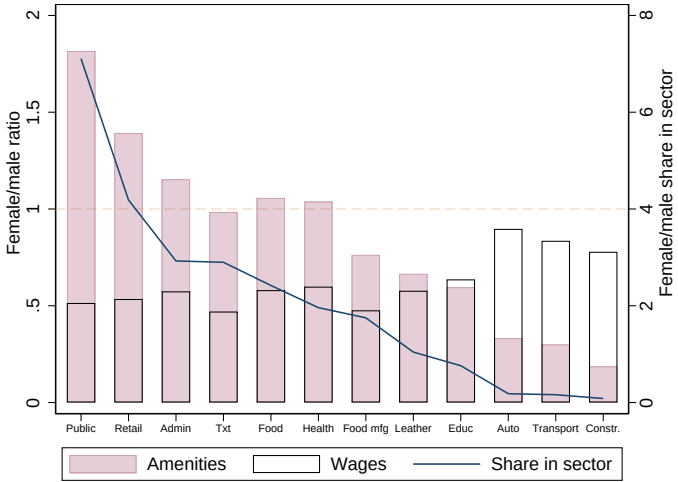
What makes the textile sector large for women?

Non-wage amenities vs. productivity Details

$$s_{gk} = \frac{a_{gk}^{1+\theta_g} W_{gk}^{1+\theta_m}}{\sum_{k'} a_{gk'}^{1+\theta_g} W_{gk'}^{1+\theta_g}}$$

1. Infer amenities from model structure: given wages (W_{gk}) and shares (s_{gk})
2. Directly estimate women's/men's productivities across sectors.

Gender amenity not wage gaps drive women to textiles



Directly estimating women's/men's productivity across sectors

Productivity:

- $Y_j = z_j K_j^{\alpha_{k1}} l_j^{\alpha_{k2}}$, with l a CES aggregation $l_j = [\beta_k f_j^{\sigma} + m_j^{\sigma}]^{\frac{1}{\sigma}}$

Directly estimating women's/men's productivity across sectors

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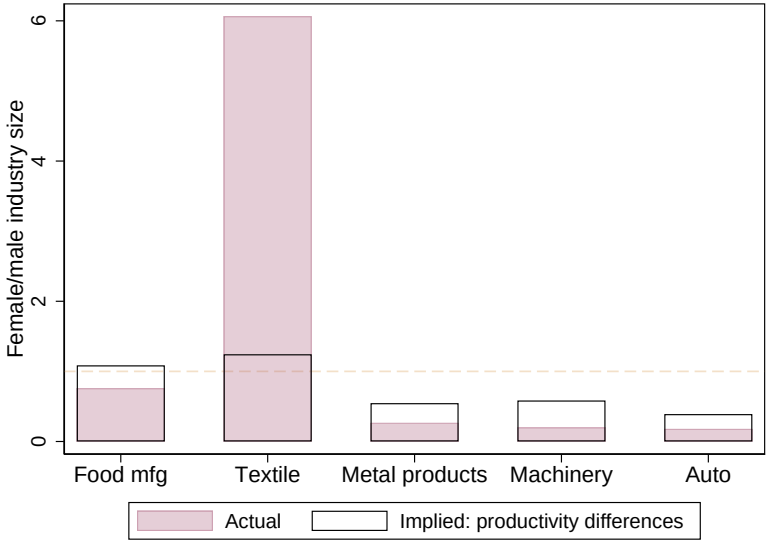
- Makes industry k large by raising marginal product

Directly estimating women's/men's productivity across sectors

Productivity:

- $Y_j = z_j K_j^{\alpha_{k1}} l_j^{\alpha_{k2}}$, with l a CES aggregation $l_j = [\beta_k f_j^{\sigma} + m_j^{\sigma}]^{\frac{1}{\sigma}}$
- Makes industry k large by raising marginal product
- Estimate β_k using standard production function techniques (Ackerberg et al. 2015).

Gender amenity not productivity gaps drive women to textiles



Taking stock

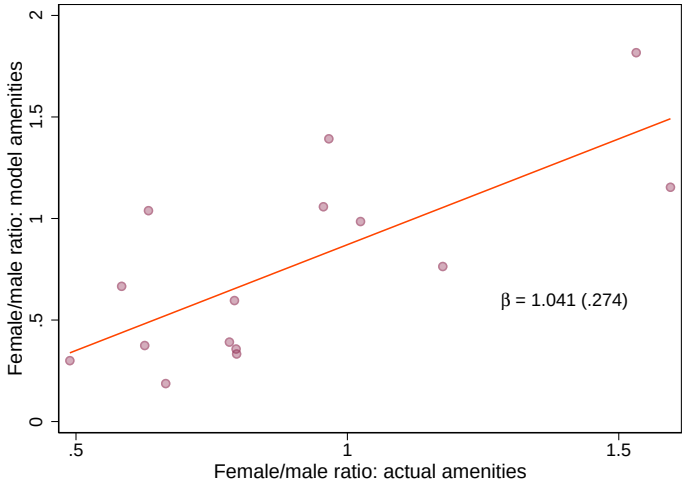
- Gender differences in monopsony generate 18pp gender wage gap
- Sources
  - Women prefer specific employer: 10pp
  - Good jobs for women concentrated in textile industry: 8pp
- Concentration driven by non-wage amenities, not productivity

What are amenities? (Contracts)

Top 20 female clauses	Top 20 male clauses	Rank
Childcare assistance	On-call pay	1
Absences	Life insurance	2
Adoption leave	Strike procedures	3
Other: holidays and leaves	Other: protections for injured workers	4
Seniority pay	Profit sharing	5
Maternity protections	Salary deductions	6
Abortion protections	Work constraints	7
Paid leave	Transfers	8
Night pay	Machine and equipment maintenance	9
Nonwork-related injury protections	Duration and schedule	10
Abortion leave	Working environment conditions	11
Policy for dependents	Salary payment - means and timeframes	12
Extension/reduction of workday	Hazard pay (danger risk)	13
Guarantees to union officers	Safety equipment	14
Renewal/termination of the CBA	CIPA: accident prevention committee	15
Medical exams	Other assistances	16
Unionization campaigns	Death/funeral assistance	17
Health education campaigns	Workday compensation	18
Waiving union fees	Collective vacations	19
Salary adjustments/corrections	Tools and equipment	20

- Corradini et al. 2022: Revealed preference approach + text of collective bargaining contracts. red = intuitively female. Details

Model amenities have an analog in contracted amenities



Safety mediates women's employer-specific preference (η_g)

	Elasticity	
	Women	Men
Δlnw_i	2.278***	3.104***
	(0.486)	(0.925)
$\Delta lnw_i \times Unsafe_{mun}$	-0.551*	0.239
	(0.166)	(1.381)
Observations	65913	49482

- Unsafe: above 75th percentile homicide rate.

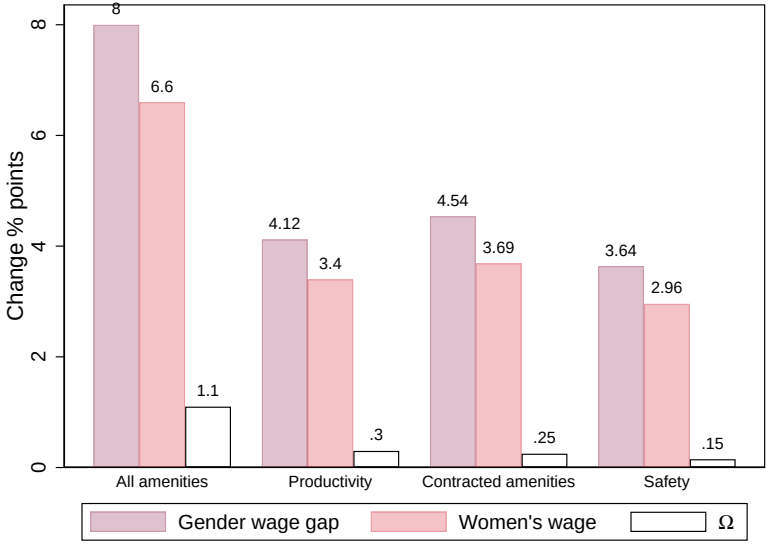
Roadmap

1. Quasi-experiment
2. Facts
3. Model/Estimation
4. **Policy Counterfactuals**

Counterfactual policies

- Level gender gaps in amenities across industries (all, contracted)
- Level gender gaps in productivity
- Improve safety to 75th percentile municipality

Counterfactual policies: results



Conclusion

- Gender differences in monopsony power explain half the gender wage gap (18pp of 35pp)
- Two intuitive sources:
  - Women find it harder to leave their specific employer
  - Good jobs for women are concentrated in textile sector
- Concentration reflects gender differences in amenities, not productivity

Conclusion

- Gender differences in monopsony power explain half the gender wage gap (18pp of 35pp)
- Two intuitive sources:
  - Women find it harder to leave their specific employer
  - Good jobs for women are concentrated in textile sector
- Concentration reflects gender differences in amenities, not productivity

$\rightarrow$ Improving non-traditional jobs can potentially create win-win situations

$\rightarrow$ Ongoing work: What are these disamenities/amenities that draw women to some industries? Do they misallocate women's talent?

Thank you!

Appendix

Top industries by gender

- Women: public sector, retail, textile and clothing, food, health, cleaning, leather
- Men: public sector, construction, retail, transport, food mfg, automotives, oil & gas

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Contributions: big picture

- **Imperfect labor market competition:** Van Reenen 1996; Card et al. 2018; Kline et al. 2018; Heining & Jäger 2019; Lamadon et al. 2019; Caldwell & Harmon 2019; Caldwell & Danieli 2018; Garin & Silverio 2018; Gerard et al. 2018; Goolsbee & Syverson 2019; Gender: Card et al. 2016; Morchio & Moser 2021; Hirsch et al. 2010; Ransom & Oaxaca 2010; Webber 2016; Caldwell & Oehlsen 2022; Concentration: Azar et al. '22, Berger et al.'21, Felix '22; and others.

- **Gender gaps**, especially in developing countries: reviewed in Blau & Kahn 2017; Fletcher et al. 2013, McKelway 2021.

→ Quasi-experiment: Gender differences in monopsony can effect large wage gap.

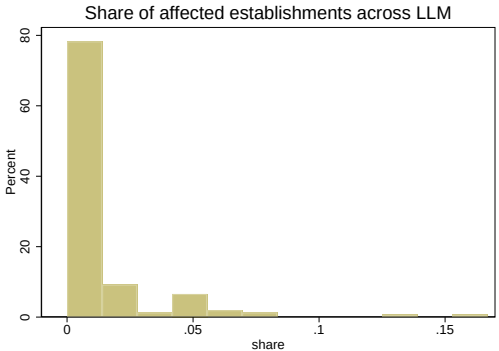
→ Sources: women have employer-specific preferences; fewer good jobs.

→ Policy: traditional HHI concentration measures can misdiagnose gender differences.

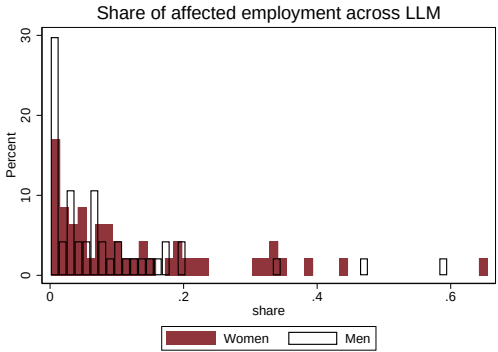
→ Methodological: can assess strategic wage responses (oligopsony) in future.

Distribution of MFA affected establishments and employment across microregions

Establishments: 2% avg.



Employment by gender: 10% avg.



- 557 microregions.

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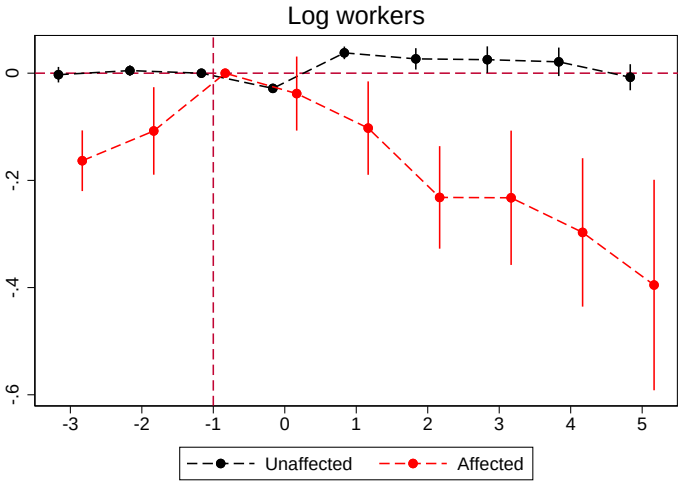
Small effect on aggregate employment



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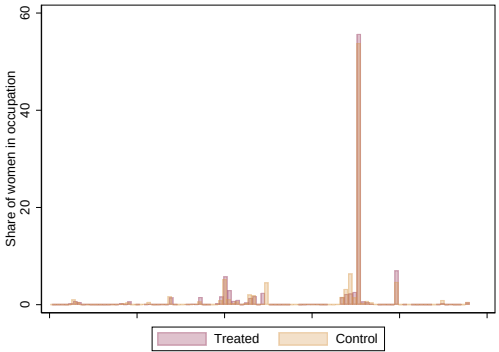
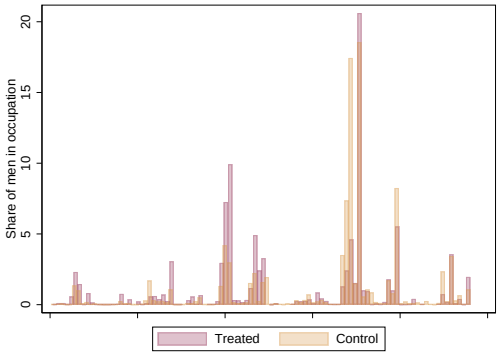
Treated and comparison occupations

Women



Men



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Nominal earnings decline between t=-1 and t=1

	(1)	(2)	(3)	(4)
	Avg. monthly wage		December wage	
	Women	Men	Women	Men
D_i	0.053***	0.060**	0.075**	0.057**
	(0.012)	(0.029)	(0.033)	(0.027)
Constant	0.058***	0.072***	0.226***	0.225***
	(0.003)	(0.003)	(0.013)	(0.013)
Observations	51533	62672	51533	62672

Back

	All workers						*Tailors*	
	Log earn (1)	Retention (2)	Log earn (3)	Retention (4)	Log earn (5)	Retention (6)	Log earn (7)	Retention (8)
D_i*Post$_1$	-0.059***	-0.032***	-0.058***	-0.018	x	x	-0.054***	-0.043*
	(0.013)	(0.011)	(0.013)	(0.012)	x	x	(0.014)	(0.024)
D_i*Post$_1$*F	0.012	0.022*	0.011	0.015	0.003	0.019*	-0.004	0.049*
	(0.010)	(0.012)	(0.009)	(0.014)	(0.006)	(0.010)	(0.014)	(0.026)
D_i*Post$_2$	0.001	-0.100***	-0.002	-0.099***	x	x	0.005	-0.178***
	(0.014)	(0.010)	(0.013)	(0.011)	x	x	(0.016)	(0.022)
D_i*Post$_2$*F	-0.036***	0.054***	-0.029***	0.052***	-0.022***	0.045***	-0.057***	0.161***
	(0.011)	(0.012)	(0.011)	(0.013)	(0.008)	(0.010)	(0.016)	(0.024)
Loc-gender-year FE	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Loc-occ-gender-year FE	No	No	Yes	Yes	No	No	No	No
Est-year FE	No	No	No	No	Yes	Yes	No	No
N	765486	850646	765486	850646	765486	850646	236722	266139

$$Y_{it} = \alpha_i + \gamma_{mgt} + \sum_{p \in \{1-2,3-5\}} \delta_p (D_i \times Post_p) + \sum_{p \in \{1-2,3-5\}} \beta_p (D_i \times Post_p \times F_i) + \epsilon_{it}$$

	All workers						*Tailors*	
	Log earn (1)	Retention (2)	Log earn (3)	Retention (4)	Log earn (5)	Retention (6)	Log earn (7)	Retention (8)
D_i*Post$_1$	-0.059***	-0.032***	-0.058***	-0.018	x	x	-0.054***	-0.043*
	(0.013)	(0.011)	(0.013)	(0.012)	x	x	(0.014)	(0.024)
D_i*Post$_1$*F	0.012	0.022*	0.011	0.015	0.003	0.019*	-0.004	0.049*
	(0.010)	(0.012)	(0.009)	(0.014)	(0.006)	(0.010)	(0.014)	(0.026)
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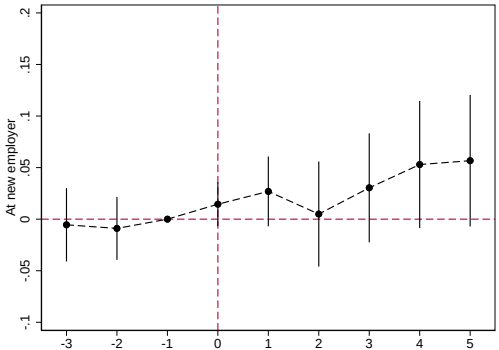
	(0.011)	(0.012)	(0.011)	(0.013)	(0.008)	(0.010)	(0.016)	(0.024)
Loc-gender-year FE	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Loc-occ-gender-year FE	No	No	Yes	Yes	No	No	No	No
Est-year FE	No	No	No	No	Yes	Yes	No	No
N	765486	850646	765486	850646	765486	850646	236722	266139

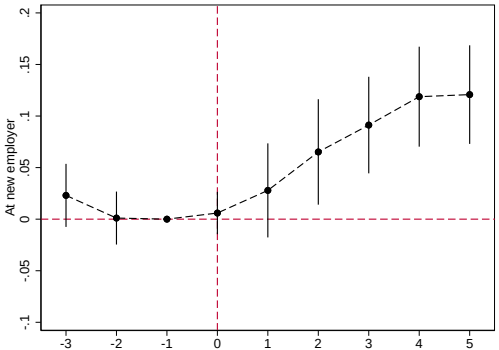
$$Y_{it} = \alpha_i + \gamma_{mgt} + \sum_{p \in \{1-2,3-5\}} \delta_p (D_i \times Post_p) + \sum_{p \in \{1-2,3-5\}} \beta_p (D_i \times Post_p \times F_i) + \epsilon_{it}$$

Treatment effect on exit explained by switching to new employers

Women



Men



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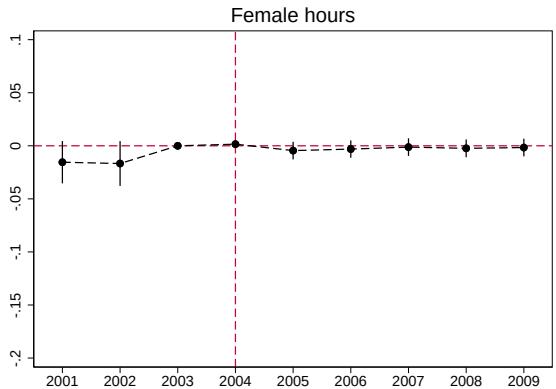
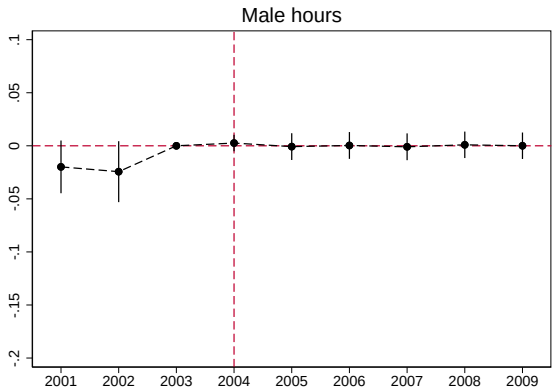
Effect on hours worked

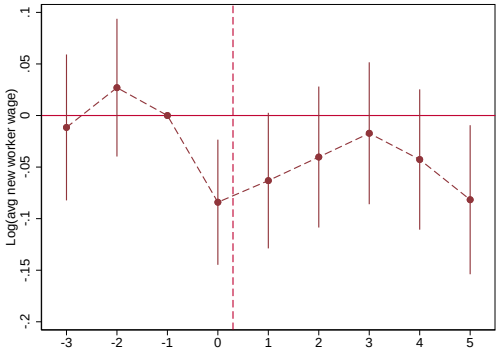




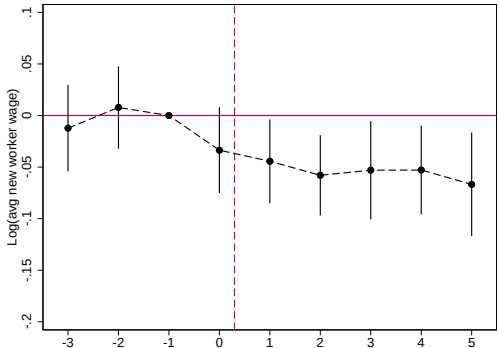
Back

New workers' wages decline

Women



Men



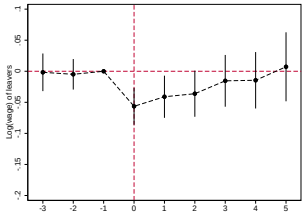
- New: hired in the past year.

New worker composition unchanged (observable characteristics)

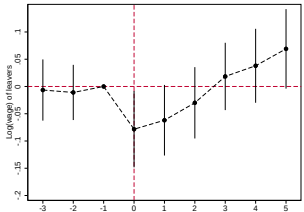
	Women			Men		
	Age	No high school degree	Poached	Age	No high school degree	Poached
	(1)	(2)	(3)	(4)	(5)	(6)
Treated*post	-0.060	-0.010	-0.001	-0.540	-0.032	-0.004
	(0.294)	(0.015)	(0.011)	(0.349)	(0.020)	(0.012)
Baseline mean	29.515	0.605	0.558	26.667	0.577	0.586
Observations	6759	6759	6759	6759	6759	6759

Stayer wages remain persistently lower, leaver wages recover

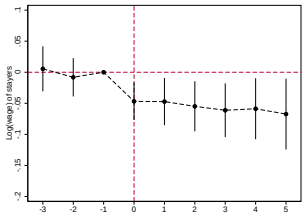
Women: leavers



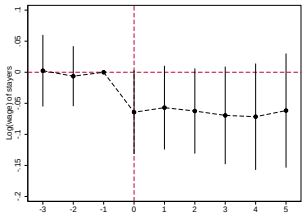
Men: leavers



Women: stayers



Men: stayers



Men's higher exit following wage drop reflects gender differences in monopsony power

- Comparative advantage and competition: Comparing tailors
- Men are laid off at higher rates: EtoE transitions
- Hours change: Hours
- Patterns consistent with monopsony models: New workers, Stayer wages.
- Gender, not observable differences: Controlling for observables

Estimating elasticities

Translate to elasticity: exclusion restriction, heterogeneity. Nested CES labor supply to firm j in industry k, region r:

$$n_{gjkr} = \left(\frac{w_{gj}}{\bar{W}_{gk}}\right)^{\eta_g} \left(\frac{\bar{W}_{gk}}{\bar{W}_{gr}}\right)^{\theta_g} \left(\frac{\bar{W}_{gr}}{\bar{W}_{g}}\right)^{\lambda_g} N_g$$

Estimating elasticities

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$$n_{gjkr} = \left(\frac{w_{gj}}{\bar{W}_{gk}}\right)^{\eta_g} \left(\frac{\bar{W}_{gk}}{\bar{W}_{gr}}\right)^{\theta_g} \left(\frac{\bar{W}_{gr}}{\bar{W}_{g}}\right)^{\lambda_g} N_g$$

Estimated elasticity (*total derivative*) encodes change in n_j from spillovers:

$$\frac{\Delta ln n_{gjkr}}{\Delta ln w_{gjkr}} = f(\Delta ln w_{-j})$$

Residual elasticity governing markdowns is the *partial derivative* wrt w_j.

$\rightarrow$ Spillovers violate exclusion restriction.

Testing exclusion: ruling out strategic wage responses (Amiti et al. 2019)

- Intuition: Strategic motives alter markdowns $\rightarrow$ as China-competing employer sheds workers, non-China competing employers can pay smaller share of marginal product.
  - Any competition structure (incl. oligopsony), invertible labor supply (incl. nested CES)
- Regression: $\Delta \ln w_j$ on weighted average of competitor changes ($\Delta \ln w_{-j}$), controlling for own $\Delta \ln mrpl_j$.

$$\Delta \ln w_j = \delta \Delta \ln mrpl_j + \gamma \Delta \ln w_{-j} + \xi_j$$

- $\delta =$ own pass-through, $\gamma =$ spillovers
- Instruments: own-MFA shock for $\Delta \ln mrpl_j$ and market-level shock for $\Delta \ln w_{-j}$.

Proof: can estimate elasticity of residual supply

No wage spillovers from MFA shock

Panel A: Pass-through estimates

	Exporters (1)	Untreated exporters (2)	All unaffected employers (3)	New workers (4)
Δw_{-j}	-0.003	0.000	0.005	0.034
	(0.003)	(0.002)	(0.005)	(0.036)
$\Delta mrpl_j$	0.145***			
	(0.052)			

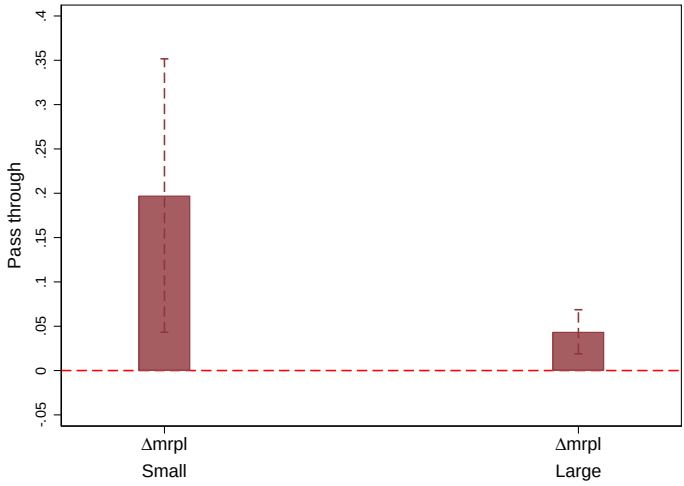
Panel B: First stage on Δw_{-j}

Per 100 treated workers	-0.100***	-0.099***	-0.089***	-0.036***
, excluding j	(0.013)	(0.014)	(0.021)	(0.003)
First stage F-stat	60.830	47.366	17.258	60.813
Avg. no. of treated workers , excluding j (hundreds)	25.833	20.018	30.239	38.284
Observations	147883	110595	426111	37674

- Interpretation: the MFA was a small shock, affecting less than 2% of establishments.

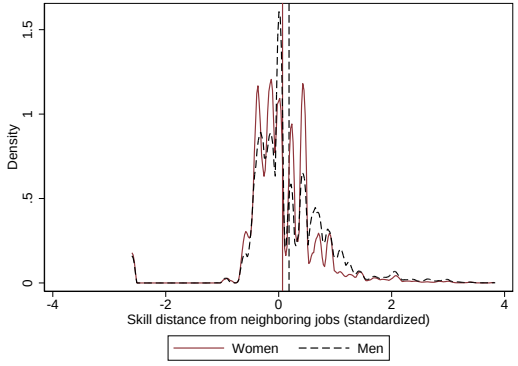
Pass-through with size, Visual IV, Establishes exclusion

Pass-through falls with employer size



Back to strategic spillovers

Distribution of O*NET skill transferability



- O*NET reports skill level from 1-8 on 35 skills.
- Skill distance with occupations *occ* in geography:
  $\sum_{occ \in g} s_{occ,g} \times \sum_{skill=1}^{skill=35} |l_{skill,o} - l_{skill,occ}|$, where o is worker's own occupation.

Back

Skills predict leaving for men

Skills predictive of leaving for men

	Retention (1)	New sector (2)	New occupation (3)
D_i*$Post_1$	-0.027*	0.020**	0.015
	(0.016)	(0.008)	(0.010)
D_i*$Post_2$	-0.069***	0.040***	0.045***
	(0.014)	(0.009)	(0.010)
D_i*$Post_1$*Transferable	-0.013	0.015	0.019
	(0.019)	(0.011)	(0.012)
D_i*$Post_2$*Transferable	-0.067***	0.039***	0.054***
	(0.017)	(0.013)	(0.014)
Observations	397188	397188	397188

Back

Controlling for gender differences in skill and occupation

	Role of skills		Role of occupations	
	Retention	New sector	Retention	New sector
	(1)	(2)	(3)	(4)
$Treat_i$*$Post_1$*F	0.025**	-0.009	0.018	-0.001
	(0.012)	(0.008)	(0.012)	(0.008)
$Treat_i$*$Post_2$*F	0.057***	-0.051***	0.055***	-0.057***
	(0.012)	(0.009)	(0.011)	(0.009)
Skill decile-treat-post FE	Yes	Yes	No	No
Occ-treat-post FE	No	No	Yes	Yes
Observations	850646	850646	850646	850646

Back

Controlling for gender differences in education and tenure

	Role of education		Role of tenure	
	Retention	New sector	Retention	New sector
	(1)	(2)	(3)	(4)
Treat*Post$*F$	0.023*	0.000	0.002	0.028***
	(0.012)	(0.008)	(0.013)	(0.010)
Treat*Post$*F$	0.054***	-0.042***	0.049***	-0.029**
	(0.012)	(0.009)	(0.015)	(0.011)
Education-treat-post FE	Yes	Yes	No	No
Tenure-treat-post FE	No	No	Yes	Yes
Observations	850646	850646	850646	850646

Back

Proof: test assesses strategic spillovers

Back to strat interaction

Proof: can estimate elasticity of residual supply absent spillovers

Log of labor supply:

$$lnn_{gjkr} = \eta_g lnw_{gjkr} + (\theta_g - \eta_g) ln\bar{W}_{kgr} + (\lambda_g - \theta_g) ln\bar{W}_{gr} + Aggregates$$

First-order approximation around Nash equilibrium, following any change to firms in the region:

$$\Delta lnn_{gjkr} = \eta_g \Delta lnw_{gjkr} + (\theta_g - \eta_g) \sum_{j' \in k,r} \frac{\partial ln\bar{W}_{kgr}}{\partial lnw_{gj'}}|_{w*_{j!=j}} \Delta lnw_{j'} + (\lambda_g - \theta_g) \sum_{j'' \in r} \frac{\partial ln\bar{W}_{gr}}{\partial ln\bar{W}_{kgr}} \frac{\partial ln\bar{W}_{kgr}}{\partial lnw_{gj''}}$$

The estimated reduced form elasticity is:

$$\epsilon_{gjkr} = \frac{\Delta lnn_{gjkr}}{\Delta lnw_{gjkr}} = e_{gjkr} + \frac{1}{\Delta lnw_{gjkr}}((\theta_g - \eta_g) \sum_{j' \in k,r} s_{gj'} \Delta lnw_{j'} + (\lambda_g - \theta_g) \sum_{j'' \in r} s_{gj''} s_{gk} \Delta lnw_{j''})$$

I show: $\Delta lnw_{j'} = 0 \forall j' \in k, r$

Back to strat interaction; Back to elasticity

Moments to estimate η_g, θ_g, λ_g

Solution 1: Elasticity to small employer, small industry, small location + no spillovers + no change in amenities.

$$\frac{\partial lnn_{gj}}{\partial lnw_{gj}} = \eta_g \text{ when } s_{gjk} \sim 0; \quad \frac{\partial lnn_{gkr,j}}{\partial lnw_{gj}} = \theta_g s_{gj} \text{ when } s_{gk} \sim 0; \quad \frac{\partial lnn_{gr}}{\partial lnw_{gj}} = \lambda_g s_{gj} s_{gk}$$

Intuition: Horizontal preference only force tethering workers to small employer, industry, geography.

Back

Sources of gender differences in monopsony power

	Textile		Economy-wide	
	(1)	(2)	(3)	(4)
	Women	Men	Women	Men
Horizontal preference				
$(1 + 1/\eta)$	69%	79%	69%	79%
Concentration				
Within-industry - $(1/\theta - 1/\eta) * HHI_{gk}$	66%	74%	66%	75%
Industry - $(1/\lambda - 1/\theta) * s_{gk} * HHI_{gk}$	55%	73%	45%	66%
ΔGWG				
Match-specific preference	10%		10%	
Within-industry concentration	-2%		-2%	
Industry concentration	10%		12%	
Total monopsony-induced GWG	18%		20%	

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Estimating elasticities (II)

Ideally: $\Delta log n_{gj} = \eta_g \Delta log w_{gj} + (\theta_g - \eta_g)\Delta log W_{gk,r} + (\lambda_g - \theta_g)\Delta log W_{gr} + \eta_g log a_{gj}$

Challenge: Endogeneous amenities; strategic wage spillovers.

Solution 2: Firm, industry, and location-level shocks (Costinot et. al. 2016, Felix 2022) Details

$$\Delta log n_{gj} = \eta_g \Delta log w_{gj} + \underbrace{(\theta_g - \eta_g)\Delta log W_{gk,r}}_{\text{Industry x Microregion FE}} + \underbrace{(\lambda_g - \theta_g)\Delta log W_{gr}}_{\text{Microregion FE}} + \eta \Delta log a_{gj}$$

Import competition exposure shocks (1991 liberalization changings tariffs τ_j):

$$ln\left(\frac{1+\tau_{j(k)1994}}{1+\tau_{j(k)1991}}\right), \sum_{j \in k,r} \frac{s^2_{j,1991}}{\sum_j s^2_{j,1991}} ln\left(\frac{1+\tau_{j(k)1994}}{1+\tau_{j(k)1991}}\right), \sum_{k \in r} \frac{s^2_{k,1991}}{\sum_{k \in r} s^2_{k,1991}} \sum_{j \in k,r} \frac{s^2_{j,1991}}{\sum_j s^2_{j,1991}} ln\left(\frac{1+\tau_{j(i)1994}}{1+\tau_{j(i)1991}}\right)$$

Safety mediates women's preference for specific employer

	Women		Men	
	Childbearing	Unsafe municipality	Childbearing	Unsafe municipality
	(1)	(3)	(4)	(6)
Δlnw_i	2.110***	2.278***	4.997***	3.104***
	(0.474)	(0.486)	(0.976)	(0.925)
$\Delta lnw_i \times X_i$	-0.542***	-0.551*	-1.898***	0.239
	(0.070)	(0.166)	(0.332)	(1.381)
Observations	65913	65913	49482	49482

- Unsafe: above 75th percentile homicide rate.
- Childbearing (18-35 years).

Back to steps Back to counterfactuals

Estimating elasticities

$$\Delta log n_{gj} = \eta_g \Delta log w_{gj} + (\theta_g - \eta_g)\Delta log W_{gk,r} + (\lambda_g - \theta_g)\Delta log W_{gr} + \eta_g log \Delta a_{gj}$$

Challenge: Endogeneous amenities; change index; strategic spillovers.

Solution 1: Elasticity to small employer, small industry, small location + no spillovers + no change in amenities.

$$\frac{\partial ln n_{gj}}{\partial ln w_{gj}} = \eta_g \text{ when } s_{gjk} \sim 0; \quad \frac{\partial ln n_{gkr,j}}{\partial ln w_{gj}} = \theta_g s_{gj} \text{ when } s_{gk} \sim 0; \quad \frac{\partial ln n_{gr}}{\partial ln w_{gj}} = \lambda_g s_{gj} s_{gk}$$

Intuition: Horizontal preference only force tethering workers to small employer, industry, geography.

Inferring gender-specific wages and amenities

Step 1: Estimating the wage index of an industry

Re-arranging the expression for the wage bill share of a firm j in sector k:

$$s_{gj} = \frac{(w_{gj})^{1+\eta_g}}{\sum_{j'}(w_{gj'})^{1+\eta_g}}$$

$$[\sum_{j'}(w_{gj'})^{1+\eta_g}]^{\frac{1}{1+\eta_g}} = w_{gj}(s_{gj})^{\frac{-1}{1+\eta_g}} \forall j$$

Taking log of both side and summing over all j we can express the wage index of a industry k as:

$$W_{gk} = \tilde{w_{gk}}\tilde{s_{gk}}^{\frac{-1}{1+\eta_g}}$$

where $\tilde{w}_{gk}$ is the geometric mean of wages and $\tilde{s}_{gk}$ is the geometric mean of the share of the wage bill within textiles (i.e. exp of the mean of logs).

Step 2: Estimating industry-specific amenity values for men

Given estimates of the wage index by industry and geography and θ_m, the amenity values for men can be inferred from the share of men in each sector, normalizing the amenity value for men to 1 in textiles.

$$\frac{s_{mk}}{s_{mtxt}} = \frac{a_{mk}^{1+\theta_m} \frac{W_{mk}^{1+\theta_m}}{W_m^{1+\theta_m}}}{\frac{W_{mtxt}^{1+\theta_m}}{W_m^{1+\theta_m}}}$$

Step 3. Estimating women's amenities relative to men's

Given estimates of the wage index by industry for each gender, (θ_m, θ_w), and observed shares, the amenity values for women relative to men can then be inferred from the share of women in each industry relative to the share of men:

$$\frac{s_{wk}}{s_{mk}} = \frac{a_{wk}^{1+\theta_w} \frac{W_{wk}^{1+\theta_w}}{W_w^{1+\theta_w}}}{a_{mk}^{1+\theta_m} \frac{W_{mk}^{1+\theta_m}}{W_m^{1+\theta_m}}}$$

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Aggregation result

$$\bar{\mu}_{gkr}^{-1} = \frac{\bar{mrpl}_{gkr}}{\bar{w}_{gkr}} = \sum_{j \in k,r} s_{gjkr} \mu_{gjkr}^{-1} = \sum_{j \in k,r} s_{gjkr} \left(1 + \frac{1}{e_{gj}}\right)$$

Proof:

$$\begin{aligned}
\sum_{j \in k,r} s_{gj} \mu_{gj}^{-1} &= \sum_{j \in k,r} s_{gj} \left(\frac{mrpl_{gj}}{w_{gj}}\right) \\
&= \sum_{j \in k,r} \frac{n_{gj}}{\sum_{j' \in k,r} w_{gj'} n_{gj'}} \frac{mrpl_{gj}}{1} \\
&= \frac{\sum_{j \in k,r} mrpl_{gj} n_{gj}}{\sum_{j' \in k,r} w_{gj'} n_{gj'}} \times \frac{\sum_{j' \in k,r} n_{gj}}{\sum_{j' \in k,r} n_{gj}} \\
&= \frac{\bar{mrpl}_{gkr}}{\bar{w}_{gkr}} \\
&= \bar{\mu}_{gkr}^{-1}
\end{aligned}$$

Estimating productivity

- $Y_{jt} = z_{jt} k_{jt}^{\alpha_{k1}} l_{jt}^{\alpha_{k2}}$ (VA); labor is CES aggregation of male and female labor $l_{jt} = [\beta_k f_{jt}^{\sigma} + m_{jt}^{\sigma}]^{\frac{1}{\sigma}}$ with β_k varying across industries.
- Timing: in each t firm picks capital for subsequent period $k_{j,t+1}$ (state), materials in current period x_{jt} (flexible), and labor in current period l_{jt} (flexible).
- **Assumption 1:** Productivity evolves according to a first-order Markov process.

$$\omega_{jt} = f(\omega_{jt-1}) + \zeta_{jt}$$

- **Assumption 2:** Scalar unobservable. The only unobservable factor in a firm's input demand function for materials is productivity ω_{jt}.
- **Assumption 3:** Strict monotonicity. A firm's input demand function for materials is strictly monotone in ω_{jt}.

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Steps in estimation

- **Step 1** Purge output of measurement error (τ_{jt}), relying on the invertibility of input demand to obtain productivity.

$$y_{jt} = f(v_{jt}; \beta) + \underbrace{\omega_{jt}}_{h_t(x_{jt}, k_{jt}, c_{jt})} + \tau_{jt}$$

- **Step 2** Construct estimates of productivity, relying on timing assumption 1 and some guess of β (simultaneously determined in step 3):

$$\omega_{jt}(\tilde{\beta}) = \phi_{jt} - f(v_{jt}; \tilde{\beta})$$

- **Step 3** Use GMM to recover the β parameters, relying on the timing of input choice to construct instruments:

$$E\left(\zeta_{jt}(\beta)\begin{pmatrix} f_{jt-1} \\ m_{jt-1} \\ k_t \end{pmatrix}\right) = 0$$

What are female-friendly amenities?

- **Data-driven** (revealed preference):
  1. Uncover firm's value (V_j^G) for women and men using EtoE moves. Sorkin (2018)
  2. Correlate with amenities to identify those valued by women and men.

$$V_j^F - V_j^M = \beta_w^F \psi_j^F - \beta_w^M \psi_j^M + \sum_{z \in Z} (\beta_z^F - \beta_z^M) a(z)_j + \epsilon_j$$

- V_j^G: value of employment at establishment j. Sorkin (2018)
- ψ_j^G: wage premia from establishment fixed effect. AKM (1999)
- $a(z)_j$: number of clause type z at establishment.
- Lasso: pick top (bottom) 20 clauses as female and male-centric.

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Estimating elasticities

Ideally: $logn_{gj} = \eta_g logw_{gj} + (\theta_g - \eta_g) logW_{gk,r} + (\lambda_g - \theta_g) logW_{gr} + \eta loga_{gj}$

Challenge: Endogeneous amenities; strategic wage spillovers.

Solution 2: Firm, industry, and location-level shocks (Costinot et. al. 2016, Felix 2022) Details

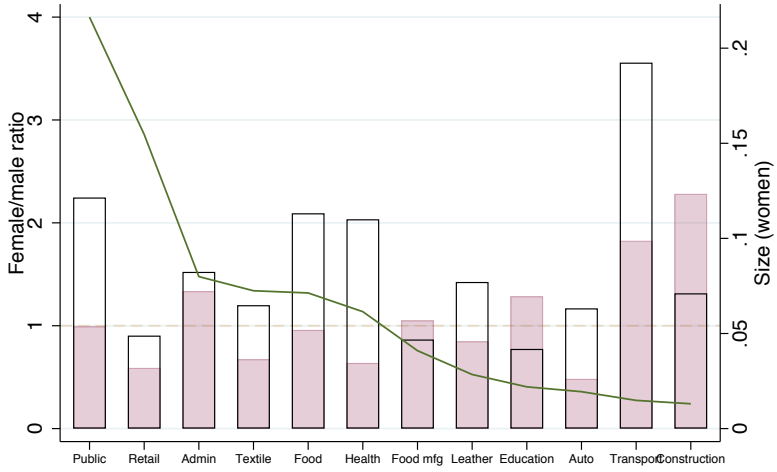
$$\Delta logn_{gj} = \eta_g \Delta logw_{gj} + \underbrace{(\theta_g - \eta_g)\Delta logW_{gk,r}}_{\text{Industry} \times \text{ Microregion FE}} + \underbrace{(\lambda_g - \theta_g)\Delta logW_{gr}}_{\text{Microregion FE}} + \eta \Delta loga_{gj}$$

Step 1. Horizontal vs. concentration

$$\bar{\mu}_{gk}^{-1} = \underbrace{1 + \frac{1}{\eta_g}}_{\text{(horizontal: 10pp)}} + \underbrace{\left(\frac{1}{\theta_g} - \frac{1}{\eta_g}\right) HHI_{gk} + \left(\frac{1}{\lambda_g} - \frac{1}{\theta_g}\right) s_{gk} HHI_{gk}}_{\text{(concentration: 8pp)}}$$

Individual estimates, Safety drives horizontal differentiation

Step 2. Within vs. cross-industry concentration



HHI_{gk}, $s_{gk} HHI_{gk}$

Decompositions

Step 2. Within vs. cross-industry concentration

$$\bar{\mu}_{gk}^{-1} = 1 + \frac{1}{\eta_g} + \underbrace{\left(\frac{1}{\theta_g} - \frac{1}{\eta_g}\right) HHI_{gk}}_{\text{(within: -2pp)}} + \underbrace{\left(\frac{1}{\lambda_g} - \frac{1}{\theta_g}\right) s_{gk} HHI_{gk}}_{\text{(cross: 10pp)}}$$

- Textiles: 10pp (horizontal), -2pp (within-industry), 10pp (cross-industry).
- Economy: 10pp (horizontal), -2pp (within-industry), 12pp (cross-industry).

Individual estimates

Decompositions

Step 2. Within vs. cross-industry concentration

$$\bar{\mu}_{gk}^{-1} = 1 + \frac{1}{\eta_g} + \underbrace{\left(\frac{1}{\theta_g} - \frac{1}{\eta_g}\right) HHI_{gk}}_{\text{(within: -2pp)}} + \underbrace{\left(\frac{1}{\lambda_g} - \frac{1}{\theta_g}\right) s_{gk} HHI_{gk}}_{\text{(cross: 10pp)}}$$

- Textiles: 10pp (horizontal), -2pp (within-industry), 10pp (cross-industry).
- Economy: 10pp (horizontal), -2pp (within-industry), 12pp (cross-industry).

Individual estimates

$\longrightarrow$ Market definition crucial for diagnosing monopsony power.

$\longrightarrow$ Ongoing: data-driven method to uncover men and women's labor market boundaries, inspired by Almagro & Manresa 2022, Appendix E.

Extra

$$n_{gjkr} = \left(\frac{a_{gj} w_{gj}}{a_{gk} W_{gk}} \right)^{\eta_g} \left(\frac{a_{gk} W_{gk}}{\bar{W}_{gr}} \right)^{\theta_g} \left(\frac{\bar{W}_{gr}}{\bar{W}_g} \right)^{\lambda_g} N_g$$

Conclusion

- Employers have substantially higher monopsony power over women than over men.
- Two intuitive sources:
  - Women find it harder to leave specific employer (horizontal difference).
  - Women's employment opportunity concentrated in textile jobs (vertical difference).
- Higher concentration in textiles reflects amenities, not productivity.

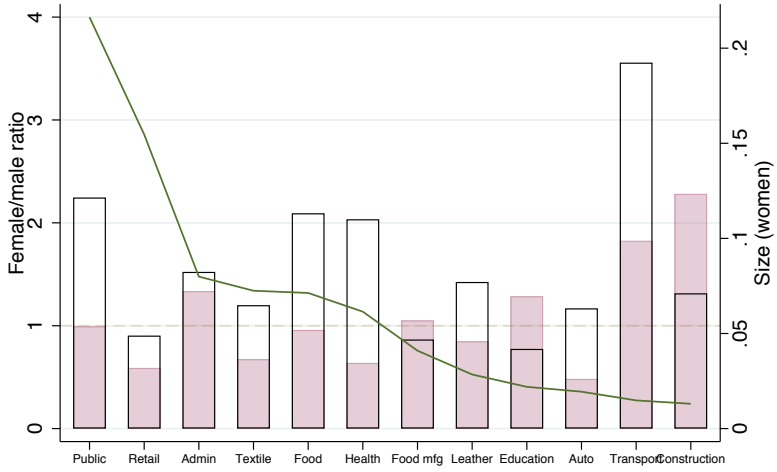
$\rightarrow$ Improving non-traditional jobs for women can remedy gender wage gap, while simultaneously raising efficiency.

$\rightarrow$ Open question: What are these disamenities/amenities drawing women to textiles? Do they misallocate women's talent?

Extra

- Effect on monopsony-induced gender wage gap
  - Leveling gender gap in amenities: 8pp
  - Leveling gender gap in productivity: 4pp
  - Improving safety: 4pp
- Amenities:
  - Contracted – maternity leave, flexibility, childcare: 4pp
  - Non-contracted – gender norms, work with women, discrimination: 4pp
- Equity begets efficiency: reallocation from small, less productive to large, productive employers.

Within and cross-industry concentration



HHI_{gk}, $s_{gk} HHI_{gk}$

Related ongoing work

In India, building on linked employer-employee social security records:

- Collusion among employers:
  - Trade association use industry + location specific min wage as focal points.
- Effect of mandatory maternity leave on young women's labor market outcomes (with Lisa Ho & Pulak Ghosh)
  - Do employers discriminate? Because they don't want to pay for leave or not want to lose a worker?