Cultural change or prevalent social stigmas to female labour participation?

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Abstract

Cultural change or prevalent social stigmas to female labour participation?

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Is there a social stigma towards wives working in blue-collar jobs? Goldin (1994) argues that low female labour participation rates (FLPRs) in middle-income countries like Mexico might be driven by this stigma. This empirical paper is the first one evaluating this theory by testing different hypotheses. The first states that married women are less likely to work in industrial jobs, compared to single women. The second argues that the alleged negative relationship of being married extends to male-intensive industries (mining), female-intensive industries (clothing), and mixed industries (food processing). The third mentions that wives' probabilities of working in industry decrease as their husbands' education levels increases. The regression analysis is based on a repeated cross-sectional dataset of Mexico's ENOE household survey from 2016 to 2019. The empirical analysis relies on probit regressions to estimate women's likelihood to work in different economic activities. Despite the growing literature suggesting attitude changes to female labour participation, stronger attachment of wives to labour markets, and higher engagement of women in industrial jobs, my results validated the three previous hypotheses in Mexico. Nevertheless, a multinomial probit regression also revealed that, compared to single women, Mexican wives are less likely to work not only in industry, but also in agriculture and services. The magnitude of the negative relationship associated to being married is similar across the three economic sectors. These represents new evidence for the literature since the theory indicates that the service sector expansion is beneficial for married women as there is no social stigma against wives working in white-collar jobs. Results showed that unmarried women with permanent partners also have lower probabilities of working in any economic sector compared to single women. Hence, Mexican women are showing a consistent adverse relationship between working and having a partner, regardless of the economic sector.

Outline

- Literature Review
- Hypotheses and results
- Econometric model
- Descriptive statistics
- Background Data
- Conclusions

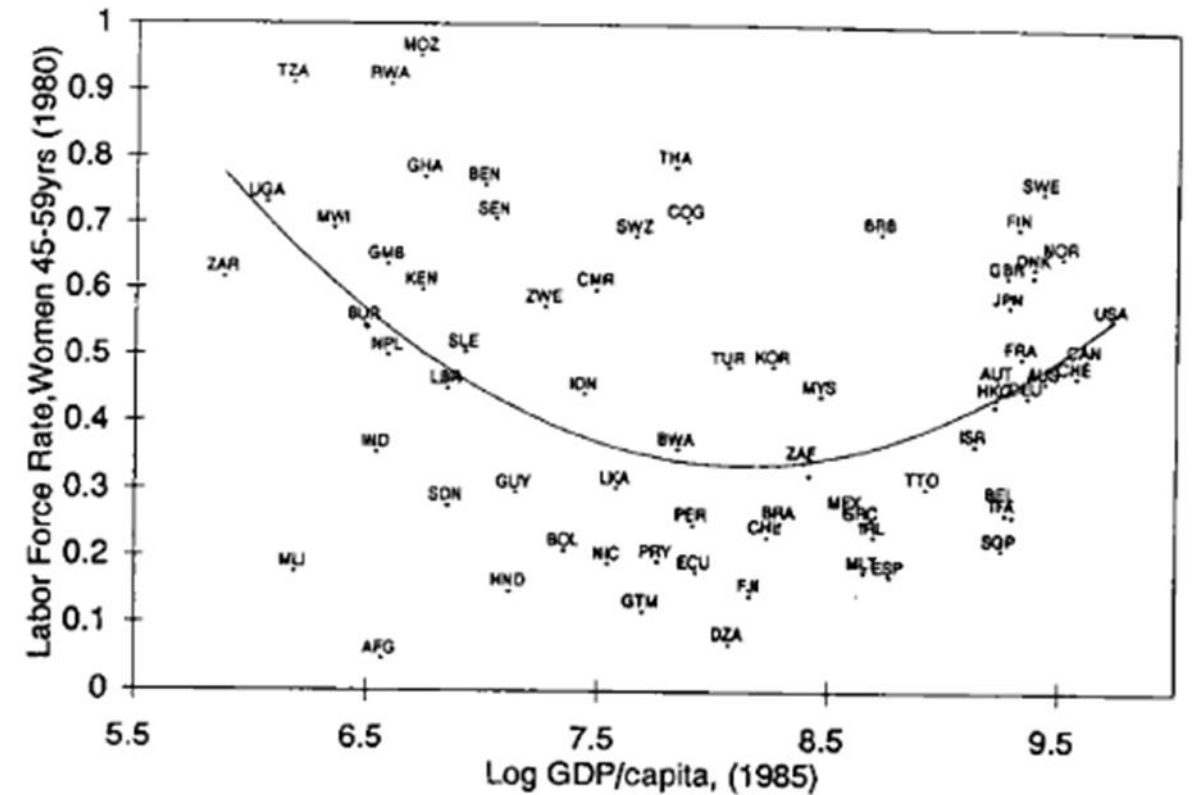# Literature Review

Literature Review

Figure 1: Labor force participation rates for women 45 to 59 years old (c. 1960) and the log of GDP/capita (1985, $1985)

Source: Goldin (1994)

Literature Review

Factors behind high female labour participation rates (FLPRs) in low-income countries, according to Goldin (1994):

- These countries have the lowest levels of economic development worldwide.

- They have high % of jobs in the agricultural sector (as a share of total employment).
  - The agricultural sector at this stage of economic development is labour-intensive.
  - Low investment in agricultural machinery entails high labour demand.
  - Agricultural jobs in family farms are compatible with child rearing.
  - Salaries and productivity rates are extremely low (both in agriculture and non-agricultural activities)

- Fertility rates in low-income countries tend to be the highest.
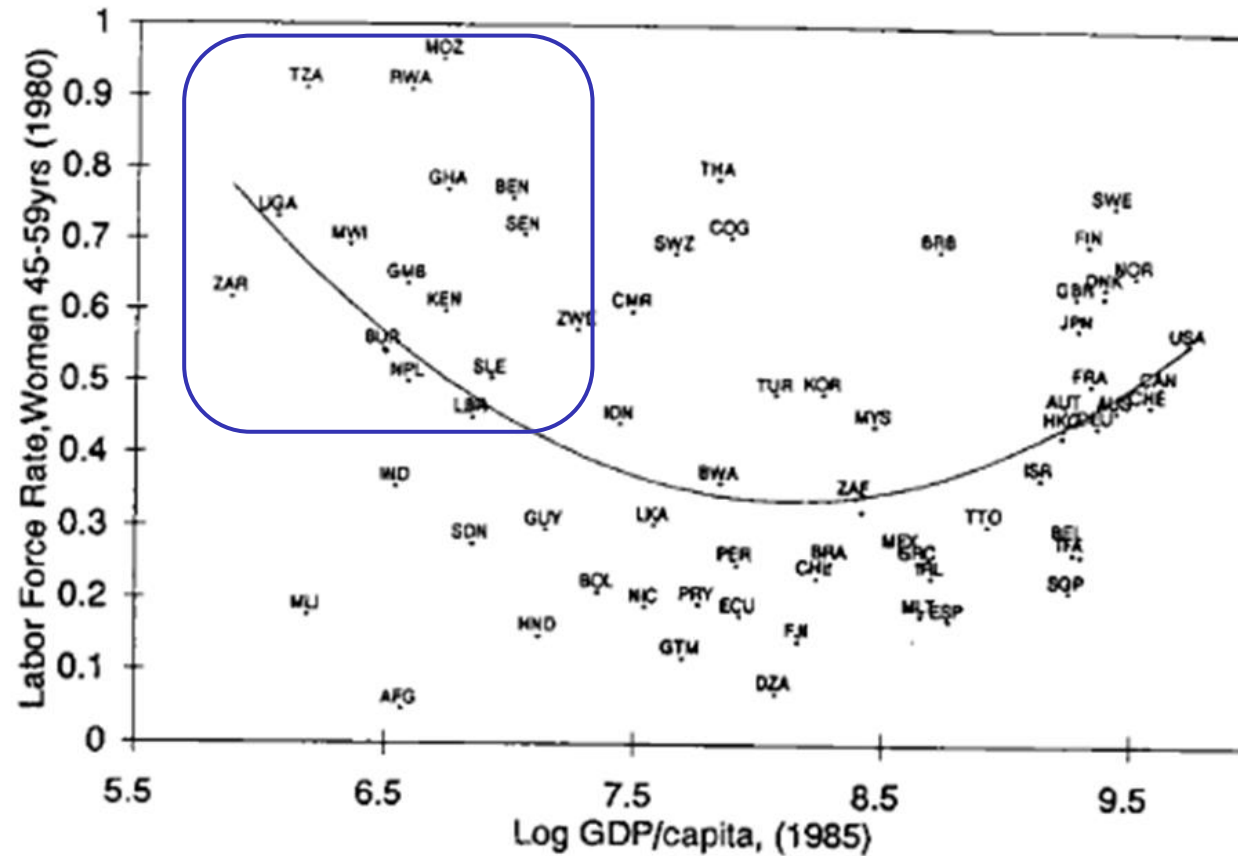 - Hence, there is a high dependency ratio within households.

Figure 1: Labor force participation rates for women 45 to 59 years old (c. 1960) and the log of GDP/capita (1985, $1985)

Source: Goldin (1994)

Literature Review

Factors behind low female labour participation rates (FLPRs) in middle-income countries, according to Goldin (1994):

- Structural transformation entails an expansion of the industrial sector.

- Several blue-collar jobs are now available in the economy... but are performed by men.
  - Why?
  - Existence of social stigmas towards wives working in blue-collar jobs.
  - Husbands can be judged as negligent if their wives work in physically demanding jobs.
  - Wives can request their husbands to exit the labour market to avoid working in factories.
  - Industrial jobs are incompatible with child rearing.

- Strong income effect, weak substitution effect, and complex labour demand effect.
  - Family income increases due to higher salaries of husbands in industry.
  - Introduction of agricultural machinery decreases labour demand of female workers.
  - Weak substitution effect as there is still a gender gap in education levels between men and women.

Figure 1: Labor force participation rates for women 45 to 59 years old (c. 1980) and the log of GDP/capita (1985, $1985)

Source: Goldin (1994)

Factors behind high female labour participation rates (FLPRs) in high-income countries, according to Goldin (1994):

- At the final stages of economic development, countries experience a service sector expansion.

- Several white-collar jobs are now available... and lots of them are done by women!
  - Why?
  - Lack of social stigmas towards jobs in sales, education, health, and financial services.
  - The gender gap in education levels disappears at this point.
  - White-collar jobs offer better salaries compared to blue-collar jobs.

- The household income effect is now weaker, and the substitution effects is stronger.

- Hence, an expansion of the service sector implies the availability of more white-collar jobs, which women are willing to perform.
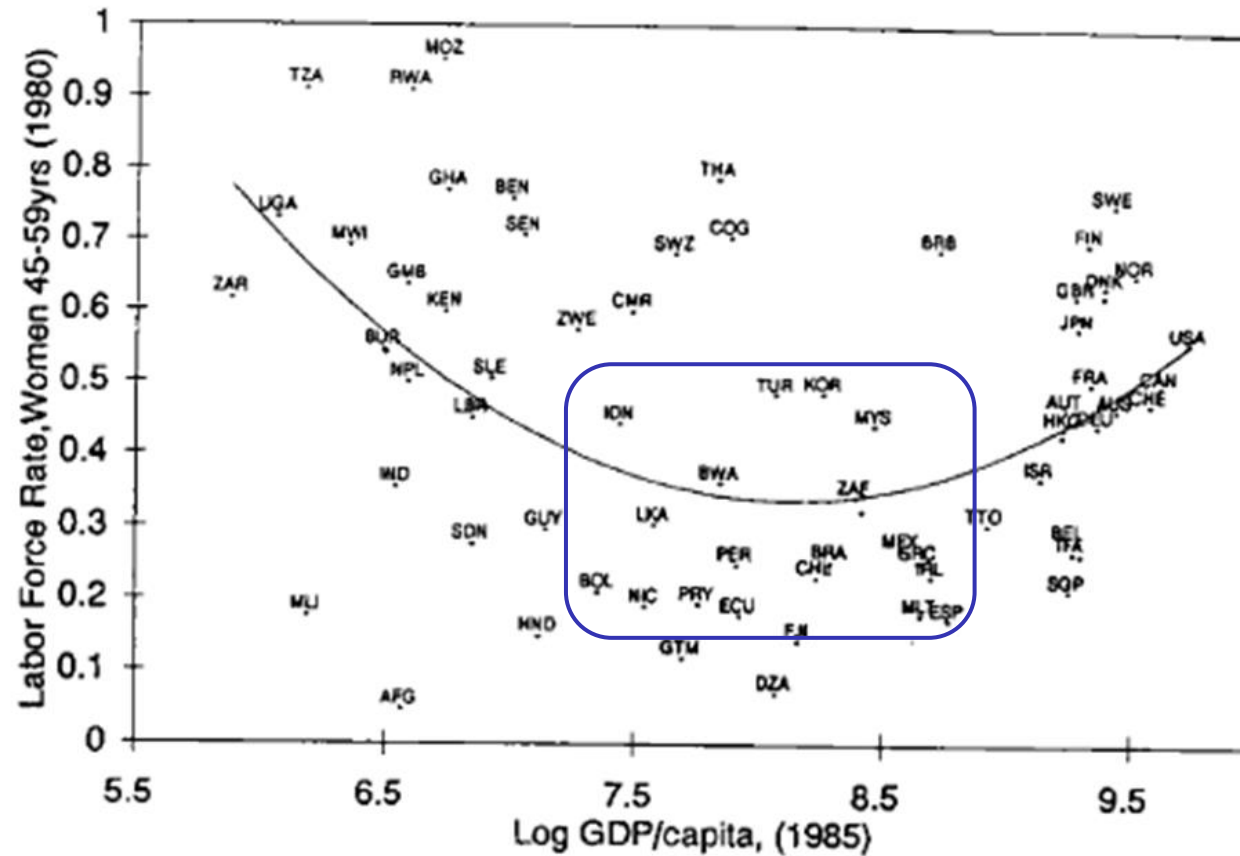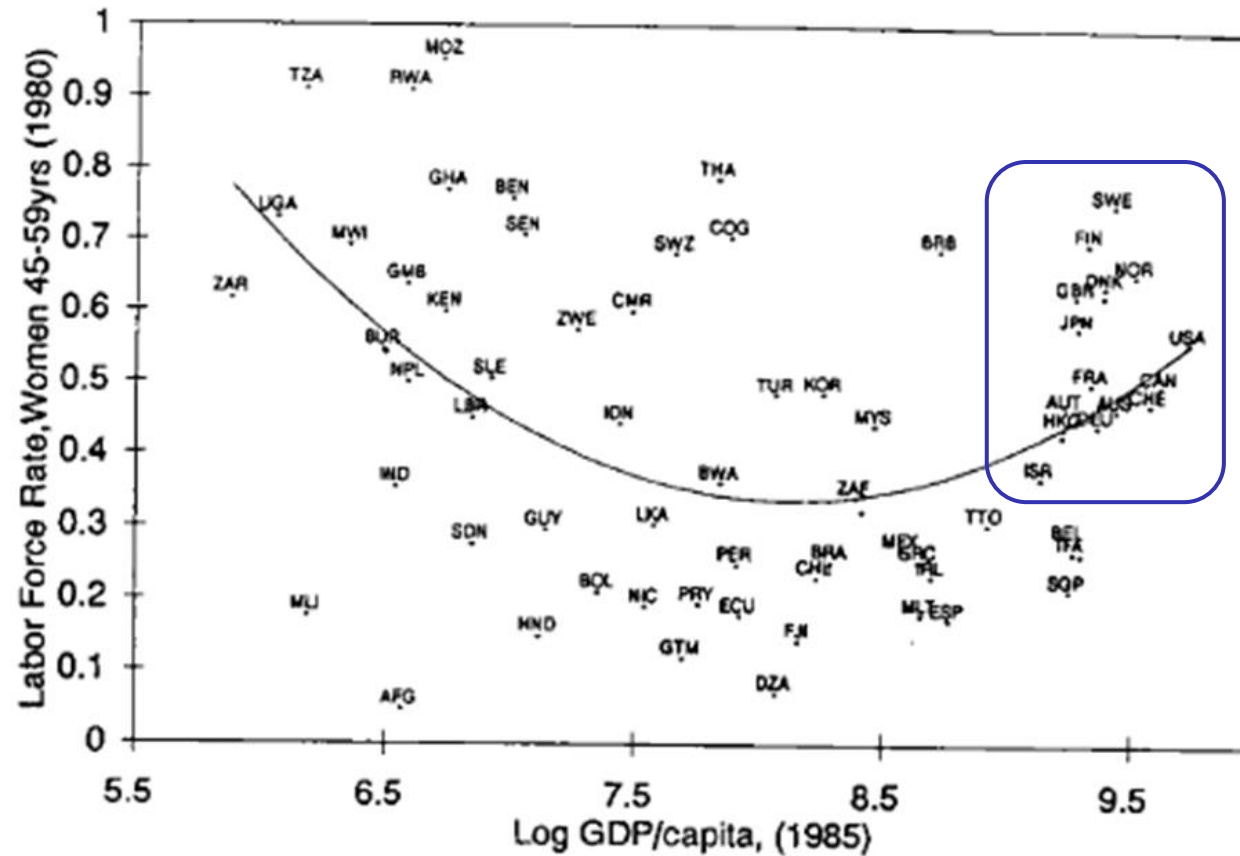
Figure 1: Labor force participation rates for women 45 to 59 years old (c. 1960) and the log of GDP/capita (1985, $1985)

Source: Goldin (1994)

Literature Review

The social stigma hypothesis

- Goldin (1994) argues that one of the main drivers for the decline of female labour participation rates (FLPRs) in middle income countries like Mexico is because there is a strong social stigma towards wives working in blue-collar jobs at the industrial sector.

  - Social stigmas against wives working in paid manual labour outside home are widespread and strong.
  - Extends to jobs in male-intensive industries: mining, female-intensive: textiles, and mixed: food processing.
  - The stigma is a simple message: Only a negligent or lazy husband would allow his wife to do physical labour.
  - The stigma does not attach to widows doing the same work.
  - The stigma attaches enforces a powerful social norm that obliges men to be the only provider.
  - Finally, the stigma does not generally attach to women working in the white-collar sector.

Model of household and market production
with a stigma equilibrium and
a non-stigma equilibrium.
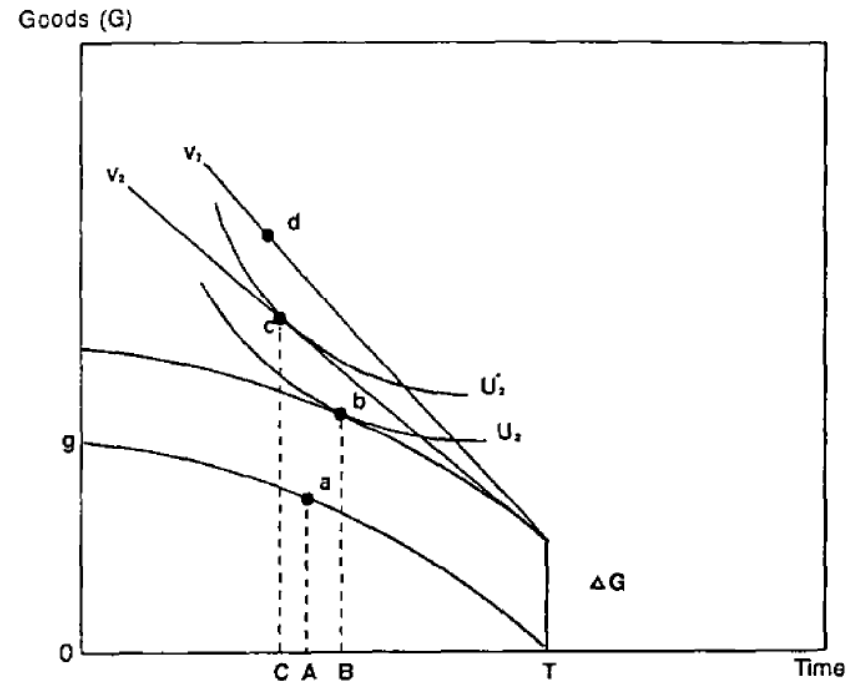
Source: Goldin (1994)

Literature Review

Evidence challenging the social stigma hypothesis

Theories developed in the last century may not fully align in modern times...

- Juhn *et al.* (2014) found that tariff reductions implemented in 1994 after signing the North American Free Trade Agreement (NAFTA) induced more productive firms in Mexico to enter the export market and modernize their technology.

- The upgraded technology lowered the need for physically demanding positions. Hence, many blue-collar jobs that were traditionally held by men started to be occupied by women, particularly by those with lower educational levels.

- Majlesi (2016) also found that women's likelihood of being employed increased due to positive labour demand shocks within Mexican manufacturing industries that increased their access to export markets.

Literature Review

Evidence challenging the social stigma hypothesis

Theories developed in the last century may not fully align in modern times...

- Blank & Shierholz (2006) showed that the alleged negative relationship between being a married women and participating in labour markets has been disappearing over time in the USA, regardless of their skill levels.

- England *et al.* (2004) as well as Blau & Kahn (2007) concurred that the labour force participation of married women in the United States became less influenced by their husbands' wages.

- Arceo-Gomez & Campos-Vazquez (2010) found that the labour supply elasticities of married women in Mexico between 1990 and 2000 showed a sharp decline, suggesting that their attachment to labour markets is increasing and it is also showing a similar convergence pattern as the one documented in the United States.

Literature Review

Evidence challenging the social stigma hypothesis

Theories developed in the last century may not fully align in modern times...

- Campos-Vazquez & Velez-Grajales (2014) estimated the probability that married women were employed, depending on whether their husbands had a working mother during their childhood or not.

- Their results showed that, in Mexico, married women whose husbands had a working mother during childhood were, on average, 15 percentage points more likely to be part of the labour force compared to those that are married with men who did not have a working mother.

- Finally, they showed that the positive effect of having a working mother during the childhood is more pronounced among husbands with less than high-school education, as their likelihood of having a working wife was 23 percentage points higher compared to those with same level of education but without a working mother during their childhood.

Gap in the literature

- The social stigma hypothesis has been taken as a stylized fact even when it has not been empirically evaluated before.

- Recent studies suggest that the social stigma hypothesis could no longer be valid in modern times.

- Blue-collar jobs are less physically demanding now than in the 20th century.

- In 1994, the number of men that had a working mother during their childhood was probably less than the number of men that had a working mother in the 21st century.

- Hence, social stigmas towards wives working in blue-collar jobs could have changed across generations.

Hypotheses and results

1ˢᵗ hypothesis

Are married women less likely to work in industrial jobs, compared to single women?

Result: Yes

Hypotheses and results

	(1) Agriculture	(2) Industry	(3) Services
Marital status (Base category: Single)			
Free union	-0.429***	-0.669***	-0.581***
	(0.0404)	(0.0210)	(0.0162)
Separated	0.0276	0.0644**	0.105***
	(0.0508)	(0.0268)	(0.0217)
Divorced	0.0934	-0.0213	0.0663**
	(0.0989)	(0.0385)	(0.0324)
Widowed	-0.0282	-0.201***	-0.155***
	(0.0558)	(0.0345)	(0.0256)
Married	-0.550***	-0.760***	-0.710***
	(0.0394)	(0.0197)	(0.0151)
Control variables			
Individual characteristics	✓	✓	✓
Household characteristics	✓	✓	✓
Household head characteristics	✓	✓	✓
Fixed effects: Year/quarter	✓	✓	✓
Fixed effects: Mexican states	✓	✓	✓
Constant	-3.725***	-4.806***	-4.779***
	(0.187)	(0.0865)	(0.0669)
Observations	506,214	506,214	506,214

Regressions was restricted to working-age women (18-65)

Regressions were run using probability weights

Base category of time fixed effects (2016, Q1)

Base category of state fixed effects (Mexico City)

Robust standard errors in parentheses

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

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Robust standard errors in parentheses			
*** p<0.01, ** p<0.05, * p<0.1			

Hypotheses and results

Predicted probability of women working in different economic sectors.

|	Marital Status	Margin	std. err.	z	P>z	[95% conf. interval]	
Not Working	Free Union	0.6441	0.0022	290.00	0.000	0.6397	0.6484
	Separated	0.4793	0.0041	115.67	0.000	0.4711	0.4874
	Divorced	0.4894	0.0069	70.56	0.000	0.4758	0.5030
	Widowed	0.5401	0.0050	107.05	0.000	0.5302	0.5500
	Married	0.6718	0.0016	425.57	0.000	0.6687	0.6749
	Single	0.5014	0.0023	214.95	0.000	0.4968	0.5059
Working in agriculture	Free Union	0.0139	0.0005	26.89	0.000	0.0129	0.0150
	Separated	0.0174	0.0011	16.08	0.000	0.0153	0.0195
	Divorced	0.0201	0.0029	6.93	0.000	0.0144	0.0258
	Widowed	0.0195	0.0013	14.79	0.000	0.0169	0.0221
	Married	0.0123	0.0004	33.63	0.000	0.0116	0.0130
	Single	0.0179	0.0008	21.76	0.000	0.0163	0.0195
Working in industry	Free Union	0.0564	0.0011	53.34	0.000	0.0543	0.0585
	Separated	0.0979	0.0025	39.44	0.000	0.0930	0.1028
	Divorced	0.0894	0.0036	24.74	0.000	0.0823	0.0965
	Widowed	0.0820	0.0031	26.31	0.000	0.0759	0.0881
	Married	0.0535	0.0007	73.11	0.000	0.0520	0.0549
	Single	0.0966	0.0015	63.13	0.000	0.0936	0.0996
Working in services	Free Union	0.2838	0.0021	134.26	0.000	0.2796	0.2879
	Separated	0.4034	0.0040	100.05	0.000	0.3955	0.4113
	Divorced	0.3983	0.0065	61.06	0.000	0.3855	0.4111
	Widowed	0.3568	0.0049	73.43	0.000	0.3473	0.3663
	Married	0.2603	0.0015	178.60	0.000	0.2575	0.2632
	Single	0.3821	0.0024	161.90	0.000	0.3775	0.3868

Note:
Predictive margins were estimated at the mean of the covariates.

Hypotheses and results

Predicted probability of women working in different economic sectors.
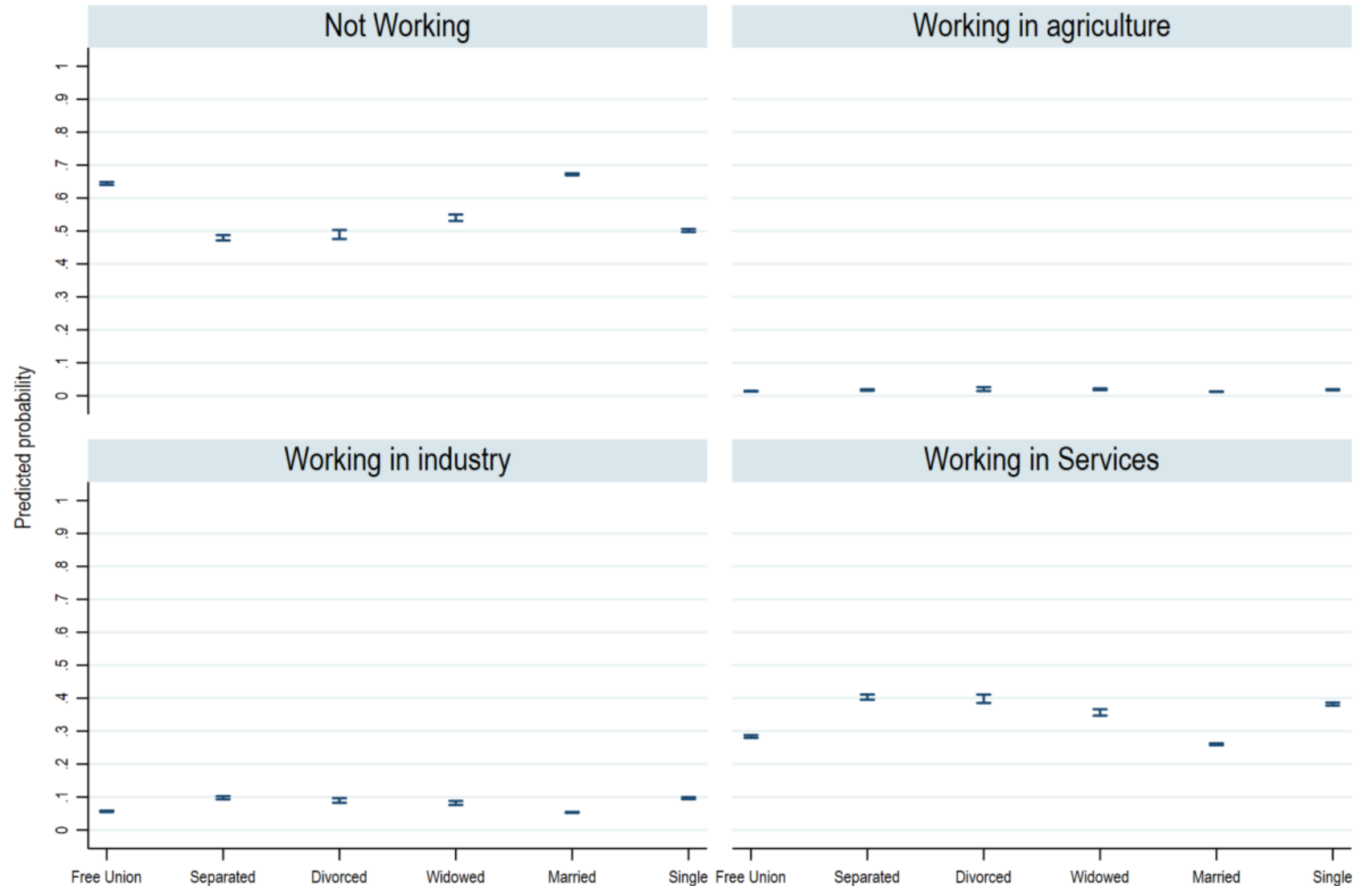
Note:
Predictive margins were estimated at the mean of the covariates.

2nd hypothesis

Wives' probabilities of working in industry decrease as their husbands' education levels increases.

Result: Yes

Hypotheses and results

	(1) Agriculture	(2) Industry	(3) Services
Husband's level of education (Base category: No studies at all)			
Primary school or less	-0.0540	-0.0337	0.0500**
	(0.0373)	(0.0299)	(0.0237)
Secondary school	-0.2335***	-0.0435	0.0807***
	(0.0428)	(0.0308)	(0.0247)
High school	-0.3579***	-0.1127***	0.0637**
	(0.0566)	(0.0332)	(0.0261)
Technical career	-0.6745***	-0.1061**	0.0215
	(0.1151)	(0.0462)	(0.0326)
Graduate or post-graduate	-0.2932***	-0.1955***	-0.0462*
	(0.0691)	(0.0360)	(0.0272)

Control variables			
Women's level of education	✓	✓	✓
Age	✓	✓	✓
Age squared	✓	✓	✓
Number of sons or daughters	✓	✓	✓
Household socioeconomic stratum	✓	✓	✓
Urban/rural household location	✓	✓	✓
Population size of household location	✓	✓	✓
Kids in the household (<6)	✓	✓	✓
Household members	✓	✓	✓
Household head sex	✓	✓	✓
Household head age	✓	✓	✓
Household head education	X	X	X
State fixed effects	✓	✓	✓
Year/quarter fixed effects	✓	✓	✓
Constant	-1.5093***	-2.3850***	-2.8744***
	(0.1989)	(0.0975)	(0.0698)
Observations	258,550	258,550	258,550

All regressions were restricted to working-age women (18-65).

Regressions were restricted to considered just married women and women in free union relationships (not married but with a permanent partner).

Household head education was not included as control in this set of regressions as it is highly colinear with husbands' level of education.

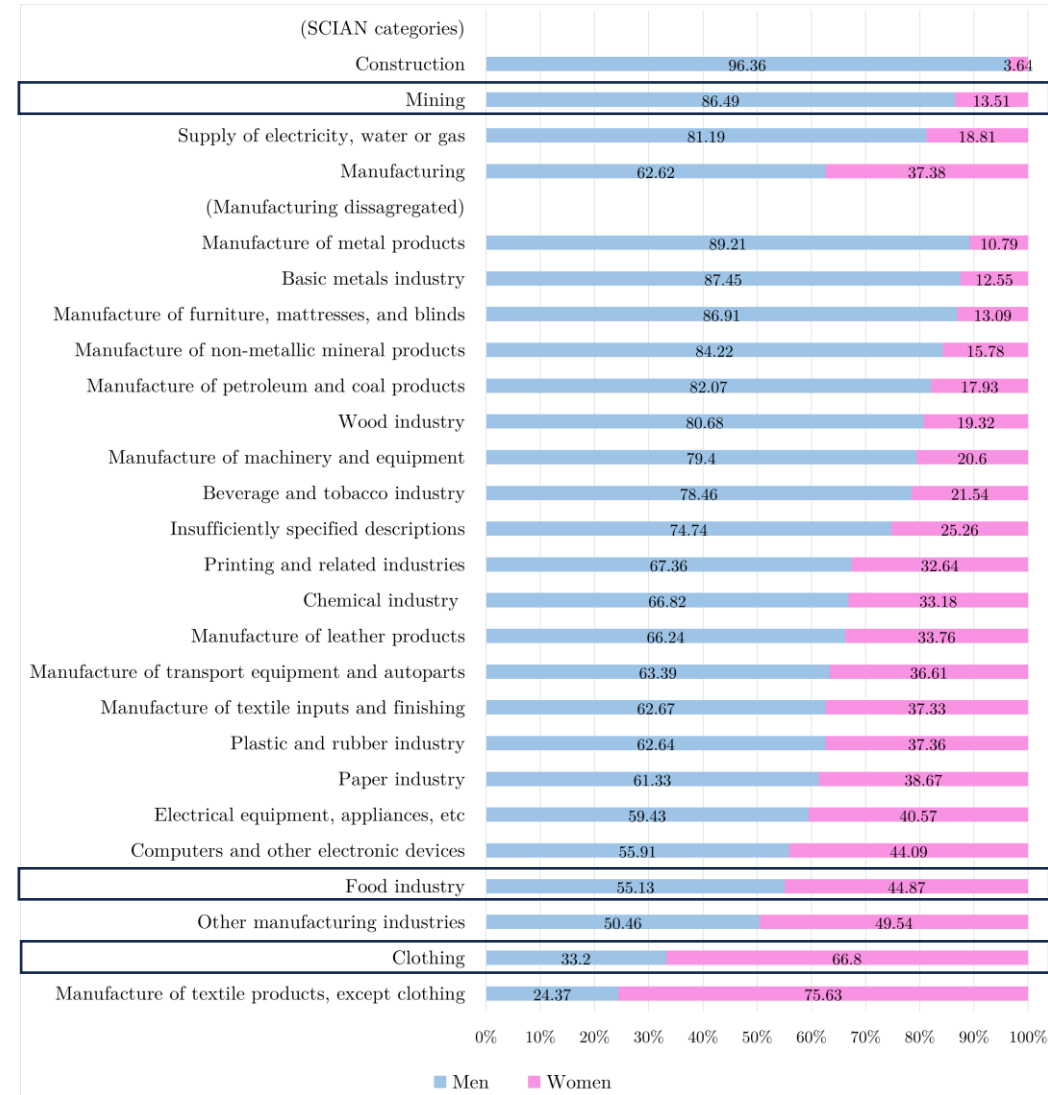Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

3rd hypothesis

The alleged negative relationship
of being married extends to
male-intensive industries (mining),
female-intensive industries (clothing),
and mixed industries (food processing).

Result: Yes

Hypotheses and results

Percentage of men and women working in different
economic activities within Mexico's industrial sector (2019, Q4)

	(1) Mining	(2) Construction	(3) Food	(4) Computers	(5) Clothing	(6) Textile
Marital status. Base category: Single women						
Free Union	-0.4191***	-0.3667***	-0.4480***	-0.5148***	-0.5300***	-0.2549***
	(0.1090)	(0.0601)	(0.0305)	(0.0530)	(0.0385)	(0.0564)
Separated	0.2008	-0.0479	0.0020	-0.0603	-0.0428	0.1953***
	(0.1550)	(0.0747)	(0.0371)	(0.0670)	(0.0442)	(0.0714)
Divorced	0.1636	-0.0960	-0.0191	-0.1500*	-0.0276	-0.1722
	(0.1930)	(0.0874)	(0.0514)	(0.0904)	(0.0669)	(0.1211)
Widowed	-0.0760	-0.1690	-0.1460***	-0.3567***	-0.1656***	0.0006
	(0.1590)	(0.1098)	(0.0416)	(0.1051)	(0.0570)	(0.0791)
Married	-0.3620***	-0.5636***	-0.4781***	-0.5501***	-0.5486***	-0.1812***
	(0.1053)	(0.0565)	(0.0289)	(0.0505)	(0.0349)	(0.0519)
Controls: individual characteristics	✓	✓	✓	✓	✓	✓
Controls: household characteristics	✓	✓	✓	✓	✓	✓
Controls: household head characteristics	✓	✓	✓	✓	✓	✓
Year/quarter fixed effects	✓	✓	✓	✓	✓	✓
State fixed effects	✓	✓	✓	✓	✓	✓
Constant	-5.3005***	-5.5420***	-3.4399***	-6.7102***	-4.2461***	-2.5167***
	(0.5209)	(0.2554)	(0.1118)	(0.3096)	(0.1410)	(0.1898)
Observations	205,333	249,647	258,267	179,164	253,502	250,038
% of women in that industrial activity as a share of the total labour force	13.50%	3.64%	44.87%	44.09%	66.80%	75.63%
All regressions were restricted to working-age women (18-65)						
Robust standard errors in parentheses						
*** p<0.01, ** p<0.05, * p<0.1						