

# Labor Market Outcomes of Same-Sex Couples in Countries with Legalized Same-Sex Marriage

**Honorata Bogusz<sup>1</sup>**    Jan Gromadzki<sup>2,3</sup>

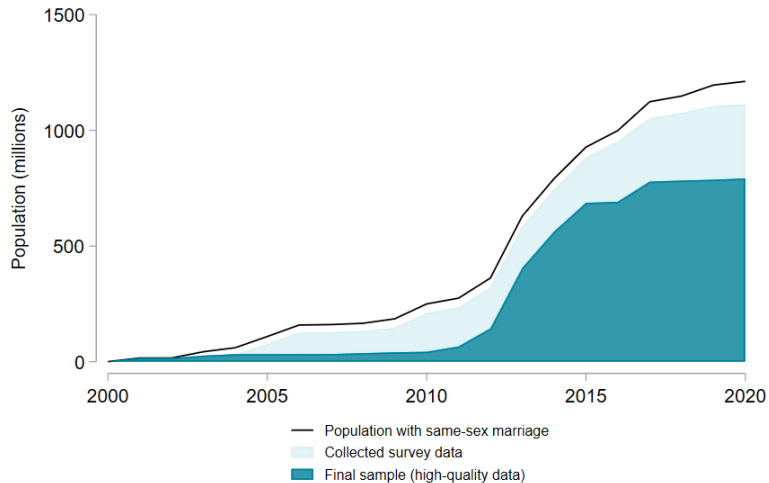
<sup>1</sup>Interdisciplinary Centre for labor Market and Family Dynamics (LabFam), University of Warsaw

<sup>2</sup>Vienna University of Economics and Business

<sup>3</sup>IZA Institute of Labor Economics

ASSA 2025

## World's population with access to same-sex marriage



## Contribution

- ▶ Existing studies based on country-specific studies, high income countries, focus on wages (Badgett et al., 2021).
- ▶ Assessment of the quality of data on same-sex couples (SSC) in 18 countries.
- ▶ Our final sample represents more than two-thirds of the world's population with access to same-sex marriage:
  - ▶ Latin America: Brazil and Uruguay.
  - ▶ Europe: Belgium, France, Germany, Netherlands, UK.
  - ▶ U.S.
- ▶ First large cross-country study of gaps in labor supply and unemployment.
- ▶ Evidence on selection into parenthood.

## Data and Methods

- ▶ Largest household surveys (usually LFS-type), 2015-2019, 20-64 years old, urban areas.
- ▶ Labor supply (household-level outcomes: both partners in labor force, total hours worked, % hours worked by secondary worker):

$$Y_i = \beta + \theta_1 SSC_i^W + \theta_2 SSC_i^M + \kappa X_i + \varepsilon_i \quad (1)$$

- ▶ Unemployment (individual-level outcome: 0 - in employment, 1 - not in employment, looking for a job):

$$Y_i = \beta + \theta SSC_i + \kappa X_i + \varepsilon_i \quad (2)$$

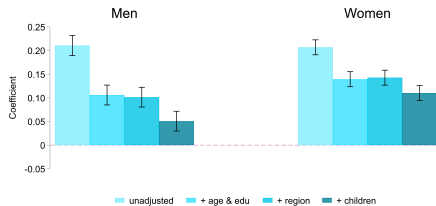
- ▶ Reference category: different-sex couples.
- ▶ We show coefficient plots: from unadjusted gaps to the full specification with all controls (age, edu, sub-national region FE, children).

# Descriptive statistics

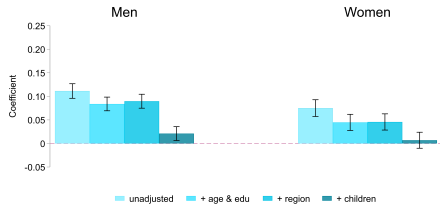
	DSC	Latin America SSC Men	SSC Women	DSC	Europe SSC Men	SSC Women	DSC	USA SSC Men	SSC Women
Household-level									
Labor Force Participation (both)	61.25%	82.55%	82.27%	72.91%	84.25%	80.30%	68.12%	79.49%	77.54%
Hours Worked	60.34	70.27	66.29	58.54	67.38	62.86	68.78	75.13	71.59
Children (dummy)	53.30%	4.82%	26.43%	44.83%	4.03%	23.29%	47.68%	9.56%	26.35%
Individual-level: Men									
Unemployment	5.19%	7.61%		3.36%	3.41%		2.54%	3.47%	
Age	43.80	36.23		45.23	41.23		44.87	42.79	
Secondary Education	41.69%	43.68%		44.26%	35.19%		52.85%	45.25%	
Tertiary Education	19.70%	48.91%		38.00%	53.67%		39.95%	52.34%	
Individual-level: Women									
Unemployment	9.58%		11.45%	3.75%		2.99%	3.39%		3.30%
Age	41.01		35.82	43.04		40.68	42.95		41.44
Secondary Education	45.11%		53.28%	43.81%		38.05%	50.49%		50.21%
Tertiary Education	23.58%		31.22%	38.09%		51.52%	43.55%		46.95%
Observations	2,490,484	4,984	6,670	1,518,646	9,782	7,370	3,625,698	34,028	33,704
Share	99.50%	0.23%	0.27%	98.77%	0.72%	0.51%	98.29%	0.85%	0.86%

# Labor force participation: both partners active

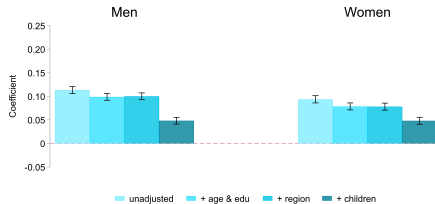
(a) Latin America



(b) Europe

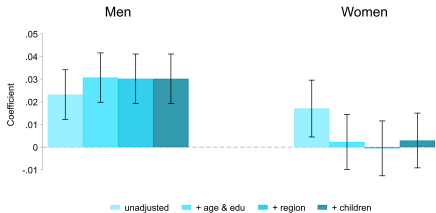


(c) U.S.

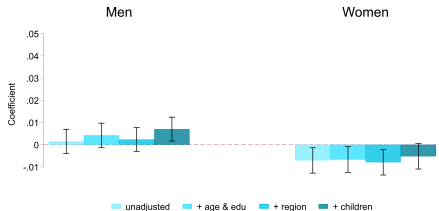


# Unemployment

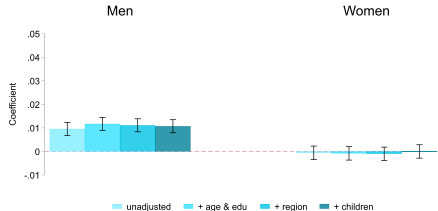
## (a) Latin America



## (b) Europe



## (c) U.S.



## Is it due to occupational segregation?

- ▶ Perhaps men in same-sex couples sort into occupations with less prejudice but higher risk of unemployment.
- ▶ For each occupation, we calculate the risk of unemployment.
- ▶ Then, we calculate unemployment rate predicted by the occupation-specific risk:

$$UnempRate_{r,s,c}^{Occupation} = \sum_{o \in O} \omega_{r,s,c}^o \cdot UnempRisk_o^{EU} \quad (3)$$

- ▶ The difference between predicted and actual unemployment rate is due to within-occupation differences in the risk of unemployment.

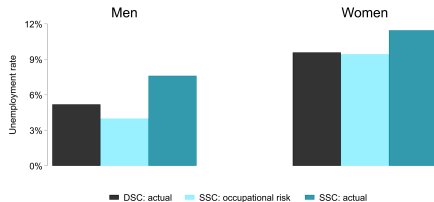
Validation

Segregation index

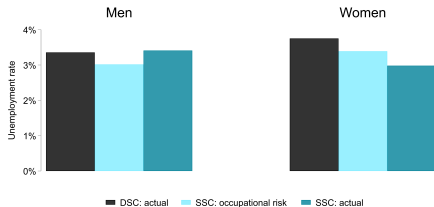


# Occupational segregation doesn't explain unemployment gaps

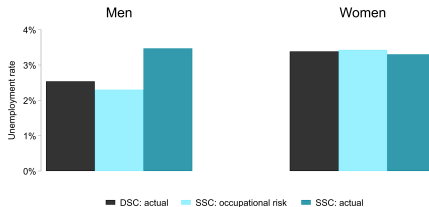
(a) Latin America



(b) Europe



(c) U.S.



# Sensitivity tests & Additional analyses

Sensitivity tests: Age: 25-39 Education Married couples Ñopo decomposition

Other outcomes: Hours Worked % of Hours Worked by Secondary Worker Labor force (individual)  
Hours worked (individual) Gender gaps in labor supply: SSC vs. DSC

All results by country: Labor force Hours worked Unemployment

## Conclusion

1. Same-sex couples have higher joint labor supply than different-sex couples, but this is driven by low parenthood rates.
2. Men in same-sex couples have much higher risk of unemployment than men in different-sex couples. Unemployment gaps cannot be explained by the differences in observable factors including occupational segregation.
3. Patterns of selection into parenthood differ substantially, largely due to the different nature of parenthood.



# References I

-  Badgett, M. V. Lee, Christopher S. Carpenter, and Dario Sansone (2021). “LGBTQ Economics”. In: *Journal of Economic Perspectives* 35.2, pp. 141–70. DOI: 10.1257/jep.35.2.141.
-  Ñopo, Hugo (2008). “Matching as a Tool to Decompose Wage Gaps”. In: *The Review of Economics and Statistics* 90.2, pp. 290–299. ISSN: 0034-6535. DOI: 10.1162/rest.90.2.290.
-  Pew Research Center (2014). *Religion in Latin America*. Online Article. URL: <https://www.pewresearch.org/religion/2014/11/13/religion-in-latin-america/>.
-  — (2018). *Eastern and Western Europeans Differ on Importance of Religion, Views of Minorities, and Key Social Issues*. Online Article. URL: <https://www.pewresearch.org/religion/2018/10/29/eastern-and-western-europeans-differ-on-importance-of-religion-views-of-minorities-and-key-social-issues/>.
-  — (2019). *Majority of Public Favors Same-Sex Marriage, but Divisions Persist*. Online Article. URL: <https://www.pewresearch.org/politics/2019/05/14/majority-of-public-favors-same-sex-marriage-but-divisions-persist/>.

## Selection into parenthood

	DSC		SSC Men		SSC Women	
	Parents	Childless	Parents	Childless	Parents	Childless
Panel A. Latin America						
Primary Education	32.17%	38.14%	22.61%	6.64%	23.44%	12.64%
Secondary Education	46.96%	39.34%	45.88%	43.57%	56.65%	52.07%
Tertiary Education	20.87%	22.52%	31.51%	49.79%	19.91%	35.29%
Age	38.42	46.95	36.54	36.21	34.93	36.14
Observations	1,345,778	1,144,706	292	4,692	1,888	4,782
Share	53.30%	46.70%	4.82%	95.18%	26.43%	73.57%
Panel B. Europe						
Primary Education	17.29%	18.42%	15.04%	11.02%	11.00%	10.32%
Secondary Education	41.09%	46.41%	37.59%	35.03%	33.38%	39.48%
Tertiary Education	41.62%	35.18%	47.37%	53.95%	55.62%	50.21%
Age	39.36	48.03	40.40	41.27	39.30	41.12
Observations	654,730	854,042	556	9,202	1,776	5,576
Share	44.86%	55.14%	3.95%	96.05%	23.11%	76.89%
Panel C. U.S.						
Primary Education	8.22%	5.10%	7.22%	1.90%	4.70%	2.17%
Secondary Education	48.97%	54.15%	46.73%	45.10%	53.41%	49.07%
Tertiary Education	42.81%	40.76%	46.05%	53.00%	41.89%	48.76%
Age	39.53	47.92	41.03	42.98	38.80	42.39
Observations	1,628,638	1,997,060	2,872	31,156	8,142	25,562
Share	47.68%	52.32%	9.56%	90.44%	26.35%	73.65%

- Puzzle: SSC face high cost of having children (adoption, IVF, surrogacy), but same-sex parents are negatively selected on education (unlike different-sex parents).

## Same-sex parents often act as guardians of their relatives' biological children

	DSC			SSC Men			SSC Women		
	Children	Other Relatives	Other	Children	Other Relatives	Other	Children	Other Relatives	Other
Belgium	98.50%	1.50%	0.00%	87.51%	12.49%	0.00%	92.19%	7.81%	0.00%
Brazil	91.48%	8.35%	0.17%	90.50%	8.26%	1.25%	87.39%	10.48%	2.13%
Germany	99.50%	0.38%	0.12%	72.43%	16.87%	10.70%	100.00%	0.00%	0.00%
France	99.09%	0.58%	0.33%	100.00%	0.00%	0.00%	98.07%	0.98%	0.95%
United Kingdom	96.63%	2.47%	0.90%	87.56%	12.44%	0.00%	92.98%	5.54%	1.48%
Netherlands	99.56%	0.36%	0.08%	91.00%	0.00%	9.00%	97.94%	0.00%	2.06%
Uruguay	93.53%	5.90%	0.57%	93.67%	6.33%	0.00%	84.31%	11.62%	4.08%
United States	93.48%	5.12%	1.40%	84.66%	10.04%	5.29%	82.13%	10.26%	7.61%

Children = own (biological) children, adopted children, step children.

Other relatives = biological children of the household head's relatives.

Other = biological children of the partner's relatives (most likely).

## SSC identification

Same-sex couple: household head and their partner are of the same sex.

Limitations:

- ▶ Only couples formed by household head and their partner are included.  
HH head couples
- ▶ Problematic "sex" variable. Failure to recognize non-binary gender identities and intersex individuals.
- ▶ Problematic: monosexist approach.
- ▶ We exclude multi-partner relationships (extremely rare in household surveys).



## Data quality check

We collected largest cross-sectional household surveys for 18 countries.

Data quality check criteria:

1. Large sample (conservative restriction of 1000 observations of people in same-sex couples from 2015-2019 surveys pooled). [Counts](#)
2. Low measurement error of gender. [SSC shares by age](#)
3. Stable demographics of same-sex couples over time. [Test](#) [Example](#)

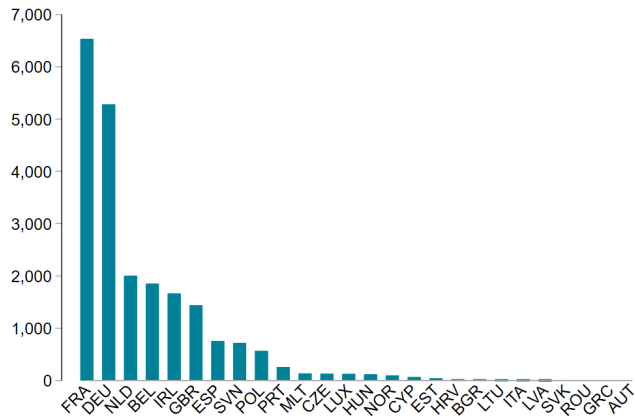
## Final sample: country coverage

Country	Largest Household Survey	Final High Quality Sample
Argentina	Encuesta Permanente de Hogares (EPH)	
Australia	Labor Force Survey	
Belgium	European Union labor Force Survey (EU-LFS)	✓
Brazil	Pesquisa Nacional por Amostra de Domicílios (PNAD)	✓
Canada	Labor Force Survey	
Colombia	Gran Encuesta Integrada de Hogares (GEIH)	
Denmark	European Union labor Force Survey (EU-LFS)	
Finland	European Union labor Force Survey (EU-LFS)	
France	European Union labor Force Survey (EU-LFS)	✓
Germany	European Union labor Force Survey (EU-LFS)	✓
Iceland	European Union labor Force Survey (EU-LFS)	
Ireland	European Union labor Force Survey (EU-LFS)	
Luxembourg	European Union labor Force Survey (EU-LFS)	
Malta	European Union labor Force Survey (EU-LFS)	
Mexico	Encuesta Nacional de Ocupación y Empleo (ENOE)	
Netherlands	European Union labor Force Survey (EU-LFS)	✓
New Zeland	Integrated Data Infrastructure	
Norway	European Union labor Force Survey (EU-LFS)	
Portugal	European Union labor Force Survey (EU-LFS)	
South Africa	General Household Survey	
Spain	European Union labor Force Survey (EU-LFS)	
Sweden	European Union labor Force Survey (EU-LFS)	
United Kingdom	European Union labor Force Survey (EU-LFS)	✓
United States	American Community Survey (ACS)	✓
Uruguay	Encuesta Continua de Hogares (ECH)	✓

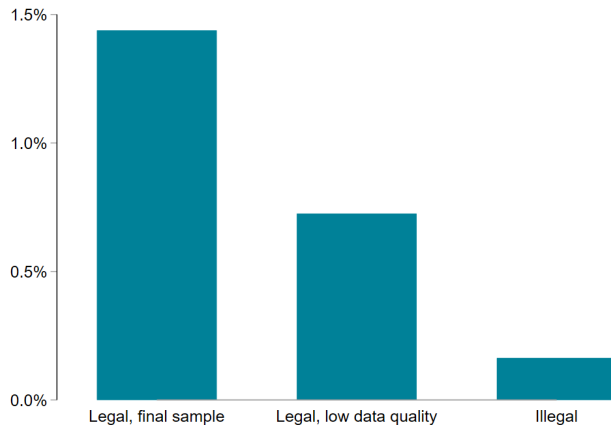
# Descriptive statistics

	Latin America			Europe			USA		
	DSC	SSC Men	SSC Women	DSC	SSC Men	SSC Women	DSC	SSC Men	SSC Women
Household-level									
Labor Force Participation (both)	61.25%	82.55%	82.27%	72.91%	84.25%	80.30%	68.12%	79.49%	77.54%
Hours Worked	60.34	70.27	66.29	58.54	67.38	62.86	68.78	75.13	71.59
Children (dummy)	53.30%	4.82%	26.43%	44.83%	4.03%	23.29%	47.68%	9.56%	26.35%
Individual-level: Men									
Unemployment	5.19%	7.61%		3.36%	3.41%		2.54%	3.47%	
Age	43.80	36.23		45.23	41.23		44.87	42.79	
Secondary Education	41.69%	43.68%		44.26%	35.19%		52.85%	45.25%	
Tertiary Education	19.70%	48.91%		38.00%	53.67%		39.95%	52.34%	
Individual-level: Women									
Unemployment	9.58%		11.45%	3.75%		2.99%	3.39%		3.30%
Age	41.01		35.82	43.04		40.68	42.95		41.44
Secondary Education	45.11%		53.28%	43.81%		38.05%	50.49%		50.21%
Tertiary Education	23.58%		31.22%	38.09%		51.52%	43.55%		46.95%
Observations	2,490,484	4,984	6,670	1,518,646	9,782	7,370	3,625,698	34,028	33,704
Share	99.50%	0.23%	0.27%	98.77%	0.72%	0.51%	98.29%	0.85%	0.86%

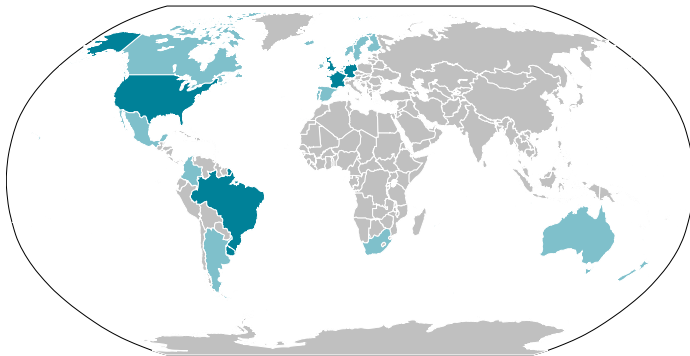
## Number of individuals in SSC, Europe (2015-2019)



## Individuals in SSC as a % of all partnered individuals, Europe (2015-2019)



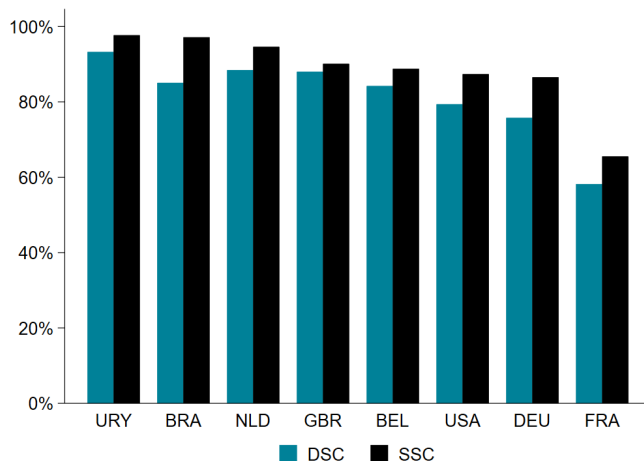
## Countries that legalized same-sex marriage by the end of 2017



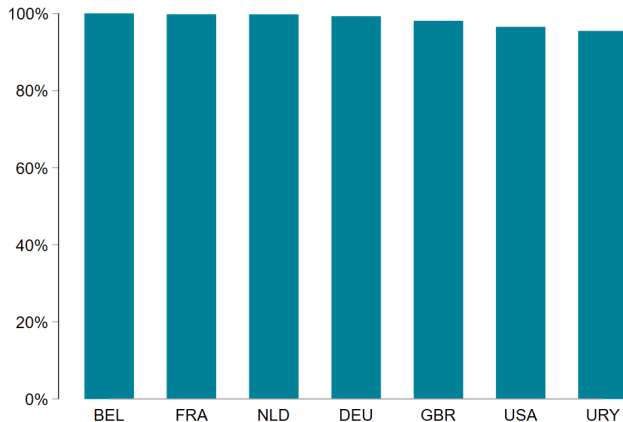
Note: Countries in dark blue are included in the final analysis.

[Back](#)

## Share of individuals living in urban areas by couple type (2015-2019)



## Number of household head couples as percent of all couples (2015-2019)





## Number of individuals in same-sex couples (2015-2019)

Country	Observations
Argentina	3,446
Belgium	1,852
Brazil	10,630
Colombia	13,922
France	6,534
Germany	5,280
Ireland	1,664
Luxembourg	126
Malta	136
Mexico	1,096
Netherlands	2,006
Norway	98
Portugal	258
Spain	756
United Kingdom	1,438
United States	67,732
Uruguay	1,024

## Share of same-sex couples aged 18-64 and 65+ in all couples (2015-2019)

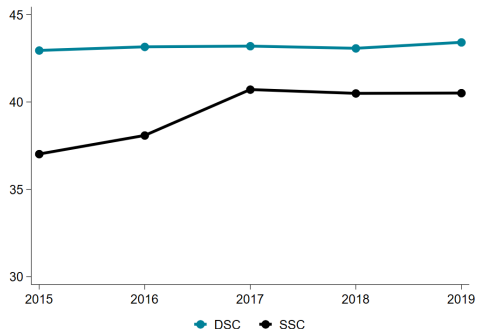
Country	Age: 20-64	Age: 65+
Argentina	1.49%	1.06%
Belgium	1.98%	0.22%
Brazil	0.50%	0.02%
Colombia	1.07%	0.83%
France	1.34%	0.08%
Germany	0.78%	0.04%
Ireland	1.34%	0.04%
Mexico	0.28%	0.01%
Netherlands	1.69%	0.17%
United Kingdom	1.41%	0.09%
United States	1.71%	0.84%
Uruguay	0.62%	0.11%

Maximum year to year change, absolute and as % of SD for a pooled country sample for age, share of population with secondary education, and share of population with tertiary education (2015-2019)

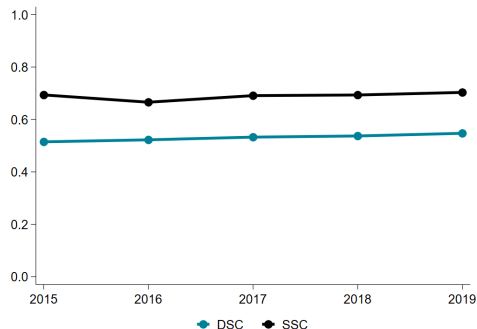
	Age		Secondary Education		Tertiary Education	
	Max	Max % SD	Max	Max % SD	Max	Max % SD
Argentina	1.65	0.15	0.07	0.14	0.12	0.27
Belgium	1.62	0.14	0.09	0.19	0.10	0.20
Brazil	0.62	0.06	0.05	0.10	0.07	0.14
Colombia	1.68	0.14	0.05	0.11	0.07	0.14
France	1.44	0.13	0.05	0.10	0.09	0.18
Germany	0.98	0.09	0.02	0.04	0.02	0.04
Ireland	2.62	0.28	0.04	0.09	0.02	0.04
Mexico	2.55	0.28	0.21	0.47	0.25	0.50
Netherlands	1.48	0.13	0.03	0.06	0.05	0.10
United Kingdom	1.79	0.16	0.06	0.14	0.06	0.12
United States	0.54	0.05	0.01	0.02	0.01	0.02
Uruguay	2.14	0.21	0.07	0.14	0.11	0.23

# Weighted variable means by year, and couple type for Ireland

(a) Age



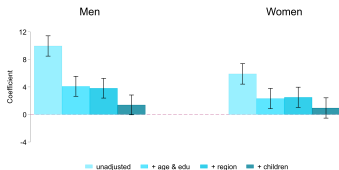
(b) Share of highly educated



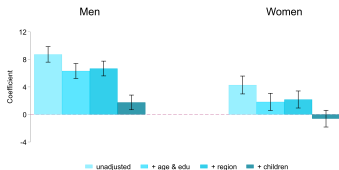
[Back](#)

# Total hours worked

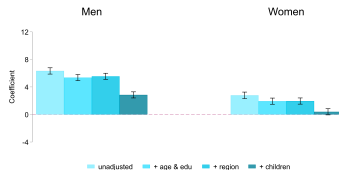
## (a) Latin America



## (b) Europe

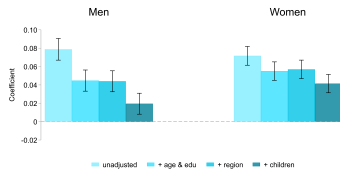


## (c) U.S.

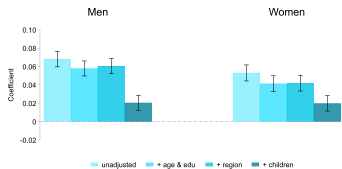


# Secondary worker's hours share

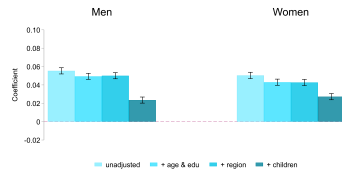
## (a) Latin America



## (b) Europe



## (c) U.S.



## Occupational risk

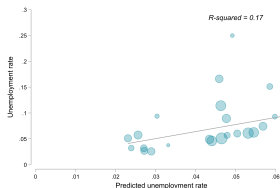
We calculate the occupation-related risk of unemployment,  $UnempRisk_o^{EU}$  for each 3-digit level ISCO occupation group. We use the information about the occupation in the most recent workplace which is available in the EU-LFS to obtain the unemployment risk. Next, we calculate the predicted unemployment rates for each group:

$$UnempRate_{r,s,c}^{Occupation} = \sum_{o \in O} \omega_{r,s,c}^o \cdot UnempRisk_o^{EU} \quad (4)$$

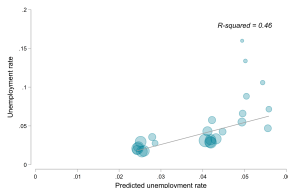
where  $UnempRate_{r,s,c}^{Occupation}$  is the predicted unemployment rate for individuals of sex  $s$  in a couple type  $c$  in the world region  $r$ , and  $\omega_{r,s,c}^o$  is the share of occupation  $o$  in total employment of a given group. We adjust the predicted unemployment rates for a given sex in a given world region by a factor so that the predicted and actual unemployment rates are equal for individuals in different-sex couples.

# Occupational risk: validation

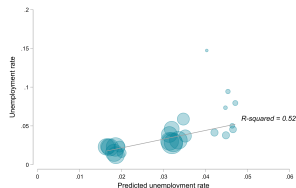
(a) Latin America



(b) Europe



(c) U.S.



[Back](#)



## Occupational segregation (Duncan's dissimilarity index)

	Latin America	Europe	U.S.
Occupational segregation by gender	0.560	0.484	0.500
Occupational segregation by relationship type: men	0.492	0.347	0.330
Occupational segregation by relationship type: women	0.237	0.221	0.202
Occupational segregation by gender: different-sex couples	0.558	0.492	0.509
Occupational segregation by gender: same-sex couples	0.313	0.234	0.234

[Back](#)

# Robustness: 25-39 years old

	Labor Force Participation (1)	Hours Worked (2)	Unemployment (men) (3)	Unemployment (women) (4)
Panel A. Latin America				
Same-sex couple: men	-0.012 (0.018)	-0.907 (1.189)	0.033*** (0.009)	
Same-sex couple: women	0.099*** (0.012)	-0.206 (0.947)		-0.005 (0.009)
Adj. R-Squared	0.08	0.09	0.01	0.03
Mean of outcome	0.71	65.48	0.05	0.11
Observations (same-sex couples)	2,273	2,273	1,766	2,445
Observations	351,267	351,267	340,242	249,412
Panel B. Europe				
Same-sex couple: men	0.015 (0.012)	-0.913 (0.888)	0.010 (0.006)	
Same-sex couple: women	0.008 (0.014)	-1.247 (1.038)		-0.003 (0.007)
Adj. R-Squared	0.12	0.18	0.03	0.03
Mean of outcome	0.78	62.71	0.03	0.04
Observations (same-sex couples)	2,369	2,369	2,337	2,101
Observations	187,094	187,094	179,386	149,230
Panel C. U.S.				
Same-sex couple: men	0.056*** (0.006)	3.032*** (0.402)	0.005** (0.002)	
Same-sex couple: women	0.062*** (0.006)	0.532 (0.380)		-0.001 (0.003)
Adj. R-Squared	0.08	0.09	0.01	0.01
Mean of outcome	0.73	72.13	0.02	0.04
Observations (same-sex couples)	9,136	9,136	7,910	9,174
Observations	490,012	490,012	470,120	379,114
Year FE	✓	✓	✓	✓
Age & Education	✓	✓	✓	✓
Region FE	✓	✓	✓	✓
Children	✓	✓	✓	✓

# Robustness: at least one partner with tertiary education

	Labor Force Participation (1)	Hours Worked (2)	Unemployment (men) (3)	Unemployment (women) (4)
Panel A. Latin America				
Same-sex couple: men	0.047*** (0.013)	2.419*** (0.875)	0.020*** (0.006)	
Same-sex couple: women	0.098*** (0.012)	3.453*** (1.172)		-0.008 (0.007)
Adj. R-Squared	0.10	0.10	0.00	0.01
Mean of outcome	0.74	67.71	0.03	0.06
Observations (same-sex couples)	2,896	2,896	2,852	2,484
Observations	359,536	359,536	334,700	280,062
Panel B. Europe				
Same-sex couple: men	0.018* (0.009)	0.946 (0.640)	0.006* (0.003)	
Same-sex couple: women	0.016 (0.011)	-0.365 (0.811)		-0.004 (0.004)
Adj. R-Squared	0.08	0.11	0.01	0.01
Mean of outcome	0.80	64.41	0.02	0.03
Observations (same-sex couples)	5,465	5,465	5,886	4,120
Observations	378,277	378,277	354,947	317,764
Panel C. U.S.				
Same-sex couple: men	0.049*** (0.004)	2.798*** (0.253)	0.011*** (0.002)	
Same-sex couple: women	0.052*** (0.004)	0.862*** (0.258)		-0.003* (0.001)
Adj. R-Squared	0.06	0.07	0.00	0.00
Mean of outcome	0.73	72.58	0.02	0.02
Observations (same-sex couples)	22,913	22,913	21,633	19,297
Observations	1,052,977	1,052,977	979,221	819,507
Year FE	✓	✓	✓	✓
Age & Education	✓	✓	✓	✓
Region FE	✓	✓	✓	✓
Children	✓	✓	✓	✓

# Robustness: none of the partners with tertiary education

	Labor Force Participation (1)	Hours Worked (2)	Unemployment (men) (3)	Unemployment (women) (4)
Panel A. Latin America				
Same-sex couple: men	0.074*** (0.020)	0.254 (1.351)	0.052*** (0.012)	
Same-sex couple: women	0.122*** (0.011)	-0.799 (0.974)		0.012 (0.010)
Adj. R-Squared	0.10	0.11	0.01	0.03
Mean of outcome	0.56	57.22	0.06	0.12
Observations (same-sex couples)	2,931	2,931	1,670	3,394
Observations	891,533	891,533	792,945	528,044
Panel B. Europe				
Same-sex couple: men	0.037*** (0.013)	3.678*** (0.970)	0.007 (0.005)	
Same-sex couple: women	-0.007 (0.015)	-0.803 (0.924)		-0.013*** (0.004)
Adj. R-Squared	0.14	0.18	0.04	0.04
Mean of outcome	0.65	52.56	0.05	0.05
Observations (same-sex couples)	3,090	3,090	2,812	2,328
Observations	384,664	384,664	326,822	276,540
Panel C. U.S.				
Same-sex couple: men	0.041*** (0.008)	2.036*** (0.457)	0.007** (0.003)	
Same-sex couple: women	0.039*** (0.007)	-0.750* (0.424)		0.002 (0.003)
Adj. R-Squared	0.07	0.08	0.00	0.01
Mean of outcome	0.62	64.47	0.03	0.05
Observations (same-sex couples)	10,953	10,953	8,231	9,890
Observations	793,738	793,738	692,936	552,815
Year FE	✓	✓	✓	✓
Age & Education	✓	✓	✓	✓
Region FE	✓	✓	✓	✓
Children	✓	✓	✓	✓

# Robustness: married couples

	Labor Force Participation (1)	Hours Worked (2)	Unemployment (men) (3)	Unemployment (women) (4)
Panel A. Latin America				
Same-sex couple: men	0.001 (0.039)	-4.082 (2.529)	0.036** (0.016)	
Same-sex couple: women	0.043 (0.046)	2.900 (3.472)		-0.017 (0.017)
Adj. R-Squared	0.16	0.17	0.00	0.02
Mean of outcome	0.67	64.73	0.02	0.05
Observations (same-sex couples)	179	179	193	123
Observations	51,094	51,094	46,275	37,063
Panel B. Europe				
Same-sex couple: men	0.017 (0.012)	3.513*** (0.896)	0.007* (0.004)	
Same-sex couple: women	0.013 (0.014)	0.132 (0.954)		-0.009** (0.005)
Adj. R-Squared	0.14	0.19	0.02	0.02
Mean of outcome	0.70	57.09	0.03	0.03
Observations (same-sex couples)	3,822	3,822	3,651	2,953
Observations	573,836	573,836	506,311	433,120
Panel C. U.S.				
Same-sex couple: men	0.047*** (0.005)	3.543*** (0.328)	0.011*** (0.002)	
Same-sex couple: women	0.046*** (0.005)	0.500 (0.307)		-0.004*** (0.002)
Adj. R-Squared	0.07	0.09	0.00	0.01
Mean of outcome	0.67	68.48	0.02	0.03
Observations (same-sex couples)	18,330	18,330	15,296	16,169
Observations	1,613,276	1,613,276	1,460,388	1,177,260
Year FE	✓	✓	✓	✓
Age & Education	✓	✓	✓	✓
Region FE	✓	✓	✓	✓
Children	✓	✓	✓	✓

## Nopo decomposition of gaps between DSC and SSC

Methodology proposed in Nopo (2008) as a tool to decompose gender wage gap.

$$D = \bar{Y}_A - \bar{Y}_B \quad (5)$$

$$D = D_0 + D_X + D_A + D_B \quad (6)$$

$D_0$  – unexplained component

$D_X$  – explained component (matching by observables)

$D_A, D_B$  – "out of support" components (there are people in the DSC/SSC populations who have no match)

Individuals are matched by region, parenthood status, education, and year, using exact matching. Standard errors are determined by bootstrap (with 1000 repetitions).

[Back](#)

## Nopo decomposition: Latin America

	Labor Force Participation (men) (1)	Labor Force Participation (women) (2)	Hours Worked (men) (3)	Hours Worked (women) (4)	Unemployment (men) (5)	Unemployment (women) (6)
Panel A. Latin America						
D	0.005 (0.004)	0.237*** (0.004)	-1.647*** (0.266)	9.675*** (0.245)	0.016*** (0.004)	0.022*** (0.004)
D0	-0.046*** (0.004)	0.145*** (0.005)	-4.138*** (0.291)	6.289*** (0.256)	0.025*** (0.004)	0.003 (0.005)
DX	0.018*** (0.002)	0.027*** (0.003)	0.407*** (0.128)	0.895*** (0.130)	-0.003* (0.001)	0.009*** (0.002)
DA	0.034*** (0.002)	0.065*** (0.002)	2.144*** (0.098)	2.543*** (0.089)	-0.007*** (0.001)	0.008*** (0.001)
DB	-0.001 (0.001)	-0.000 (0.001)	-0.060 (0.048)	-0.052 (0.035)	0.000 (0.001)	0.001 (0.001)
Observations (same-sex couples)	4,984	6,670	4,984	6,670	4,522	5,878
Observations	1,250,226	1,251,912	1,250,226	1,251,912	1,127,645	808,106
Year	✓	✓	✓	✓	✓	✓
Age & Education	✓	✓	✓	✓	✓	✓
Region	✓	✓	✓	✓	✓	✓
Children	✓	✓	✓	✓	✓	✓

## Nopo decomposition: Europe

	Labor Force Participation (men) (1)	Labor Force Participation (women) (2)	Hours Worked (men) (3)	Hours Worked (women) (4)	Unemployment (men) (5)	Unemployment (women) (6)
Panel B. Europe						
D	-0.001 (0.003)	0.098*** (0.004)	-1.789*** (0.175)	7.322*** (0.193)	0.005** (0.002)	-0.004 (0.002)
D0	-0.023*** (0.003)	0.048*** (0.004)	-2.683*** (0.176)	4.323*** (0.194)	0.007*** (0.002)	-0.005* (0.003)
DX	0.022*** (0.002)	0.010*** (0.002)	0.589*** (0.103)	1.903*** (0.113)	0.008*** (0.001)	0.012*** (0.001)
DA	-0.000 (0.001)	0.041*** (0.001)	0.323*** (0.067)	1.159*** (0.069)	-0.010*** (0.000)	-0.011*** (0.000)
DB	-0.001 (0.000)	-0.001** (0.001)	-0.018 (0.022)	-0.063** (0.026)	0.000 (0.000)	0.001 (0.000)
Observations (same-sex couples)	9,758	7,352	9,758	7,352	8,698	6,448
Observations	764,144	761,738	764,144	761,738	681,769	594,304
Year	✓	✓	✓	✓	✓	✓
Age & Education	✓	✓	✓	✓	✓	✓
Region	✓	✓	✓	✓	✓	✓
Children	✓	✓	✓	✓	✓	✓



## Nopo decomposition: U.S.

	Labor Force Participation (men) (1)	Labor Force Participation (women) (2)	Hours Worked (men) (3)	Hours Worked (women) (4)	Unemployment (men) (5)	Unemployment (women) (6)
Panel C. U.S.						
D	-0.028*** (0.002)	0.125*** (0.002)	-2.800*** (0.091)	7.179*** (0.093)	0.010*** (0.001)	-0.001 (0.001)
D0	-0.044*** (0.002)	0.083*** (0.002)	-3.474*** (0.095)	5.046*** (0.093)	0.010*** (0.001)	-0.001 (0.001)
DX	0.022*** (0.001)	0.030*** (0.001)	0.924*** (0.035)	1.530*** (0.040)	-0.000 (0.000)	0.001*** (0.000)
DA	-0.006*** (0.001)	0.013*** (0.000)	-0.237*** (0.026)	0.646*** (0.022)	-0.000 (0.000)	-0.001*** (0.000)
DB	-0.000 (0.000)	-0.001*** (0.000)	-0.013 (0.010)	-0.042*** (0.013)	0.000 (0.000)	0.000 (0.000)
Observations (same-sex couples)	34,028	33,704	34,028	33,704	29,864	29,187
Observations	1,846,877	1,846,553	1,846,877	1,846,553	1,672,157	1,372,322
Year	✓	✓	✓	✓	✓	✓
Age & Education	✓	✓	✓	✓	✓	✓
Region	✓	✓	✓	✓	✓	✓
Children	✓	✓	✓	✓	✓	✓

## Labor force participation, individual level

	Latin America		Europe		U.S.	
	Men (1)	Women (2)	Men (3)	Women (4)	Men (5)	Women (6)
Same-sex couple: women		0.168*** (0.005)		0.047*** (0.005)		0.092*** (0.002)
Same-sex couple: men	-0.052*** (0.006)		-0.031*** (0.005)		-0.043*** (0.002)	
Adj. R-Squared	0.12	0.11	0.14	0.11	0.08	0.07
Mean of outcome	0.91	0.66	0.90	0.78	0.91	0.74
Observations (same-sex couples)	4,984	6,670	9,758	7,352	34,028	33,704
Observations	1,250,226	1,251,912	764,144	761,738	1,846,877	1,846,553
Year FE	✓	✓	✓	✓	✓	✓
Age & Education	✓	✓	✓	✓	✓	✓
Region FE	✓	✓	✓	✓	✓	✓
Children	✓	✓	✓	✓	✓	✓

## Hours worked, individual level

	Latin America		Europe		U.S.	
	Men (1)	Women (2)	Men (3)	Women (4)	Men (5)	Women (6)
Same-sex couple: women		7.578*** (0.377)		4.631*** (0.310)		5.415*** (0.118)
Same-sex couple: men	-4.724*** (0.369)		-3.211*** (0.272)		-3.471*** (0.114)	
Adj. R-Squared	0.08	0.09	0.12	0.15	0.07	0.08
Mean of outcome	37.51	22.87	35.22	23.47	40.28	28.60
Observations (same-sex couples)	4,984	6,670	9,758	7,352	34,028	33,704
Observations	1,250,226	1,251,912	764,144	761,738	1,846,877	1,846,553
Year FE	✓	✓	✓	✓	✓	✓
Age & Education	✓	✓	✓	✓	✓	✓
Region FE	✓	✓	✓	✓	✓	✓
Children	✓	✓	✓	✓	✓	✓

## Hours worked, individual level (non-zero hours worked only)

	Latin America		Europe		U.S.	
	Men (1)	Women (2)	Men (3)	Women (4)	Men (5)	Women (6)
Same-sex couple: women		2.825*** (0.306)		3.597*** (0.231)		2.568*** (0.082)
Same-sex couple: men	-1.828*** (0.273)		-1.953*** (0.192)		-1.885*** (0.083)	
Adj. R-Squared	0.01	0.02	0.03	0.14	0.02	0.03
Mean of outcome	43.62	37.83	41.00	31.47	43.85	37.54
Observations (same-sex couples)	4,239	5,242	8,168	6,127	30,273	29,700
Observations	1,071,309	749,243	647,968	564,894	1,690,649	1,416,058
Year FE	✓	✓	✓	✓	✓	✓
Age & Education	✓	✓	✓	✓	✓	✓
Region FE	✓	✓	✓	✓	✓	✓
Children	✓	✓	✓	✓	✓	✓

# Gender gaps in labor supply: SSC vs. DSC

	Same-sex couples		Different-sex couples	
	Labor Force Participation	Hours Worked	Labor Force Participation	Hours Worked
	(1)	(2)	(3)	(4)
Panel A. Latin America				
Gender: woman	0.017** (0.008)	-0.292 (0.571)	-0.281*** (0.001)	-15.883*** (0.032)
Adj. R-Squared	0.05	0.06	0.18	0.19
Mean of outcome	0.90	34.05	0.78	30.17
Observations	11,654	11,654	2,490,484	2,490,484
Panel B. Europe				
Gender: woman	-0.005 (0.007)	-1.207*** (0.428)	-0.132*** (0.001)	-12.367*** (0.036)
Adj. R-Squared	0.11	0.12	0.13	0.21
Mean of outcome	0.90	32.81	0.84	29.39
Observations	17,110	17,110	1,508,772	1,508,772
Panel C. U.S.				
Gender: woman	-0.008** (0.003)	-1.263*** (0.164)	-0.187*** (0.000)	-12.523*** (0.022)
Adj. R-Squared	0.07	0.07	0.10	0.16
Mean of outcome	0.88	36.66	0.83	34.45
Observations	67,732	67,732	3,625,698	3,625,698
Year FE	✓	✓	✓	✓
Age & Education	✓	✓	✓	✓
Region FE	✓	✓	✓	✓
Children	✓	✓	✓	✓

## Labor force participation: both partners active, countries

	(1) Brazil	(2) Uruguay	(3) Belgium	(4) France	(5) Germany	(6) Netherlands	(7) United Kingdom	(8) United States
Same-sex couple: women	0.111*** (0.008)	0.040 (0.025)	-0.064*** (0.022)	0.003 (0.011)	0.049*** (0.010)	-0.016 (0.022)	0.015 (0.020)	0.048*** (0.004)
Same-sex couple: men	0.051*** (0.011)	0.033 (0.021)	-0.019 (0.019)	0.014* (0.008)	0.018** (0.009)	0.023 (0.017)	0.037** (0.018)	0.048*** (0.004)
Adj. R-Squared	0.12	0.15	0.26	0.22	0.12	0.11	0.10	0.07
Mean of outcome	0.61	0.70	0.69	0.68	0.74	0.78	0.75	0.68
Observations (same-sex couples)	5,315	512	926	3,267	2,640	1,003	719	33,866
Observations	1,167,603	83,466	48,055	246,955	340,580	70,089	57,262	1,846,715
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Age & Education	✓	✓	✓	✓	✓	✓	✓	✓
Region FE	✓	✓	✓	✓	✓	✓	✓	✓
Children	✓	✓	✓	✓	✓	✓	✓	✓

Back

## Hours worked, countries

	(1) Brazil	(2) Uruguay	(3) Belgium	(4) France	(5) Germany	(6) Netherlands	(7) United Kingdom	(8) United States
Same-sex couple: women	0.956 (0.765)	-0.096 (1.779)	-3.163** (1.473)	-1.114 (0.705)	1.255** (0.624)	-3.711*** (1.311)	0.813 (1.524)	0.387* (0.229)
Same-sex couple: men	1.419* (0.753)	0.345 (1.595)	-2.049 (1.399)	0.742 (0.588)	2.959*** (0.634)	4.181*** (1.283)	1.956 (1.273)	2.843*** (0.226)
Adj. R-Squared	0.13	0.15	0.23	0.27	0.18	0.15	0.14	0.10
Mean of outcome	60.27	65.74	53.93	56.16	58.72	55.40	61.79	68.86
Observations (same-sex couples)	5,315	512	926	3,267	2,640	1,003	719	33,866
Observations	1,167,603	83,466	48,055	246,955	340,580	70,089	57,262	1,846,715
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Age & Education	✓	✓	✓	✓	✓	✓	✓	✓
Region FE	✓	✓	✓	✓	✓	✓	✓	✓
Children	✓	✓	✓	✓	✓	✓	✓	✓

Back

# Unemployment, countries

Table: Men

	(1) Brazil	(2) Uruguay	(3) Belgium	(4) France	(5) Germany	(6) Netherlands	(7) United Kingdom	(8) United States
Same-sex couple: men	0.030*** (0.006)	0.029*** (0.010)	0.008 (0.008)	0.019*** (0.005)	0.002 (0.004)	0.010 (0.007)	0.002 (0.006)	0.011*** (0.001)
Adj. R-Squared	0.01	0.00	0.04	0.03	0.02	0.01	0.01	0.00
Mean of outcome	0.07	0.04	0.04	0.07	0.03	0.03	0.02	0.03
Observations (same-sex couples)	3,979	543	844	3,520	2,667	953	714	29,864
Observations	1,050,199	77,446	41,106	211,384	311,984	65,379	51,916	1,672,157
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Age & Education	✓	✓	✓	✓	✓	✓	✓	✓
Region FE	✓	✓	✓	✓	✓	✓	✓	✓
Children	✓	✓	✓	✓	✓	✓	✓	✓

Table: Women

	(1) Brazil	(2) Uruguay	(3) Belgium	(4) France	(5) Germany	(6) Netherlands	(7) United Kingdom	(8) United States
Same-sex couple: women	0.004 (0.006)	-0.037*** (0.009)	-0.019** (0.008)	-0.003 (0.005)	0.004 (0.004)	-0.003 (0.009)	-0.011* (0.006)	-0.000 (0.001)
Adj. R-Squared	0.03	0.03	0.04	0.04	0.01	0.01	0.01	0.01
Mean of outcome	0.07	0.04	0.04	0.07	0.03	0.03	0.02	0.03
Observations (same-sex couples)	5,482	396	670	2,141	2,186	860	591	29,187
Observations	746,392	61,714	35,821	185,898	269,212	58,525	44,848	1,372,322
Year FE	✓	✓	✓	✓	✓	✓	✓	✓
Age & Education	✓	✓	✓	✓	✓	✓	✓	✓
Region FE	✓	✓	✓	✓	✓	✓	✓	✓
Children	✓	✓	✓	✓	✓	✓	✓	✓



# Selection into parenthood: own children vs. children of relatives

	Non-children	DSC Children	Childless	Non-children	SSC Men Children	Childless	Non-children	SSC Women Children	Childless
Panel A. Latin America									
Primary Education	62.26%	29.22%	38.14%	53.79%	18.89%	6.64%	34.20%	21.59%	12.64%
Secondary Education	30.62%	48.56%	39.34%	39.72%	46.61%	43.57%	50.27%	57.75%	52.07%
Tertiary Education	7.12%	22.22%	22.52%	6.49%	34.50%	49.79%	15.53%	20.66%	35.29%
Age	50.18	37.27	46.95	40.56	36.06	36.21	38.78	34.26	36.14
Observations	133,150	1,212,628	1,144,706	48	244	4,692	324	1,564	4,782
Share	4.77%	48.54%	46.70%	0.51%	4.30%	95.18%	3.89%	22.53%	73.57%
Panel B. Europe									
Primary Education	35.03%	16.92%	18.42%	39.53%	13.70%	11.02%	28.39%	10.18%	10.32%
Secondary Education	40.91%	41.09%	46.41%	47.81%	37.03%	35.03%	45.86%	32.79%	39.48%
Tertiary Education	24.06%	41.99%	35.18%	12.66%	49.27%	53.95%	25.75%	57.04%	50.21%
Age	45.25	39.24	48.03	41.80	40.33	41.27	42.33	39.16	41.12
Observations	7,882	646,848	854,042	20	536	9,202	60	1,716	5,576
Share	0.92%	43.94%	55.14%	0.21%	3.74%	96.05%	1.04%	22.07%	76.89%
Panel C. U.S.									
Primary Education	17.56%	7.48%	5.10%	12.43%	6.12%	1.90%	8.63%	3.76%	2.17%
Secondary Education	65.68%	47.66%	54.15%	61.20%	43.68%	45.10%	64.27%	50.81%	49.07%
Tertiary Education	16.76%	44.87%	40.76%	26.37%	50.20%	53.00%	27.10%	45.44%	48.76%
Age	47.83	38.88	47.92	42.12	40.80	42.98	41.45	38.17	42.39
Observations	118,454	1,510,184	1,997,060	500	2,372	31,156	1,624	6,518	25,562
Share	3.49%	44.19%	52.32%	1.66%	7.89%	90.44%	5.10%	21.25%	73.65%

## Individuals under 15 years old by their relationship to the household head

	DSC			SSC Men			SSC Women		
	Children	Other Relative	Other	Children	Other Relative	Other	Children	Other Relative	Other
Belgium	98.50%	1.50%	0.00%	87.51%	12.49%	0.00%	92.19%	7.81%	0.00%
Brazil	91.48%	8.35%	0.17%	90.50%	8.26%	1.25%	87.39%	10.48%	2.13%
Germany	99.50%	0.38%	0.12%	72.43%	16.87%	10.70%	100.00%	0.00%	0.00%
France	99.09%	0.58%	0.33%	100.00%	0.00%	0.00%	98.07%	0.98%	0.95%
United Kingdom	96.63%	2.47%	0.90%	87.56%	12.44%	0.00%	92.98%	5.54%	1.48%
Netherlands	99.56%	0.36%	0.08%	91.00%	0.00%	9.00%	97.94%	0.00%	2.06%
Uruguay	93.53%	5.90%	0.57%	93.67%	6.33%	0.00%	84.31%	11.62%	4.08%
United States	93.48%	5.12%	1.40%	84.66%	10.04%	5.29%	82.13%	10.26%	7.61%

[Back](#)

# Selection into marriage

	DSC		SSC Men		SSC Women	
	Married	Cohabiting	Married	Cohabiting	Married	Cohabiting
Panel A. Latin America						
Primary Education	20.42%	23.42%	14.36%	11.00%	6.63%	11.03%
Secondary Education	54.79%	60.67%	52.10%	51.37%	57.00%	60.90%
Tertiary Education	24.79%	15.91%	33.55%	37.62%	36.37%	28.08%
Age	46.83	38.07	42.86	38.50	38.53	36.02
Observations	101,830	64,078	222	370	136	296
Share	61.33%	38.67%	37.46%	62.54%	31.62%	68.38%
Panel B. Europe						
Primary Education	19.77%	16.95%	13.68%	10.53%	11.69%	10.07%
Secondary Education	40.46%	42.61%	34.27%	32.07%	33.73%	37.30%
Tertiary Education	39.77%	40.45%	52.05%	57.40%	54.57%	52.63%
Age	46.32	37.43	46.19	37.74	43.30	38.36
Observations	816,870	293,302	3,540	4,684	2,830	3,252
Share	73.74%	26.26%	39.90%	60.10%	48.42%	51.58%
Panel C. U.S.						
Primary Education	6.10%	8.58%	2.35%	2.60%	2.85%	3.05%
Secondary Education	49.72%	61.84%	43.01%	47.37%	46.61%	54.65%
Tertiary Education	44.18%	29.58%	54.64%	50.03%	50.54%	42.30%
Age	45.07	36.64	44.92	40.02	43.53	38.43
Observations	2,549,908	351,884	14,932	12,844	15,840	11,534
Share	86.40%	13.60%	52.49%	47.51%	56.57%	43.43%

## Selection into parenthood: married couples

	DSC		SSC Men		SSC Women	
	Parents	Childless	Parents	Childless	Parents	Childless
	Panel A. Latin America (excl. Brazil)					
Primary Education	18.26%	22.48%	19.80%	12.81%	2.26%	8.88%
Secondary Education	54.34%	55.22%	50.06%	52.67%	56.13%	57.45%
Tertiary Education	27.40%	22.31%	30.13%	34.52%	41.61%	33.67%
Age	41.74	51.68	42.85	42.86	35.94	39.87
Observations	49,774	52,056	50	172	46	90
Share	48.82%	51.18%	22.10%	77.90%	33.96%	66.04%
	Panel B. Europe					
Primary Education	16.82%	20.15%	11.02%	12.95%	9.14%	12.20%
Secondary Education	39.73%	46.92%	37.20%	36.09%	29.69%	37.92%
Tertiary Education	43.44%	32.93%	51.78%	50.96%	61.17%	49.88%
Age	40.19	51.65	42.15	46.34	39.82	44.93
Observations	497,474	642,554	356	3,884	1,068	2,336
Share	46.06%	53.94%	5.94%	94.06%	31.64%	68.36%
	Panel C. U.S.					
Primary Education	7.41%	5.06%	5.19%	1.85%	4.18%	2.10%
Secondary Education	46.36%	53.60%	42.34%	43.15%	46.50%	46.33%
Tertiary Education	46.23%	41.34%	52.47%	55.00%	49.32%	51.57%
Age	40.09	49.86	42.27	45.58	39.63	45.34
Observations	1,478,002	1,711,890	2,136	15,570	5,292	13,662
Share	49.09%	50.91%	13.33%	86.67%	30.35%	69.65%

## Selection into parenthood: unmarried couples

	DSC		SSC Men		SSC Women	
	Parents	Childless	Parents	Childless	Parents	Childless
	Panel A. Latin America (excl. Brazil)					
Primary Education	24.62%	21.27%	26.06%	8.88%	21.31%	7.28%
Secondary Education	62.59%	57.25%	63.19%	49.71%	67.75%	58.40%
Tertiary Education	12.79%	21.48%	10.75%	41.41%	10.94%	34.32%
Age	36.22	41.36	38.83	38.46	35.64	36.15
Observations	41,086	22,992	46	324	80	216
Share	64.08%	35.92%	12.36%	87.64%	26.70%	73.30%
	Panel B. Europe					
Primary Education	18.86%	13.59%	21.28%	9.75%	14.56%	8.92%
Secondary Education	45.67%	44.98%	38.19%	34.34%	40.44%	40.64%
Tertiary Education	35.47%	41.43%	40.52%	55.91%	45.00%	50.45%
Age	36.55	37.95	37.68	37.94	38.31	38.28
Observations	157,254	211,474	200	5,318	708	3,240
Share	41.23%	58.77%	2.60%	97.40%	15.25%	84.75%
	Panel C. U.S.					
Primary Education	14.78%	5.31%	12.11%	1.95%	5.59%	2.25%
Secondary Education	70.17%	57.04%	57.37%	46.94%	65.21%	52.00%
Tertiary Education	15.05%	37.65%	30.52%	51.11%	29.21%	45.75%
Age	35.02	37.61	38.02	40.52	37.38	39.22
Observations	150,636	285,170	736	15,586	2,850	11,900
Share	38.65%	61.35%	5.67%	94.33%	21.50%	78.50%

## Support for same-sex marriage across countries

1. Latin America (Pew Research Center, 2014)
  - ▶ Uruguay 62%
  - ▶ Brazil 45%
2. Europe (Pew Research Center, 2018)
  - ▶ Netherlands 86%
  - ▶ Belgium 82%
  - ▶ UK 77%
  - ▶ Germany 75%
  - ▶ France 73%
3. U.S. 60% (Pew Research Center, 2019)