

# Globalization - a Chance for Gender Equality in the Workforce? An Analysis of Latin American Firms

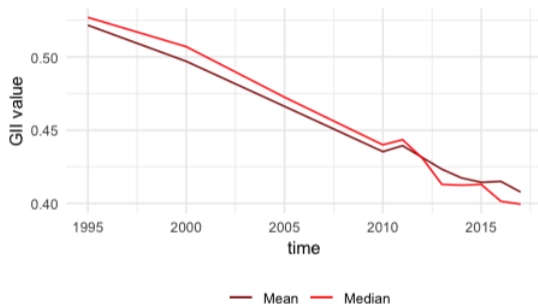
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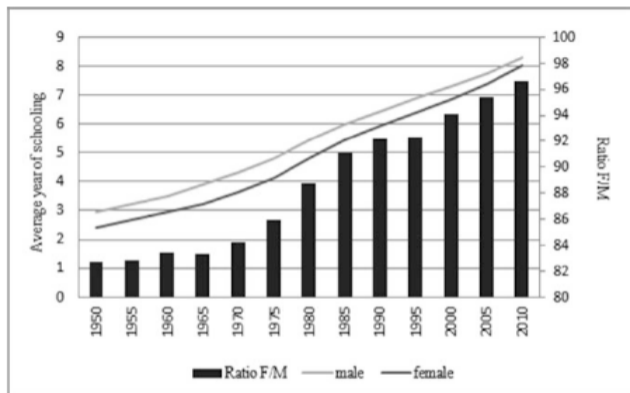
Young Economists Conference 2019

## Motivation - Latin America & Gender Equality



Gender Inequality Index (GII) for Latin American countries over time

(Source: United Nations Development Programme (2019), own figure)



## Educational attainment by sex

(Source: Camou&Maubrigades (2017), p. 227 - based on Barro&Lee (2012))

## Motivation - Latin America & Gender Equality

- "1. 1910–1940: a fall in female labour participation in some countries like Argentina and Chile  
2. 1940–1970: few changes in the Latin American countries studied  
3. 1970 to the present: explosive growth in female labour participation rates"  
(Camou and Maubrigades 2017, p. 225).

## Motivation - Latin America & Gender Equality

- improvement but still high levels of gender inequality
- increasing integration into the world market (NAFTA, Mercosur, EU-Mexico trade agreement etc.)
- previous empirical tests only for single countries

⇒ Investigate effect of globalization on gender equality at a firm level for Latin America as a whole.

⇒ Do "globalized" and "non-globalized" firms differ with regard to their share of female workers?

# Data

Enterprise Surveys from the Enterprise Analysis Unit of the World Bank

- standardized questions → comparability
- 16 Latin American countries
- panel data: 2006 - 2017

## Variables

- share of female full-time workers (production and non-production)
- exports (in % of total sales)
- foreign ownership (in % of total ownership)

# Theoretical background

## Heckscher-Ohlin model

- different endowments of resources → skills
- unskilled labor is abundant in developing countries and often female-dominated
- export the good that uses the abundant factor

⇒ positive effect on women in the workforce

- control variable: share of skilled workers

# Theoretical background

## Taste for Discrimination

- Becker (1957)
- taste preferences - discrimination is costly
- competitive environments → leave market or change behaviour

⇒ positive effect on women in the workforce

- control variable: number of competitors in the field, (amount of working capital financed by credit and advances)



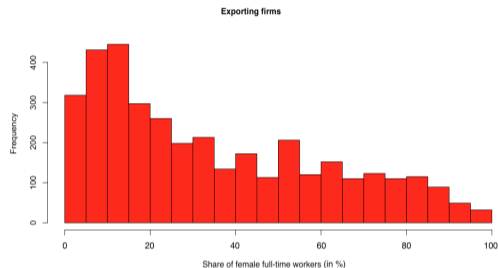
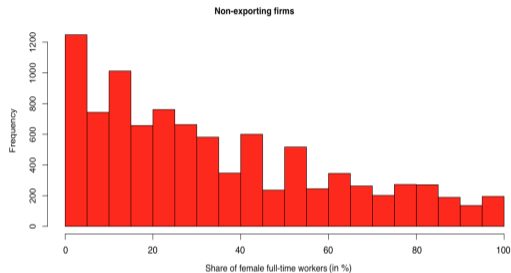
# Theoretical background

## Firm heterogeneity & investment in technology

- differences between exporting and non-exporting firms: size, productivity, investment in technology
- change in skills → technology replaces physically demanding tasks

⇒ positive effect on women in the workforce

- control variable: firm characteristics, implementation of new processes



## Histogram of the share of female full-time workers

(Source: Enterprise Surveys - World Bank (2019), own figure)

## Methodological approach

Model:

$$FFTW_{it} = \beta_1 \text{exp}_{it} + \beta_2 \text{for}_{it} + \beta_3 X_{it} + \alpha_i + u_{it} \quad (1)$$

- FFTW = share of female full-time workers
- exp = direct exports dummy (in % of total sales)
- for = foreign-owned firms dummy (in% of total ownership)
- X = firm characteristics vector
- $\alpha_i$  = unobserved effect
- $u_{it}$  = idiosyncratic error

## Results: Share of female full-time workers

	(1)	(2)	(3)
Exports $\geq$ 10%	0.025** (0.012)		
Exports $\geq$ 50%, < 100%		0.045* (0.027)	
Exports = 100%			0.323*** (0.038)
Female owned	0.039*** (0.011)	0.039*** (0.011)	0.039*** (0.011)
Share of skilled workers	0.059*** (0.022)	0.059*** (0.022)	0.059*** (0.022)
Large number of competitors	0.032* (0.016)	0.032** (0.016)	0.032* (0.016)
New process	-0.025* (0.013)	-0.024* (0.013)	-0.024* (0.013)
Working capital financed by credit	0.001*** (0.000)	0.0005*** (0.000)	0.001*** (0.000)
Constant	0.298*** (0.111)	0.296*** (0.111)	0.297*** (0.111)
Observations	4,192	4,192	4,192
R <sup>2</sup>	0.421	0.421	0.421
Adjusted R <sup>2</sup>	0.401	0.400	0.400
Industry fixed effect	Yes	Yes	Yes
Year*Country fixed effect	Yes	Yes	Yes

## Results: Share of female full-time workers

	(1)	(2)	(3)
Foreign $\geq$ 10%	0.020 (0.018)		
Foreign = 100%		0.004 (0.027)	-0.015 (0.022)
Exports = 100%			0.094*** (0.025)
Foreign=100%*Exports=100%			0.186 (0.125)
Observations	11,611	11,611	11,604
R <sup>2</sup>	0.406	0.406	0.409
Adjusted R <sup>2</sup>	0.396	0.396	0.399
Industry fixed effect	Yes	Yes	Yes
Year*Country fixed effect	Yes	Yes	Yes

## Concluding remarks

- small but statistically significant evidence that exporting firms have a higher share of female workers
- the effect gets bigger the more the firm exports
- no difference for foreign-owned firms compared to domestically-owned firms

### Challenges & Discussion

- heterogeneity of Latin American countries  
→ analyze cluster of countries
- other dimensions of women in the workforce

## Literature mentioned

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Thank you for your attention!  
Questions? Comments?



## Descriptives - Female Workers

Female full-time workers	Exporting firms ( $\geq 10\%$ )	Non-exporting firms	Foreign-owned firms ( $\geq 10\%$ )	Domestically-owned firms
share: mean	34.3 %	32.9 %	31.4 %	33.4 %
share: median	26.3 %	25.9 %	25.0 %	26.3 %
absolute: mean	97	19	119	29
absolute: median	20	5	25	6

		<i>Dependent variable:</i>
		Share of female full-time workers
Exports		0.001** (0.000)
Firm age		-0.001* (0.000)
Share of skilled workers		0.059*** (0.022)
Working capital financed by credit		0.001*** (0.000)
Large number of competitors		0.032** (0.016)
Female owned		0.039*** (0.011)
Share of temporary workers		-0.012** (0.005)
Number of workers (lagged)		0.00001 (0.000)
New process		-0.025* (0.013)
Constant		0.299*** (0.112)
Observations		4,192
R <sup>2</sup>		0.421
Adjusted R <sup>2</sup>		0.401
Industry fixed effect		Yes
Year*Country fixed effect		Yes
Residual Std. Error		0.662 (df = 4046)
F Statistic		20.324*** (df = 145; 4046)

Note:

Clustered standard errors: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

	<i>Dependent variable:</i>
	Share of female full-time workers
Foreign ownership	0.0002 (0.000)
Firm age	-0.0005* (0.000)
Share of skilled workers	0.059*** (0.022)
Working capital financed by credit	0.001*** (0.000)
Large number of competitors	0.031* (0.016)
Female owned	0.040*** (0.011)
Share of temporary workers	-0.012** (0.005)
Number of workers (lagged)	0.00002 (0.000)
New process	-0.025* (0.013)
Constant	0.296*** (0.111)
Observations	4,191
R <sup>2</sup>	0.421
Adjusted R <sup>2</sup>	0.400
Industry fixed effect	Yes
Year*Country fixed effect	Yes
Residual Std. Error	0.662 (df = 4045)
F Statistic	20.291*** (df = 145; 4045)

Note:

Clustered standard errors: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01