Unemployment and Intimate-Partner Violence: A Gender-Identity Approach

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The Paper

- Despite general perception that domestic violence increases with recession, evidence inconclusive
- Analysis of the relationship between intimate-partner violence (IPV) and unemployment:
  - Individual data on IPV of the highest quality for Spain
  - Exploit regional and time variation in female and male unemployment
  - Introducing *gender identity* $\rightarrow$ determined by traditional family type
- Heterogeneous impacts:
  1. Traditional gender roles: a decrease in female unemployment is associated with an increase in IPV
     - ★ men feel their traditional breadwinner role at risk and react against this feeling with violence
  2. More equal gender roles: effect is offset

Literature

1. *Total* unemployment and domestic violence:
   - near zero (Aizer, 2010; Iyengar, 2009) or positive (Van der Berg and Tertilt, 2012) effects
2. *Relative* female and male unemployment and domestic violence:
   - household bargaining model: $\downarrow$ female unemployment $\Rightarrow\downarrow$ domestic violence (Anderberg et al. 2015)
   - male backlash model: $\downarrow$ female unemployment $\Rightarrow\uparrow$ domestic violence (Macmillan and Gartner 1999)
3. Cultural values as a mediator of the impact that changes in the relative resources will have on domestic violence
   - Atkinson et al. 2005, Angelucci 2008, Cools and Kotsadam 2015, Alesina et al. 2016

Data and Empirical Strategy

- **Intimate-Partner Violence**
  - 4 cross-sectional surveys (1999, 2002, 2006 and 2011) on violence against women. Representative to all women 18+ living in Spain (N=77,525)
  - Gold standard methods to estimate prevalence (WHO, 2013)

▸ questions

▸ descriptives

- **Unemployment**
  - Active Population Survey (1999-2011)
  - I compute the contemporaneous (same quarter) and lagged (previous quarter) unemployment rate, by age group, gender and province. 8 quarters (N=1,172,824)
  - focus on *perceived* risk of unemployment

▸ descriptives

$$IPV_{iapy} = \alpha + \beta^f Unemp^f_{apy} + \beta^m Unemp^m_{apy}$$
$$+\gamma \boldsymbol{X}_{iapy} + \lambda_p Provin_p + \theta_y Year_y + \epsilon_{iapy}$$

▸ results

Heterogeneous Impacts: My Hypothesis

- *Gender identity* determines men's reactions to changes in the gender gap in unemployment
- *Gender identity* is shaped by the **historical family type** that prevailed in each region (Tur-Prats 2015)
  - **nuclear family**: female activities restricted to domestic $\Rightarrow$ men breadwinners $\Rightarrow$ *traditional* gender identity
    - ★ $\downarrow$ female unemployment $\Rightarrow\uparrow$ domestic violence (to reinstate their authority)
  - **stem family**: coresidence with the mother-in-law increases wife's contribution to family subsistence $\Rightarrow$ both wives and husbands were providers $\Rightarrow$ *egalitarian* gender identity
    - ★ no effect (no threat on their notion of masculinity)
  - average number of married and widowed women in the household at the province level using 1860 census data

▸ map

- I test this by including an *interaction term* between male and female unemployment and the traditional family type

Heterogenous Impacts: Results

Mean dependent variable=0.089			
	(1)	(2)	(3)
Panel A. Contemporaneous effects (unemployment in same quarter)			
Male unemployment	0.02	0.03	0.03
	(0.061)	(0.060)	(0.067))
Female unemployment	-0.12**	-0.12**	-0.13**
	(0.054)	(0.053)	(0.055)
Male unemployment*Stem family	-0.08	-0.11	-0.18
	(0.221)	(0.213)	(0.254)
Female unemployment*Stem family	0.55**	0.54**	0.60**
	(0.271)	(0.265)	(0.252)
Panel B. Lagged effects (unemployment in previous quarter)			
Male unemployment	-0.05	-0.04	-0.08
	(0.058)	(0.058)	(0.070)
Female unemployment	-0.07	-0.07	-0.03
	(0.054)	(0.051)	(0.064)
Male unemployment*Stem family	-0.13	-0.13	0.21
	(0.287)	(0.285)	(0.377)
Female unemployment*Stem family	0.69*	0.67*	0.20
	(0.351)	(0.338)	(0.368)
Observations	54,768	54,768	54,768
Adj-R^2	0.023	0.034	0.036
Province and year FE	Yes	Yes	No
Traditional family type specific time FE	Yes	Yes	No
Province-year FE	No	No	Yes
Additional individual-level controls	No	Yes	Yes

Notes: *Stem family* is defined as the average number of married and widowed women in the household at the province level in 1860. All models include age-group-fixed-effects, the presence of children and respondent's level of education as control variables. Additional individual-level controls include partner's level of education, marital status fixed-effects, and respondent's religion. Standard errors clustered by province in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Exogenous Measures of Unemployment

- Changes in local unemployment might reflect changes in the underlying characteristics of workers in the province that could be correlated with violence
- I construct an exogenous measure of unemployment following Bartik (1991):
  - I interact the initial industry composition of employment at a given province with the industry-specific unemployment rate at the national level over time

$$\widehat{Unemp}^{g}_{apy} = \sum_{j} \psi^{a}_{jap} Unemp^{g}_{jay,-p}$$

Results with Exogenous Unemployment

Mean dependent variable=0.089			
	(1)	(2)	(3)
Panel A. Contemporaneous effects (unemployment in same quarter)			
Male unemployment	0.42*	0.50**	0.37*
	(0.236)	(0.234)	(0.217)
Female unemployment	-0.68**	-0.71**	-0.56**
	(0.312)	(0.314)	(0.281)
Male unemployment*Stem family	-1.71*	-1.88*	-1.26
	(0.934)	(0.951)	(0.852)
Female unemployment*Stem family	2.51**	2.61**	2.02**
	(1.058)	(1.023)	(0.864)
Panel B. Lagged effects (unemployment in previous quarter)			
Male unemployment	0.16	0.26	0.23
	(0.255)	(0.251)	(0.266)
Female unemployment	-0.44*	-0.49*	-0.45
	(0.259)	(0.251)	(0.275)
Male unemployment*Stem family	-0.53	-0.67	-0.75
	(1.061)	(1.107)	(0.940)
Female unemployment*Stem family	1.36	1.45	1.51*
	(0.936)	(0.938)	(0.827)
Observations	54,768	54,768	54,768
Adj-R^2	0.023	0.034	0.036
Province and year FE	Yes	Yes	No
Traditional family type specific time FE	Yes	Yes	No
Province-year FE	No	No	Yes
Additional individual-level controls	No	Yes	Yes

▸ robustness tests

Notes: *Stem family* is defined as the average number of married and widowed women in the household at the province level in 1860. All models include age-group-fixed-effects, the presence of children and respondent's level of education as control

Conclusions

- I find *heterogeneous* impacts of female and male unemployment depending on the *gender identity*, which is determined by the historical family type that prevailed in each province in the past
- For women living in provinces with traditional gender roles: $\downarrow$ female unemployment $\Rightarrow\uparrow$ IPV
- *My hypothesis:* men perceive the improvement in female employment as an insult that calls into question his masculinity, and abuse their partners to alleviate these feelings (Akerlof and Kranton 2000 identity model)
- Contribution to understanding the long-term determinants of gender identity. Necessity of considering deeply embedded cultural norms when designing policies to fight violence against women

Definition of IPV in the Survey

At the moment, how often has someone from your home or your intimate partner done any of the following:

1. Doesn't allow you to see your family, friends or neighbors.
2. Takes the money you make or doesn't give you enough money to live on.
3. Calls you names or threatens you.
4. Decides the things you can or cannot do.
5. Insists on having sex even though he or she knows you don't want to.
6. Doesn't take your needs into account (leaves you the worst share of the food, the house, etc.).
7. Makes you feel afraid.
8. Shoves or beats you when is feeling angry.
9. Says you're incapable of doing anything on your own/without him or her.
10. Says everything you do is wrong, calls you clumsy.
11. Belittles your beliefs (going to church, voting for a political party, joining an organization, etc.) or doesn't value them.
12. Doesn't appreciate your work.
13. Says things to make you look bad in front of the children.

return

Summary Statistics for the Gender Violence Survey

	Mean	*No. of observations*
Intimate-partner violence	8.95	59,012
Year:		
1999	9.51	15,740
2002	9.28	15,654
2006	7.82	21,534
2011	10.67	6,084
	Mean	*Mean IPV*
Presence of children	67.09	11.56
Age 18-24	24.78	3.97
Age 25-44	46.07	9.64
Age 45-65	29.15	12.09
Respondent's level of education:		
Primary or lower	26.27	13.18
Secondary	52.60	8.28
College	21.13	5.25
Partner's level of education:		
Primary or lower	27.74	15.35
Secondary	51.76	9.50
College	20.51	7.17
Working	44.09	7.57
Unemployed	11.10	8.49
Inactive	44.81	10.43
Head of the household	17.29	6.5
Single	28.93	3.62
Married/cohabitating	63.17	11.83
Divorced/separated	4.44	8.61
Widowed	3.45	1.48
Catholic	84.84	9.27

Notes: Data used come from four cross-sectional surveys on violence against women in Spain, conducted in 1999, 2002, 2006, and 2011. I have restricted the observations to the sample used in the estimations (N=59,012). *Head of the household* shows the percentage of households in which the respondent contributes the highest share of household income.

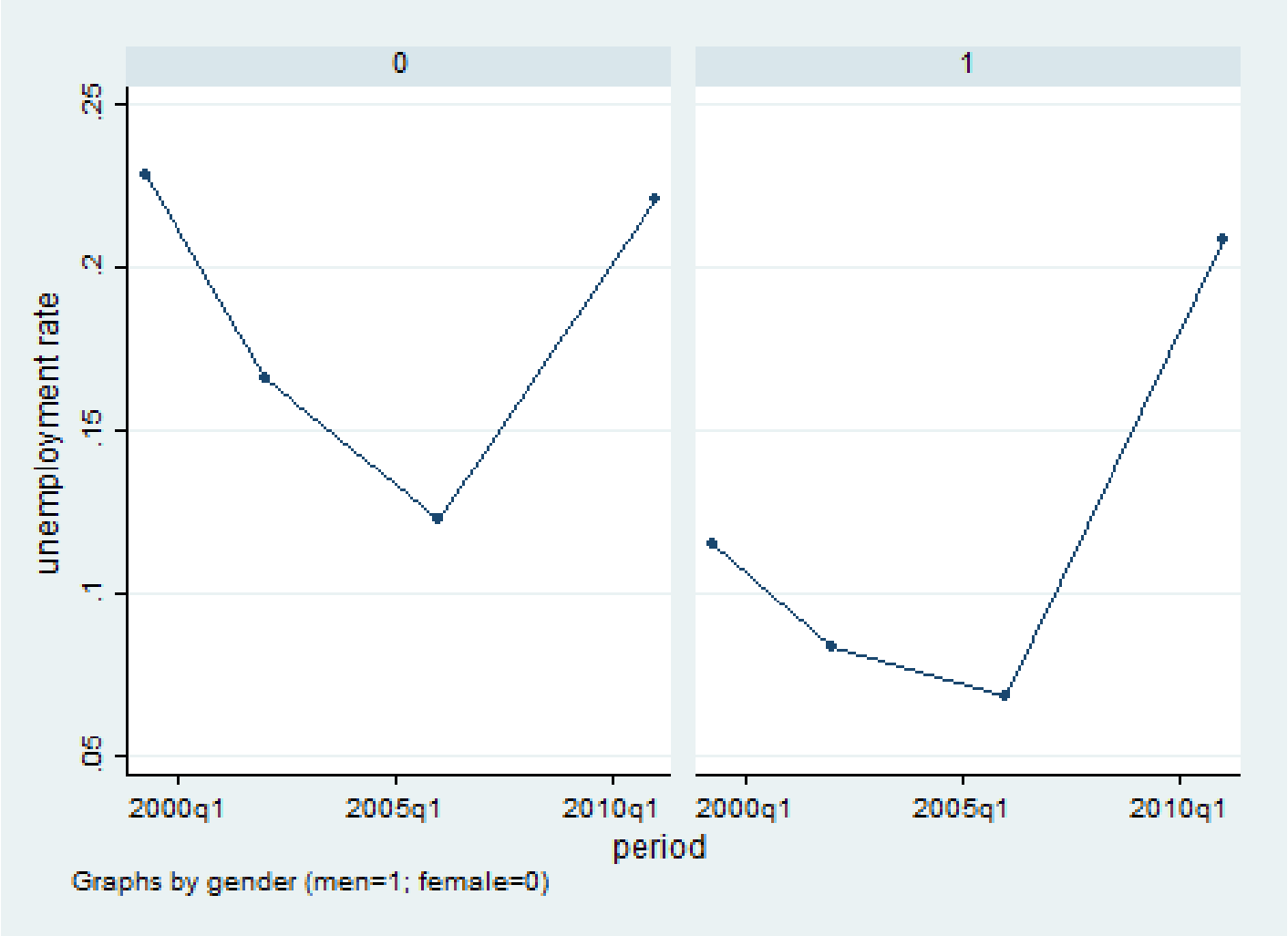
Descriptive Statistics for the Unemployment Survey

Variables	*Mean*	*Std. Deviation*
Total unemployment	0.146	0.353
Unemployment 1999q1	0.173	0.379
Unemployment 1999q2	0.159	0.366
Unemployment 2001q4	0.107	0.310
Unemployment 2002q1	0.116	0.320
Unemployment 2005q4	0.088	0.283
Unemployment 2006q1	0.091	0.288
Unemployment 2010q4	0.205	0.403
Unemployment 2011q1	0.214	0.410
Female unemployment	0.182	0.385
Male unemployment	0.121	0.326
Age 16-24 unemployment	0.285	0.451
Age 25-44 unemployment	0.140	0.347
Age 45-64 unemployment	0.102	0.303

Notes: Data used come from eight quarters of the Active Population survey, from 1999 to 2011. I have restricted the observations to the sample used in the estimations (N=909,248). The table provides the average unemployment rate (unemployed/active population) and its standard deviation using survey weights.

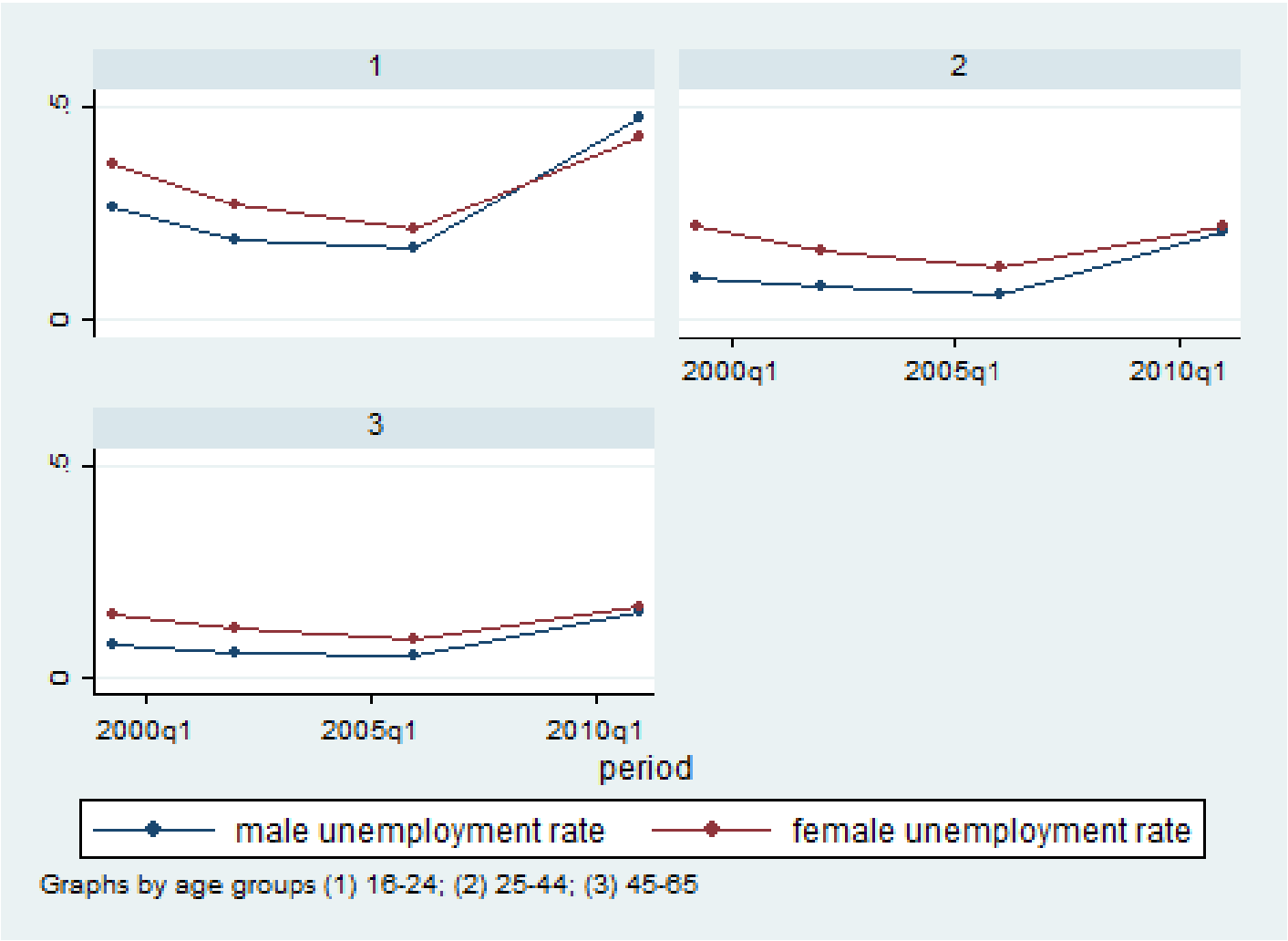
return

Evolution of the Unemployment Rate by Gender, 1999-2011



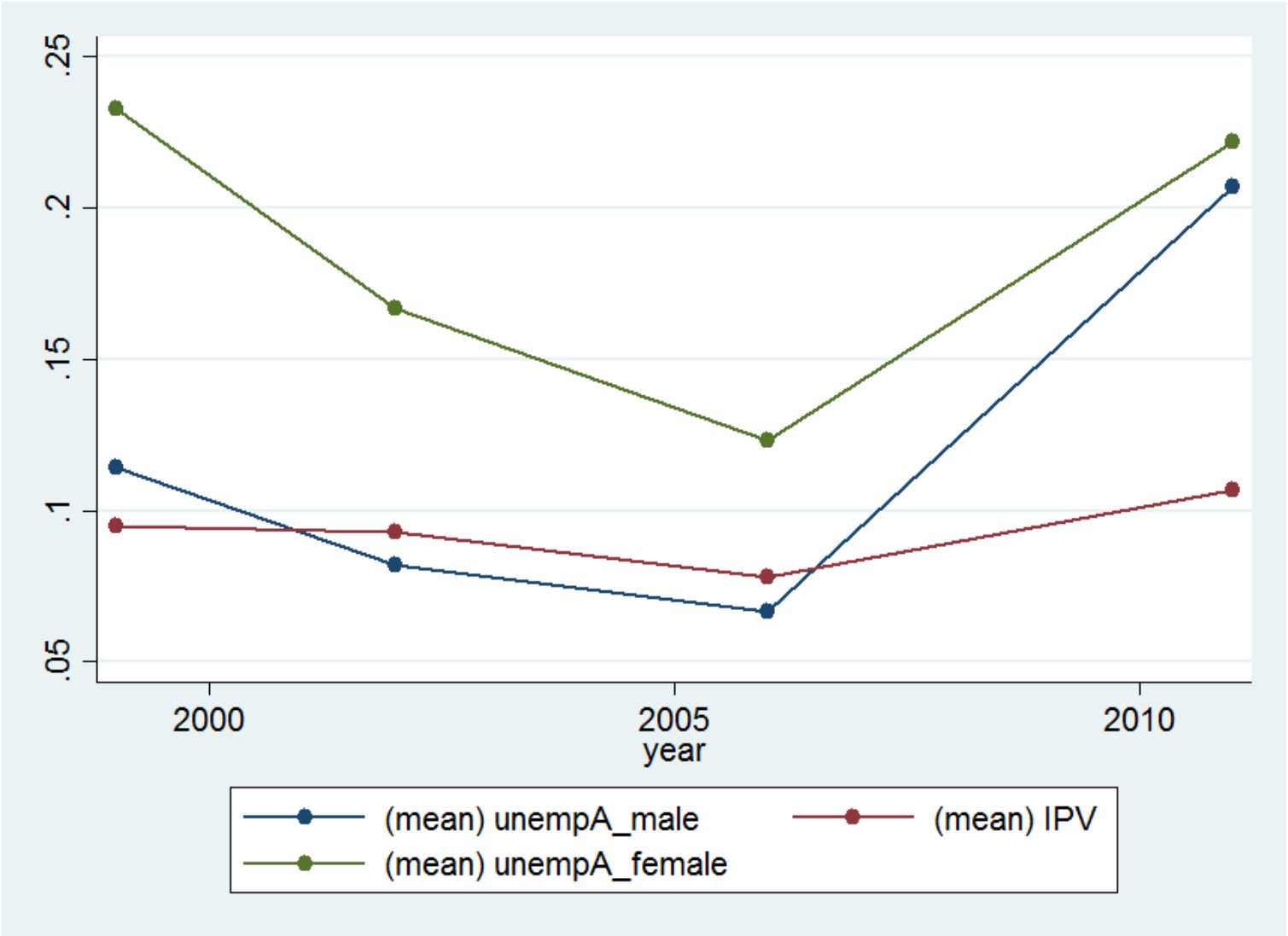
Source: Own elaboration using the Active Population Survey data.

Evolution of the Unemployment Rate by Gender and Age Groups, 1999-2011



Source: Own elaboration using the Active Population Survey data.

IPV and Unemployment in Spain, 1999-2011



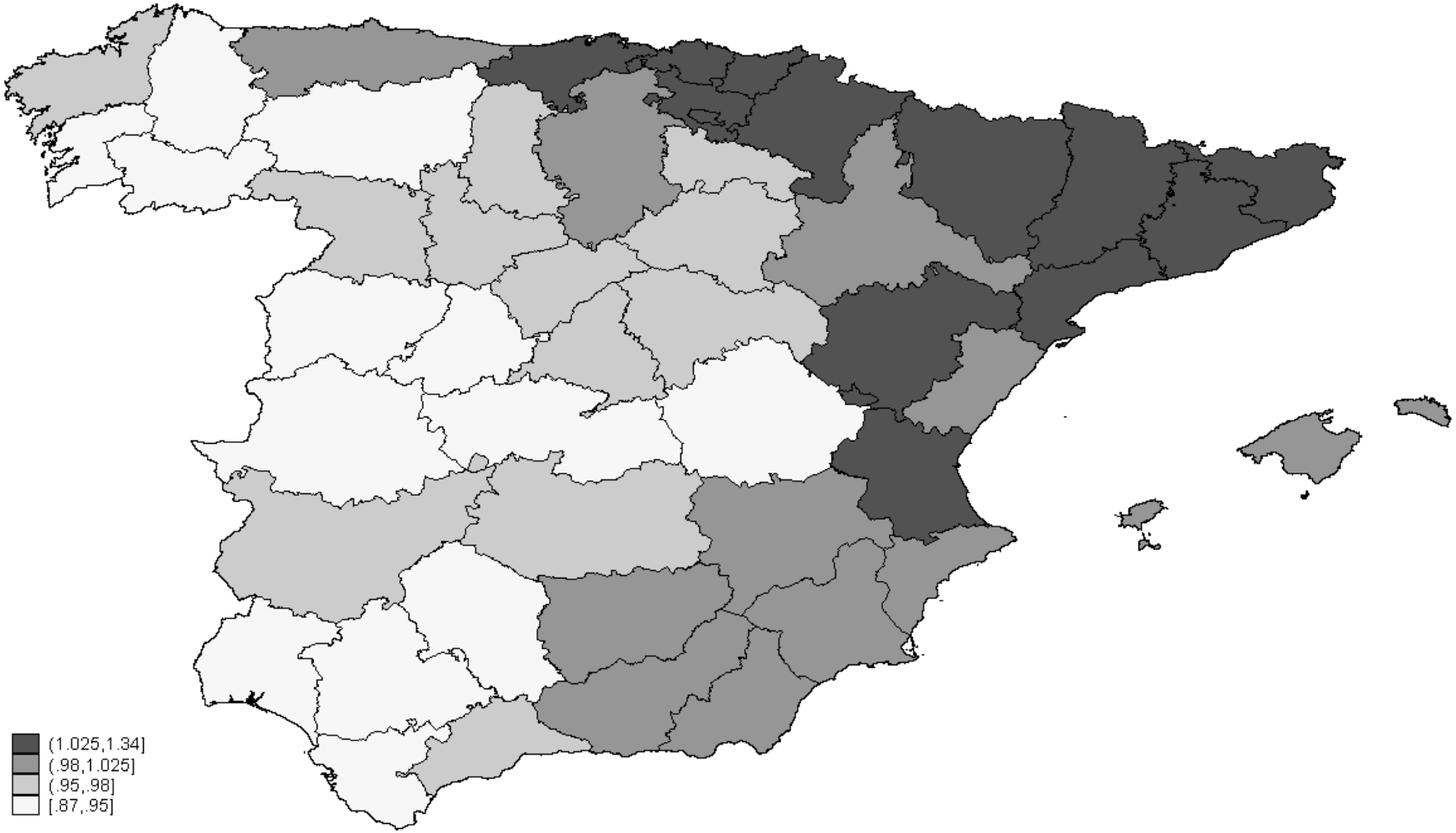
Source: Own elaboration using the Active Population Survey and the Violence Against Women Survey data.

Impact of Unemployment on IPV

Mean dependent variable=0.089						
	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A. Contemporaneous effects (unemployment in same quarter)					
Unemployment	0.058	0.056				
	(0.0785)	(0.0801)				
Male unemployment (all ages)			0.107	0.108		
			(0.142)	(0.143)		
Female unemployment (all ages)			-0.029	-0.031		
			(0.0887)	(0.0888)		
Male unemployment (own age group)					0.040	0.043
					(0.0398)	(0.0397)
Female unemployment (own age group)					-0.055*	-0.051*
					(0.0293)	(0.0289)
	Panel B. Lagged effects (unemployment in the previous quarter)					
Unemployment	0.053	0.049				
	(0.0740)	(0.0756)				
Male unemployment (all ages)			0.034	0.034		
			(0.1161)	(0.1176)		
Female unemployment (all ages)			0.020	0.018		
			(0.0657)	(0.0638)		
Male unemployment (own age group)					-0.033	-0.028
					(0.0349)	(0.0354)
Female unemployment (own age group)					0.009	0.008
					(0.0284)	(0.0271)
Observations	57,095	57,095	57,095	57,095	57,095	57,095
Adj-R^2	0.023	0.034	0.023	0.034	0.023	0.034
Province FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Additional individual-level controls	No	Yes	No	Yes	No	Yes

Notes: The unit of observation is a woman living in Spain in years 1999, 2002, 2006 and 2011. All models include age-group-fixed-effects, the presence of children and respondent's level of education as control variables. Additional individual-level controls include partner's level of education, marital status fixed-effects, and respondent's religion. Standard errors clustered by province in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Family Types in Spain in 1860



Source: Own calculations using 1860 census data. For each province, I compute the average number of married and widowed women in the household, as a measure of the family structure. Values range from 0.87 to 1.34, with an average of 1. Provinces shown in darker grey are provinces where the average number of widowed and married women in the household is higher and, consequently, where the stem family is more prevalent.

return

Robustness Tests

Mean Dep. Variable= 0.089				
Panel A: Alternative Family Types Measures				
	(1)	(2)	(3)	(4)
Male unemployment	0.26	0.28	1.70**	
	(0.177)	(0.179)	(0.676)	
Female unemployment	-0.38	-0.37	-2.52***	
	(0.242)	(0.244)	(0.724)	
Male unemployment*Stem family	-0.38	-0.42**	1.47**	
	(0.269)	(0.204)	(0.663)	
Female unemployment*Stem family	0.55**	0.52**	2.19***	
	(0.272)	(0.213)	(0.671)	
Panel B: Collinearity Check				
Female-male unemployment				-0.49**
				(0.224
Female-male unemployment*Stem family				2.45***
				(0.875)
Observations	54,768	54,768	54,768	54,768
Adj-R^2	0.036	0.036	0.036	0.036
Province-year FE	Yes	Yes	Yes	Yes
Additional individual-level controls	Yes	Yes	Yes	Yes

Notes: In Panel A column (1) *Stem family* is defined as a binary variable that takes the value 1 if the average number of married and widowed women in the household at the province level in 1860 is greater than 1.075. In column (2) the threshold for defining a stem family province is lowered down to 1.02 (percentile 75 of the distribution). In column (3) I use the average number of married and widowed people (both men and women) in the household at the province level in 1860. In Panel B (column (4)) I compute the unemployment gap and measure the family types in the standard way (i.e., as the average number of married and widowed women in the household at the province level in 1860). All the unemployment rates are computed using the Bartik-style instrument. All models include age-group-fixed-effects, the presence of children and respondent's and partner's level of education fixed-effects, marital status fixed-effects, and respondent's religion. Standard errors clustered by province in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Placebo Test

Mean Dep. Variable= 0.089		
	(1)	(2)
Male unemployment	0.14	0.04
	(0.259)	(0.184)
Female unemployment	-0.30	-0.23
	(0.320)	(0.232)
Male unemployment*Pop. Density 1860	0.00	
	(0.004)	
Female unemployment*Pop.Density 1860	0.00	
	(0.005)	
Male unemployment*Urbanization 1860		0.00
		(0.005)
Female unemployment*Urbanization 1860		-0.00
		(0.006)
Observations	54,768	54,768
Adj-R^2	0.036	0.036
Province-year FE	Yes	Yes
Additional individual-level controls	Yes	Yes

Notes: I interact the exogenous unemployment rates with the population density and the urbanization rates at 1860 (columns (1) and (2) respectively). All models include age-group-fixed-effects, the presence of children and respondent's and partner's level of education fixed-effects, marital status fixed-effects, and respondent's religion. Standard errors clustered by province in parentheses.* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

return

Impact of Unemployment on Different Types of IPV

	(1)	(2)
Panel A. Physical and Sexual Violence		
Mean Dep. Variable= 0.033		
Male unemployment	0.28*	0.32**
	(0.150)	(0.150)
Female unemployment	-0.47**	-0.48**
	(0.200)	(0.197)
Male unemployment*Stem family	-1.03*	-1.09*
	(0.600)	(0.628)
Female unemployment*Stem family	1.62***	1.67***
	(0.595)	(0.592)
Adj-R^2	0.014	0.020
Panel B. Psychological, Spiritual, Economic and Structural Violence		
Mean Dep. Variable= 0.072		
Male unemployment	0.15	0.23
	(0.191)	(0.192)
Female unemployment	-0.40	-0.42*
	(0.238)	(0.236)
Male unemployment*Stem family	-0.53	-0.67
	(0.761)	(0.802)
Female unemployment*Stem family	1.11	1.20
	(0.748)	(0.734)
Adj-R^2	0.020	0.028
Observations	54,768	54,768
Province-year FE	Yes	Yes
Additional individual-level controls	No	Yes

Notes: All models include age-group-fixed-effects, the presence of children, respondent's and partner's level of education partner's and marital status fixed-effects, and respondent's religion. Additional individual-level controls include partner's level of education fixed-effects, marital status fixed-effects, and respondent's religion. In all the specifications I use the exogenous measures of unemployment. Standard errors clustered by province in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.