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# Gender and the Pandemic in Political Ideology: The case of Spain

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## Abstract

Gender gaps in political ideology transformed from traditional gaps (women showing more right-leaning than men) to modern gaps (women showing more left-leaning) in the last four decades in Western countries. However, Spain lagged behind in this transformation. This paper analyses how labour market status and the pandemic can affect gender differences in left-right self-placement using data on 600,000 individuals during 2008-2021. Using various indicators of the incidence of COVID-19, the paper associates the pandemic with an increasing right-wing leaning for both women and men. However, this correlation is stronger for men. While the pandemic made men more moderate and less leftist, it made women less moderate. The estimates crucially account for labour market status and generational replacement: the results show greater polarization among younger generations. The results point to gender as a relevant political cleavage in Spain in the near future.

**Keywords:** *political ideology, COVID-19 pandemic, gender-generational gap, labour market status*

**JEL:** *D72, J16*

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# 1 Introduction

Women and men tend to show different political attitudes, and these differences have evolved during the last decades. Traditional gender gaps, by which women show more conservative ideals, were transformed into modern gender gaps, by which women lean more to the left, in most of the Western economies at the end of the 20th century (Inglehart & Norris, 2000; Inglehart et al., 2003). The secular transformation characterized by the incorporation of women in the paid workforce, together with the drop in fertility, rising divorce rates and changing gender norms, among other forces, are considered fundamental aspects in this conversion (Edlund & Pande, 2002; Abendschön & Steinmetz, 2014; Dassonneville, 2020). Gethin et al. (2022) also confirm the reversal of electoral divides between women and men in a long-run analysis of Western countries. Spain posits an interesting platform to study gender gaps in political ideology, as together with Italy and Luxemburg Inglehart & Norris (2000), lagged behind in the adoption of a modern paradigm in gender gaps in political ideology.

This paper empirically analyses the role of gender in the evolution of political ideology in Spain in recent years, paying special attention to labour market status and generational replacement. The pandemic had relatively more adverse effects for women in terms of employment and unpaid care work burdens (Farré et al., 2021; Hernández-Albújar et al., 2022), which could exacerbate pre-existing gender disparities. Thus, this paper considers whether the pandemic could influence political ideology differently for women and men. Recent literature provides evidence on the influence of the pandemic in political attitudes (Barberia et al., 2021). The existing findings associate the pandemic with increasing vote intention but not in political ideology (Bol et al., 2021) and the so-called rally-around-the-flag effect (Schraff, 2021). This incipient literature shows also gender-differential trends, by which women were less likely to support the government and were more likely to support stricter health measures during the pandemic (Mazza & Scipioni, 2022; Stockemer et al., 2021).

This paper constructs a unique dataset with survey data between April 2008 and July 2021, collected from the Spanish Centre for Sociological Research Barometer (CIS) with a monthly frequency. I merge these survey information on an independent cross-section of individuals with official statistics of the incidence of the pandemic from the European Center for Disease Prevention and Control (ECDC). Using linear probability models, the paper significantly associates women with a more leftist political ideology, but this hinges upon labour market status. Home-maker women

or pensioners who never worked in the paid workforce are more likely to self-place in more rightist positions than men.

The pandemic is positively correlated with more rightist positions. This association also hinges upon a gender basis: although the pandemic is associated with a positive sign in political ideology for both women and men, it seems to be stronger for men. Complementing these results, the paper sheds lights on paper these gender interplays for political polarization. The paper suggests an important generational gender divide among the Z-Generation and intra-gender gaps (between women in the labour market and home-maker women) in Spain in coming years. All these models are robust to the use of ordered probit models and remain after including the role of generational replacement and different measures of the incidence of the pandemic.

The remainder of the paper is structured as follows. The next section reviews the related literature. Section 3 explains the data, shows descriptive evidence and the empirical specification. Section 4 shows the results and robustness checks. Section 5 discusses the main implications of the results.

## **2 Literature Review and Hypotheses**

The implications of the pandemic for political ideology are far from clear. The existential threat of a virus and the economic downturn of the pandemic could increase preferences for stability and traditional values over change and progressive attitudes, hence fostering right-wing ideals (Jost et al., 2009; Rosenfeld & Tomiyama, 2021). To the contrary, rising unemployment and economic inequality can promote preferences towards redistribution and pro-poor policies, hence fostering left-wing ideals (Emmenegger et al., 2015; Kurer, 2020; Wiertz & Rodon, 2021). On top of these, gender disparities in the economic and health consequences of the pandemic could lead to gender differential effects in the political ideology. In this sense, the pandemic could have fed gender as a political cleavage. This section reviews existing evidence and explores whether and how the pandemic could affect differently the political ideology of women and men's.

### **2.1 Gender and political ideology**

Gender has been considered a relatively smaller cleavage than race, religion or ethnicity in factoring voter turnout and political ideology (Lipset et al., 1967). However, recent literature

sheds new light on how gender gaps in turnout, as a facet of political behaviour, depend on the type of elections (Kostelka et al., 2019). Additionally, research has focused on support for radical-right populist to find lower gender gaps when there is less country-level gender equality at large (Donovan, 2023). Further, gender disparities in left-right self-placement have been found to matter in electoral strategies (Box-Steffensmeier et al., 2004) and affect economic policies, such as social expenditure as a fraction of the GDP (Iversen & Rosenbluth, 2008).<sup>1</sup> The prevailing evidence suggests that women are associated with more rightist ideals, but this is transformed along the development spectrum, where women in advanced and post-industrial societies show more left-wing positions than men (Inglehart & Norris, 2000; Inglehart et al., 2003). For Diekman & Schneider (2010), the core principles of gender divergence of political attitudes are related to diffuse gender roles (e.g., broad expectations based on sex) as well as differential specific roles (e.g., family and occupational roles).

Abendschön & Steinmetz (2014) use cross-country data for 28 European Union states in 2008 to find evidence that gender and labour market status has a role in left-right party preferences. They associate women with a lower left-right party vote, thus placing women at the left of men. They show that being employed, or other labour market status increases the probability of voting right-wing, with respect to unemployment. Nonetheless, the none in the labour market category is not further disaggregated in Abendschön & Steinmetz (2014). Shorrocks (2018) considers in detail the role of generational replacement by considering the year of birth and the interaction with gender for a subset of European countries and Canada. While she finds that women from younger generations show greater support for economic equality and state intervention and, relatively fewer supporters of liberal values makes them more left-wing than men. She associated home-maker status with a higher political ideology (meaning more right-wing) and less probability of left-wing party preference. Dassonneville (2020) complements the literature by taking a generational perspective for 36 OECD countries during 1973-2018. While she provides new insights on the gender-generational gap in political ideology, her work falls short in understanding the individual labour market role in driving modern gender gaps. Finally, the literature on the role of labour market status in political attitudes

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<sup>1</sup>The role of traditional sexual division in gender gaps in political ideology and conservative attitudes was already established in early studies of the political economy of gender. Lipset (1963) argues that women that conform with traditional gender norms of housewives are more likely to retain the dominant conservative values of the larger culture due to their relative low involvement in progressive and more knowledgeable networks of social communication. Furthermore, other socio-demographics, such as religiosity and low levels of educational attainment can feed the more conservative leaning of home-maker women (Norrander & Wilcox, 2008).

does not have a clear gender perspective (Marx, 2014; Wiertz & Rodon, 2021), and thus, are silent on the interplay between gender and labour market status in political ideology.

Case-studies are more likely to have individual data on labour market status, which specifically allow for considering the political ideology of homemakers. To the best of my knowledge, there are only two provides few studies, for the case of Italy and Turkey, which point at the uneven gender distribution of paid and unpaid work as an important driver of (traditional) gender gaps in political ideology. Barisione (2014) uses data during 1994 to 2013 and shows that the traditional gender gap and support for Berlusconi's Forza Italia was mainly driven by women that were not in the paid workforce. Similarly, Ilkcaracan (2019) uses individual data for Turkey. Once the labour status of women as home-makers is accounted in the regression models, women's support for Erdogan's AKP is no longer significant, showing intra-gender gaps on the basis of traditional sexual division of labour.

## **2.2 Pandemic, gender and political ideology**

Recent political economy literature suggests that the COVID-19 pandemic can influence political attitudes, such as government support and voting intentions, but fails to find a significant role of the pandemic in political ideology. Bol et al. (2021) conducted a web-based survey during the first months of the pandemic and exploit the variation of the lockdown and number of deaths in a sample of European countries. They did not find a significant role of the pandemic in political ideology, however, they use web-based data for only limited data around the first months of the pandemic (March-April 2020). Mazza & Scipioni (2022) combine three different surveys conducted in a sample of European countries to find that women show lower government support than men during the pandemic. Stockemer et al. (2021) find a gender disparity in the agreement on strict government measures to countervail the health effects of the pandemic. Using data for the US and Germany, they find that the percentage of women who prefer stricter measures is approximately one-third higher relative to that of men. Finally, Amat et al. (2020) look at the case of Spain and combine several pieces of experimental evidence to show that the pandemic could induce a strong national bias which coupled with higher demands for techno-authoritarian decision-making.

Other related works show little evidence of political ideology consequences of the COVID-19 pandemic. Using data from web-based surveys conducted during the pandemic, Bol et al. (2021) fail to find a significant effect of the pandemic in political ideology. Likewise, Ares et al. (2021) use data

on the early stages of the pandemic and fail to associate it to a left nor right-wing shift, but indicate increasing polarization around redistributive politics.

The gendered uneven economic impacts of the pandemic sharpened pre-pandemic gender gaps in the labour market and the distribution of unpaid care work (Alon et al., 2020). Gendered uneven economic consequences of the pandemic can lead to gender differences in political ideology in the aftermath of the crisis. In this paper, I argue that taking an intersectional perspective into the politico-ideological consequences of the pandemic can provide a better understanding of the workings of economic crises in forming political attitudes. Specially, I consider a gender-generational gap perspective to estimate the role of the pandemic in the formation of political ideology.

The pandemic had gender differential effects in labour market outcomes and unpaid care work, and women and men were exposed differently to health risks. The pre-pandemic sectoral and occupational gender segregation placed women at the forefront of the pandemic, as they were the primary health and care providers in the paid workforce (Kabeer et al., 2021; Nieves et al., 2021; Hernández-Albújar et al., 2022). Indeed, the pandemic deteriorated pre-existing gender inequalities in the labour market (Altuzarra et al., 2020; Alon et al., 2020, 2022), which can ultimately mediate an increasing leftist attitude among women. At the household level, women bore the brunt of increasing unpaid domestic and care responsibilities derived from the lockdown and closure of market care services (Adams-Prassl et al., 2020; Sevilla & Smith, 2020; Del Boca et al., 2020). Farré et al. (2021) use survey data for Spain to find that the pandemic increased the participation of men in housework and childcare, but most of the burden fell on women. They also find that the pandemic seems to have increased gender inequalities in both paid and unpaid work in the short-term. Hence, the paid and unpaid labour implications of the pandemic in political attitudes can differ between women and men.

The present paper considers how the pandemic and gender are interrelated to transforming political ideology. The main hypothesis of the paper is that the uneven gender socio-economic consequences of the pandemic could lead to differential effects of the pandemic in political ideology of women and men.

## 3 Empirical Analysis

### 3.1 Data and descriptive statistics

I collect data from the Spanish Center of Sociological Research (CIS) Barometer to construct a database with pooled independent cross-sections of individuals with monthly frequency between April 2008 to July 2021. I merge this database with information on the monthly incidence of COVID-19 virus collected from the European Center for Disease Prevention and Control (ECDC). Thus, I measure the incidence of the pandemic either in terms of mortality, using the weekly 14-day notification rate of reported deaths per 1,000,000 population attributed to the virus at national level, or the weekly 14-day notification rate of reported cases at regional level. I compute the monthly rate to be able to merge with the CIS Barometer survey data.<sup>2</sup>

The descriptive and regression analyses here provided are based on the information of roughly more than 600,000 individuals. The key outcome variable of the analysis is left-right self-placement, that proxies political ideology using a Likert-type scale from 1 (extreme left) to 10 (extreme right) (Likert, 1932). The survey includes the following question *"When talking about politics, the expressions "left" and "right" are commonly used. In a 1 to 10 scale, where do you place yourself politically?"*

Political scientist have long measured political ideology on the basis of a Likert-type scale in which categories are ordered to provide a position in the political ideological spectrum.<sup>3</sup> Although the left-right scale is subject to adjust over time (De Vries et al., 2013), its feasibility in Western countries is generally justified by the high levels of partisan left–right knowledge among the electorate (Inglehart & Klingemann, 1976; Fortunato et al., 2016; Wiertz & Rodon, 2021).

Figure 1 shows the evolution of average political ideology of women and men (Panel A) and the gender gap in political ideology (Panel B) during the period at scrutiny. There is an overall trend towards more leftist positions, and over the most part of the period, women placed at the right of

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<sup>2</sup>The data provided by the ECDC is on a weekly basis. To be able to merge this data with the survey information, I compute the monthly rates of COVID-19 deaths and cases at the corresponding national or regional levels.

<sup>3</sup>Alternative measures of political ideology use other scales that differ in two main aspects: whether the scale is divided into a small or large number of answer categories or whether there is a midpoint in the categories. Using data for Germany, Kroh (2007) shows that these choices are not trivial, and suggests the use of 11-point scales. See Bauer et al. (2017) for a greater discussion on the validity of the Left-Right scale for measuring political ideology.



men. It was not until October 2018 where the average political ideology of women was placed at the left of men, based on the CIS Barometer data. From that point onwards, there is an unprecedented increase in the gender differences in political ideology, confirming the adoption of the modern gender gap in Spain. To contextualize the rise of the modern gender gap in Spain, it should be highlighted the feminist movement in Spanish politics which gained special momentum in the form of mass demonstrations on the Women’s Strike on 8 March 2018. Together with the relatively recent new two parties operating in the Spanish politics, which entered the parliament during the last decade, Podemos and Vox, from the left-wing and far right-wing respectively. Two recent contributions to the literature, Anduiza & Rico (2022) and Caravantes (2021) respectively analyse the role of these two parties in the context of rising modern sexism and left populism.

### 3.2 Econometric Analysis

The following equation is specified to estimate the role of gender, the COVID-19 pandemic and its interaction in political ideology.

$$PI_i = \alpha + \beta_0 + \beta_1 W_i + \beta_2 LMS_i + \beta_3 LMS * W_i + \beta_4 P_{rt} + \beta_5 W * P_{irt} + X'_i + \omega_r + \delta_t + \epsilon_{irt} \quad (1)$$

where  $PI_i$  is the dependent variable, which is the response on the left-right Likert-type scale (1-10) of individual  $i$ . The key independent variables are gender, which is included in the form of  $W_{irt}$ , a dummy variable that takes the value of 1 for women and zero otherwise, labour market status, expressed in  $LMS_i$ , which is a categorical variable with 4 values (employed or retired; unemployed; student; home-maker or pensioner who never worked in the paid labour market), and the incidence of the pandemic,  $P_{rt}$  that measures either the monthly deaths attributed to the virus at national-levels or monthly COVID-19 cases at regional-level. In defining labour market status, I place special emphasis in grouping together those individuals who are currently experiencing or had experienced in the past potential gender discriminations in the paid labour force in the form of pay differentials or barriers to certain sectors or occupations. That is why I group together employed and retired people, and home-maker and pensioner individuals.

The interaction terms between gender and labour market status, and gender and the pandemic are also among the set of focal independent variables ( $W * LMS_i$  and  $W * P_{irt}$ , respectively). The term  $X'_i$  corresponds to the set of controls at the individual level, while  $\omega_r$ ,  $\delta_t$ , and  $\epsilon_{irt}$  are respectively regional fixed effects, time fixed effects and the error term.

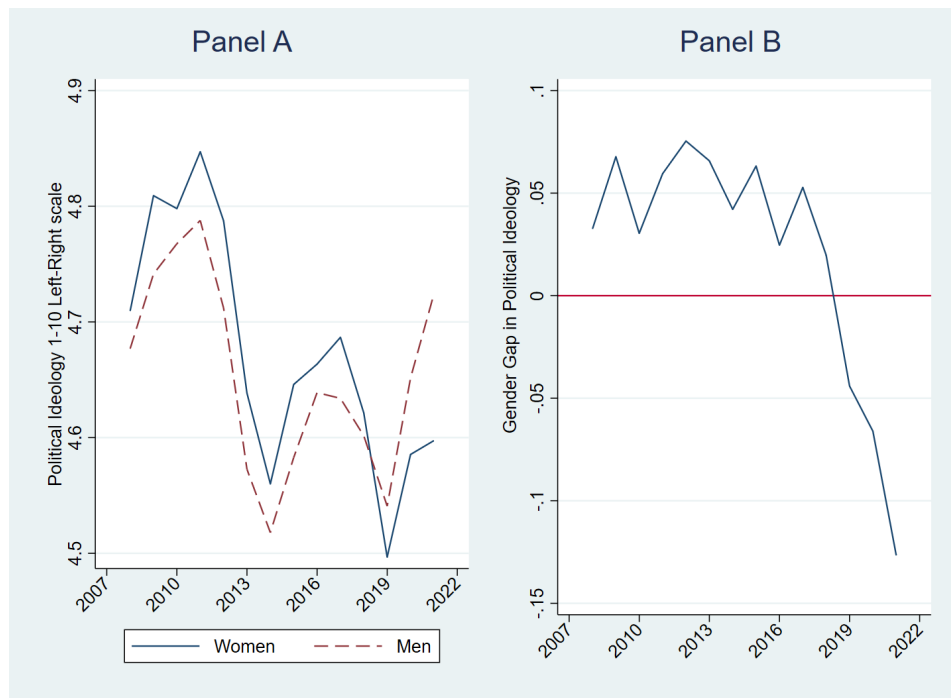


Figure 1: Gender and Political Ideology in Spain (2008-2021)

A set of individual-level control variables ( $X'_{ic}$ ) includes factors generally found to impact political ideology. This set includes first age and age squared to account for the inverted U-shape link of ageing and conservative political ideals (Glenn, 1974; Wiertz & Rodon, 2021). Other controls are educational level, religiosity and population size of the area (Giger, 2009; Abendschön & Steinmetz, 2014). Marital status, as pioneer literature in the field found that divorced women, compared to married women, tend to lean to the left (Edlund & Pande, 2002; Iversen et al., 2005). The augmented models also account for voter turnout at individual level, which can be correlated with ideology (Zaslave et al. (2021)). Importantly, all the models also control for the generation that the individual belongs to capture how the generational replacement drives gender gaps in political ideology. Even if the gap in ideology between women and men is small, intergenerational differences can lead to growing larger gaps in future, as newer generations continue to gain electoral weight (Shorrocks, 2018; Dassonneville, 2020). Subsequent models in this econometric analysis zoom in on the role of gender-generational gap, where interactions between gender and generation will be included in the models. All models also include time trends that control for year and month fixed effects, and regional fixed effects.

The empirical analysis here specified uses primarily ordinary least squares (OLS) models, as employed in related literature (Wiertz & Rodon, 2021; Bol et al., 2021; Van Ditmars, 2023).<sup>4</sup> The

<sup>4</sup>Employing OLS eases the interpretation of the results and facilitates comparisons across models and previous

following estimates should be interpreted as correlation evidence, rather than causal inference, due to the potential endogeneity problems in the form of omitted variables biases and reverse causation.

## 4 Results

Table 1 provides estimates of the equation in (1), which gradually incorporates the augmented set of controls. Column 1 includes regional and time fixed-effects together with gender to find that women are positively correlated with high levels of political ideology, meaning that women self/place to the right of men. Nonetheless, Columns 2 to 5, which include respectively the full set of controls, the generational effects, labour market status and the incidence of the pandemic (with and without its interaction with gender), associate women with more leftist positions than men. These models suggest that women are about 13% to 19% more likely to be to the left of men. Column 4 provides evidence on that labour market status influences political ideology differently for women and men. Unemployed are 13% more likely to be to the left of employed or retired people. Students are also associated with more leftist ideals than employed or retired people. This paper pays special attention to the case of home-maker status, as there are only few previous studies that considered this category as a labour market status (Barisione, 2014; Shorrocks, 2018; Ilkkaracan, 2019). The coefficient associated with home-maker status is non-significant, and this is one consequence of the under-representation of men as home-makers.<sup>5</sup> As shown in Figure A3 in the Appendix, only 0.6% of men state being home-maker, while this figure is around 32% in the case of women. More importantly, while women are on average associated with more leftist ideals than men, the interaction between women and home-maker status is positive and significant. This means that home-maker status increases the probability of being rightist of both men and women in other labour market statuses.

The results in Table 1 go along the lines of Dassonneville (2020) insofar experiences of pay discrimination by gender can fuel leftist positions among women. The increasing female labour force participation in Spain since 1990 and the number of female hours worked in the paid labour force

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research. Nonetheless, as left-right self-placement measured through Likert-type scales are ordered data, employing linear regression models as metric models to ordinal data can lead to misinterpretations of the data (Liddell & Kruschke, 2018). All the estimates below are robust to the use of ordered probit models, and are available upon request.

<sup>5</sup>It should be noticed that the category "home-maker" is virtually populated by women, and thus, it serves as an interaction between women and this status.

(Hupkau & Ruiz-Valenzuela, 2022), can thus be considered a driving force in the conversion towards modern gender gaps.

Figure 2 provides the predicted average values of political ideology by gender and labour market status based on the estimates in Column 5 in Table 1. Women are placed below men in all four labour market categories, but the gender gaps by labour market status differ in magnitude. Gender gaps are greater among students, followed by employed or retired, and finally by unemployed. In the case of home-makers, it should be reminded that men in home-maker status represent a minimal proportion of the male sample. Nonetheless, comparing at the same time gender and labour market statuses, home-maker women are the most rightist group. There are two important features to highlight in this figure: first is that gender gaps among students might lead to greater gender polarization in coming years, and as suggested by Gethin et al. (2022), that gender cleavages might prevail over other divides, such as religion, ethnicity or geography. Second is that intra-gender gaps might emerge between home-maker women and women in the paid labour force or students.

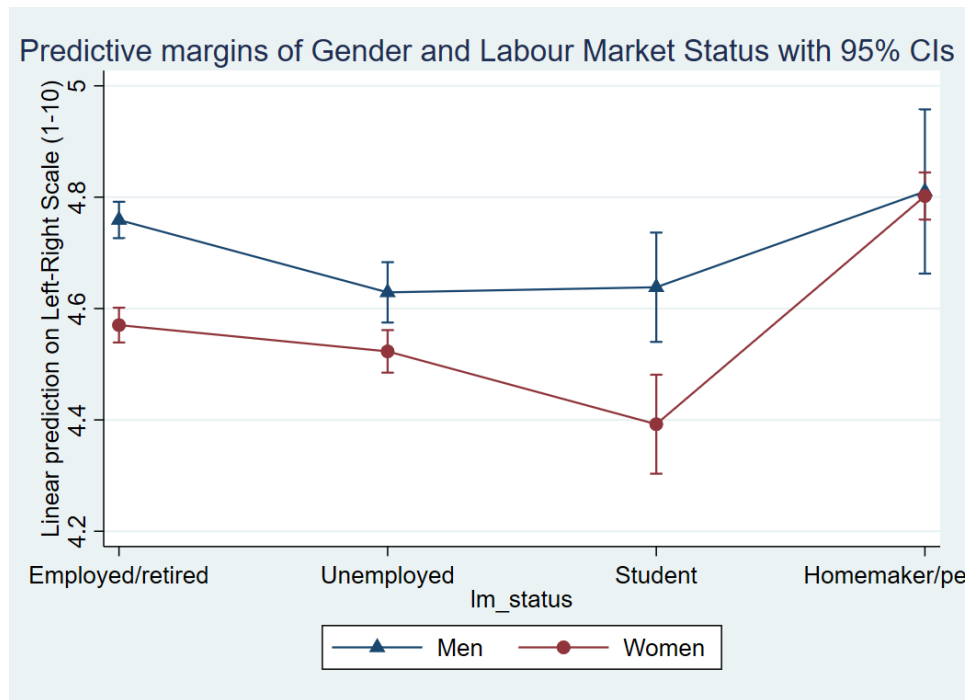


Figure 2: Linear Predictions of Political Ideology by Gender and LMS

Columns 4 and 5 in Table 1 add the regional-level number of COVID-19 cases per month, and its interaction with gender. One standard deviation increase in COVID-19 cases is associated with an 1.5% increase in the political ideology scale, that is, more rightist ideals. Existential threads

and economic downturns, as predicted in political psychology literature (Jost et al., 2003, 2004), can thus lead to a conservatism shift in political ideology, where the pandemic can induce more rightist and traditional ideals. Nonetheless, the interaction with gender is negative and significant. Figure 3 shows the gender differential marginal effect of the pandemic, measured by means of regional-level of COVID-19 cases. The estimates associate the pandemic with a right-wing turn for both women and men, but the effect is stronger for men. Table A2 in Appendix replicates the analysis using national-level of COVID-19 deaths and provide similar results.

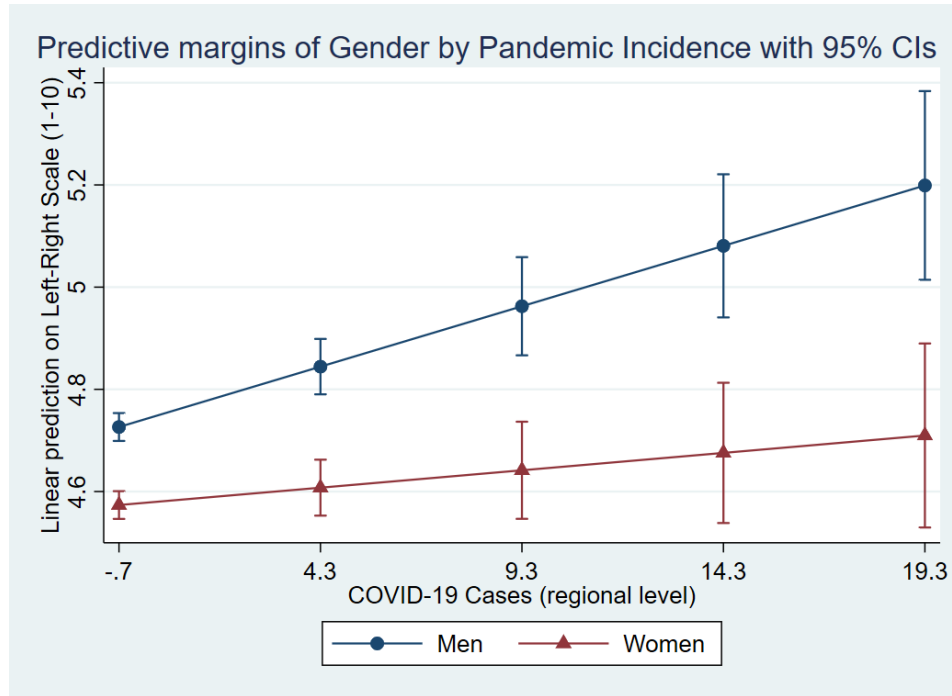


Figure 3: Linear Predictions of Political Ideology by Gender at Pandemic Incidence (cases)

Table 1: Gender, Labour Market Status and the Pandemic in Political Ideology

Dependent variable: 1-10 left-right self-placement						
	(1)	(2)	(3)	(4)	(5)	(6)
Women	0.094***	-0.137***	-0.137***	-0.189***	-0.189***	-0.193***
	(0.015)	(0.017)	(0.017)	(0.018)	(0.018)	(0.018)
Unemployed				-0.130***	-0.130***	-0.128***
				(0.032)	(0.032)	(0.032)
Student				-0.121**	-0.121**	-0.120**
				(0.046)	(0.046)	(0.046)
Home-maker/pensioner				0.051	0.051	0.052
				(0.078)	(0.078)	(0.078)
Women*Unemployed				0.083***	0.083***	0.079**
				(0.031)	(0.031)	(0.030)
Women*Student				-0.057	-0.057	-0.058
				(0.038)	(0.038)	(0.038)
Women*Home-maker				0.181**	0.181**	0.177**
				(0.079)	(0.079)	(0.079)
Regional COVID-19 cases					0.015***	0.024***
					(0.004)	(0.005)
Women*Regional COVID-19 cases						-0.017***
						(0.004)
Region and time FE	yes	yes	yes	yes	yes	yes
Full set of controls	no	yes	yes	yes	yes	yes
Generation FE	no	no	yes	yes	yes	yes
No. of Observations	603565	288535	288535	287546	287546	287546
R-sq.	0.034	0.148	0.148	0.152	0.152	0.152

Note Table 1: Full set of controls include cohabitation, age, age sq., educational attainment, religiosity, marital status, migrant status, working class and voter turnout.

Clustered standard errors by region and cohort in parentheses.

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

## 4.1 Partitions by Gender

Table 2 replicates the previous analysis using partitions of the database on the basis of gender to try to identify better the extent to which the pandemic had a greater effect on men than

on women. Columns 1 and 2 use men in the sample, whereas Columns 3 and 4 use women, and include the incidence of the pandemic, and later the interactions between the incidence of the pandemic and labour market status. Triple interactions, such as the interaction among gender, labour market status and the incidence of the pandemic can be difficult to interpret. Using instead partitions, in this case based on gender, might help advance our understanding of how the pandemic influence women and men different, and whether labour market status mediates the gender-differential impact of the pandemic. For the male sample, unemployment and student status are significant at 1%, and both are associated with more leftist positions to being employed or retired. however, for women, the significance of this covariate is only at 10%, although with the same sign. Interestingly, home-maker or pensioner status is significant at 1% level for the female sample, and it is associated with a positive sign, meaning that home-maker women are more likely to place at the right of other women. Finally, regarding the incidence of the pandemic, the partitions show that there is a significant role for political ideology of men, but a rather insignificant for women. Nonetheless, the role of labour market status in political ideology is greater in magnitude (around 14% in case of unemployment and 22% in case of students), than that of the pandemic (0.2%). The interactions with labour market status show that there is no interplay between labour market status and the pandemic in political ideology.

Table 2: Sample Partitions by Gender

Dependent variable: 1-10 left-right self-placement				
	(1)	(2)	(3)	(4)
	Men	Men	Women	Women
Unemployed	-0.148*** (0.031)	-0.149*** (0.031)	-0.030* (0.017)	-0.031 (0.019)
Student	-0.218*** (0.053)	-0.216*** (0.051)	-0.069* (0.038)	-0.070* (0.039)
Home-maker/pensioner	0.057 (0.078)	0.043 (0.083)	0.170*** (0.019)	0.169*** (0.020)
COVID incidence (regional level)	0.022*** (0.006)	0.022*** (0.006)	0.009 (0.005)	0.010** (0.004)
Unemployed*COVID incidence		-0.002 (0.007)		-0.003 (0.010)
Student*COVID incidence		0.005 (0.009)		-0.003 (0.014)
Home-maker/pensioner*COVID incidence		-0.043 (0.048)		-0.002 (0.013)
No. of Observations	146042	146042	141504	141504
R-sq.	0.151	0.151	0.156	0.156

Note Table 2: Full set of controls include cohabitation, age, age sq., educational attainment, religiosity, marital status, migrant status, working class and voter turnout.

Clustered standard errors by region and cohort in parentheses.

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

## 4.2 The Gender-Generational Gap

Next, I include the interaction between generation and gender in the augmented model (1) to consider whether women from different generational have significantly different political ideology. While previous models include generation as a control, and thus reduce omitted variables biases in the estimates, they are silent on the fact that gender might impact political ideology different across generational. As the base level for generation I use the Greatest generation, while as in previous models, the labour market status base level is being employed or retired.

Figure 4 shows estimates on this model (full model is in Table A3 in Appendix). The



coefficient of women is not significant, but the interaction between gender and generations, and that of gender and labour market status are significant in specific values of these variables. Concretely, women from the Z generation are particularly more leftist than the others. Once I consider the role of generational replacement, labour market status, and more specifically, home-maker status becomes not significant. One interpretation of the results is that generational replacement is at the core of the evolution of gender gaps in political ideology, as already stated in Shorrocks (2018) and Dassonneville (2020). However, the results in this paper shed new light on the relevance that generational replacement might play in coming years in Spain, and speak directly to the increasing role of gender cleavages in politics. While Dassonneville (2020) argues that gender will not become a real cleavage in politics in Western countries, the results here suggest otherwise. Women of the Z generation are significantly associated with more leftist ideals, whereas both Y and Z generations are associated with more rightist positions. This divergent trends in political ideology on the basis of gender in younger generations might be exacerbated by modern sexist ideals, which might be more appealing for men Anduiza & Rico (2022) and feminist movements Caravantes (2021). In this sense, my results support the

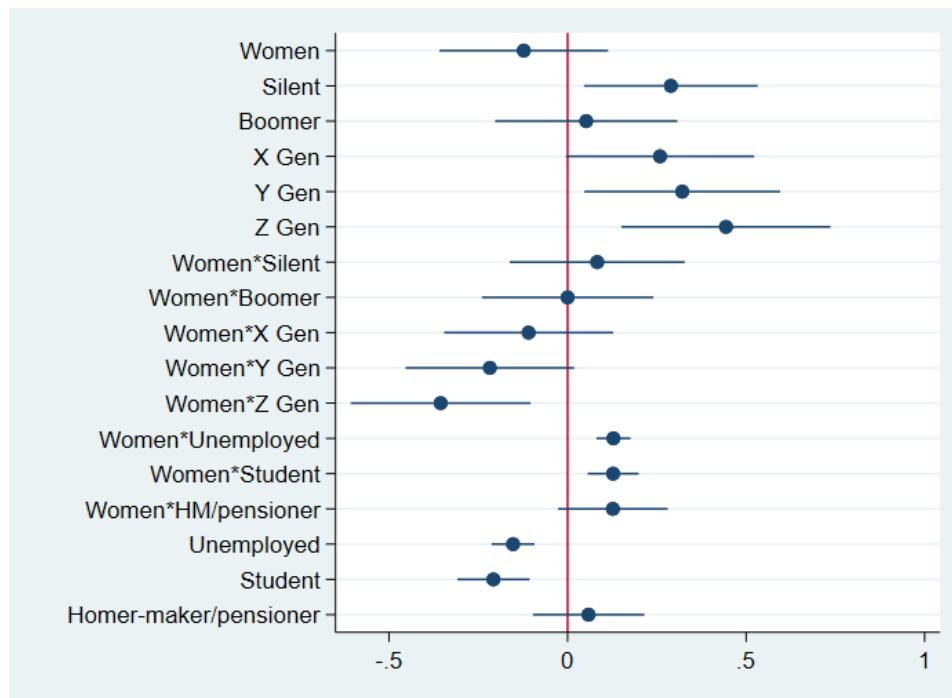


Figure 4: Gender-Generational Gap and LMS in Political Ideology

### 4.3 The Gender-Generation Gap in Political Polarization

The next step of this paper considers the role of gender, labour market status and the pandemic in driving political polarization. To do so, I compute the probabilities of being leftist, defined as self-placing equal to 3 or lower in the Left-Right scale, being moderate, defined as self-placing 4, 5 or 6, or being rightist, defined as self-place equal to 7 or higher.

Figure 5 shows probit model estimates on the three different probabilities, namely being leftist, moderate or rightist. full results are relegated at Table A4 in Appendix. Women are not significantly associated with being leftist or moderate, but positively and significantly associated with being rightist. Nonetheless, the interactions with labour market status and generations provide further information on how gender is associated with the three types of political ideology.

Being home-maker or pensioner alters the association of women to the different political ideologies. Women home-makers are more negatively associated with being leftist and positively associated with being moderate. To the contrary, home-maker or pensioner women are not significantly associated with being rightist (neither positively nor negatively). Therefore, these models allow us to identify better how home-maker status shapes political ideology, by reducing the probability of being leftist and increasing moderate ideals.

As of the role of generation and its interaction with gender, two important results from these three probit models emerge. First, for the 3 youngest generations (X, y and Z) are significantly less likely to being leftist and more likely to be rightist (with no significant effect in being moderate). However, gender plays a crucial role in altering the probabilities of being leftist and rights for women: women from younger generations are more likely to be leftist and less likely to be rightist, with no significant role in being moderate. Importantly, the young the generation, the higher the magnitude of these associations.

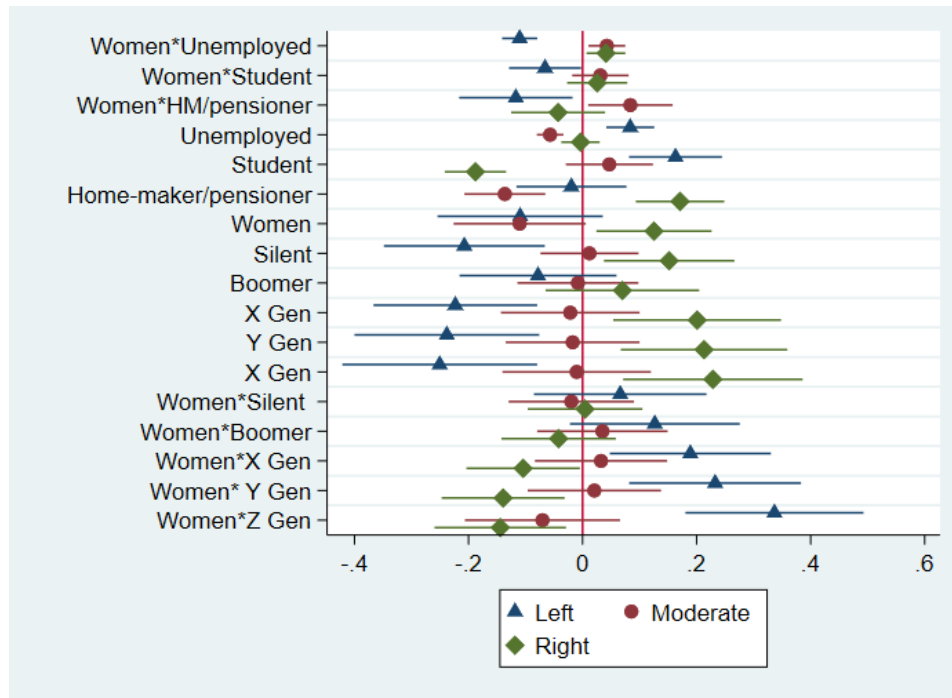


Figure 5: Gender-Generational Gap in Political Polarization: Left, Moderate and Right

#### 4.4 The Gender-Generational Gap and the Pandemic

Finally, the role of the pandemic in driving the probability of self-place in the left, moderate or right positions is represented in Figure 6, respectively for the case of being leftist (left side) and being moderate (right side). As shown in Table A4 in the Appendix, the pandemic has no significant association with the probability of being rightist. Similar to the models of using the Left-Right scale, the probit models using alternatively the probability of being left or being moderate, suggest that the pandemic is significantly associated with political ideology. While higher incidence of the pandemic is associated with less probability of being leftist for men, for women, this effect is marginal. In the case of being moderate, one standard deviation increase in the incidence of the pandemic is associated with an increasing probability of being moderate for men. For women, however, the pandemic is associated with slightly reducing probability of being moderate.

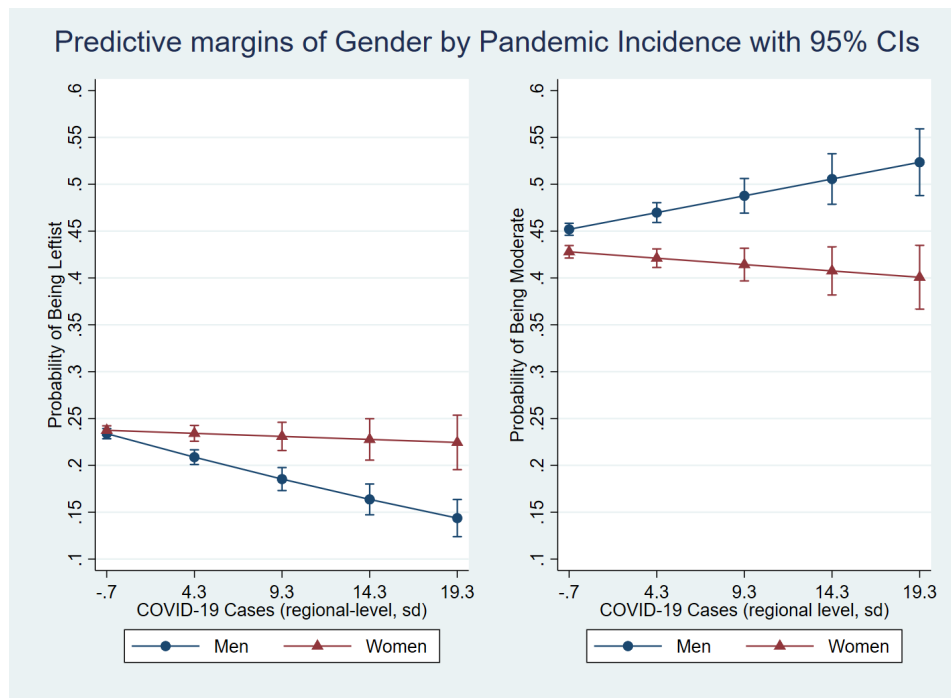


Figure 6: Gender and Pandemic in Political Polarization (Left and Moderate, Probit models)

## 5 Conclusion

Gender gaps in political ideology have long been considered in the literature. The pioneering works of Inglehart et al. (2003) path the ground for empirical cross-country analyses that helped identify factors behind gender differences in the formation of political ideology. The role of generations, as women from different generations were at different exposures to progressive ideas and performed different roles in the labour market, is deemed to be crucial in our understanding of future trends of gender disparities in political ideology. Parallel to these analyses, the role of labour market status (Wiertz & Rodon, 2021) as well as the pandemic (Bol et al., 2021; Mazza & Scipioni, 2022; Stockemer et al., 2021) have been found to be related to political ideology or attitudes. On top of these, there are conflicting arguments in the literature regarding the relevance of gender as a political cleavage in the coming future (Dassonneville, 2020; Gethin et al., 2022). Drawing on these previous accounts, the current paper aimed at providing new evidence on the interplay between labour market status and the pandemic in altering political ideology of women and men differently. Importantly, the paper provides some insights of the extent to which gender will play a role in Spanish politics in the near future.

The paper constructs a database with monthly frequency during April 2008 to July 2021 on more than 600,000 individuals, combining information on survey data from the Spanish CIS Barometer and the ECDC for official records of the pandemic, at either national or regional levels. Further, the extensive information of the CIS Barometer allows us to delve into the role of labour market status and generation in shaping political ideology. The results suggest that home-maker status is important to understand the conversion into a modern gender gap in Spain in October 2018. The results generally associate women from the Z-Generation with a tendency towards leftist ideals, whereas the results identify the opposite trend for Z-Generation men. Thus, one of the main results of the econometric analysis here is that generational replacement can contribute to fuelling gender as a real political cleavage in Spain.

The results here contribute directly to the works of Dassonneville (2020), Gethin et al. (2022) and Wiertz & Rodon (2021). Wiertz & Rodon (2021) find that unemployment increases the probability of leaning left, and fail to associate people that are not in the labour force with a significant role in political ideology. Separately, Wiertz & Rodon (2021) find evidence that women are also more likely to lean left. However, the interaction between gender and labour market status remains largely unexplored in previous research. In this paper, I provide first evidence that labour market status impacts the political ideology of women and men differently. By her part, Dassonneville (2020) analyses how generational replacement might impact on gender gaps in political ideology. While she interacts gender with time dummies for decades, she does not consider the joint effect of gender and labour market and gender and generation. In this paper, I specified models that allow us to discern the extent which factor, among generational replacement and labour market status, is a better predictor for gender gaps in political ideology. Finally, the results here support the argument in Gethin et al. (2022) that gender is a real cleavage in Western countries' politics.

The results regarding the role of the pandemic go in line with recent literature on the political behavioural consequences of the pandemic and gender differences in them (Mazza & Scipioni, 2022). For the interpretation of these results, I draw on the Jost's theory that suggest that economic downturns and crisis posit an existential threat that has psychological effects that promote more conservative ideals. At the same time, the experience of discrimination promotes more leftist ideals, and parties on the left usually propose pro-redistributive and pro-poor policies that correct for disparities in the labour market and the society at large. In the case of gender and the pandemic, the pre-existing gender disparities in both the labour market and unpaid production were reinforced

in the COVID-19 crisis. The role of women at the forefront of the provisioning of health services, both at paid and unpaid sides, couple with the widening of gender disparities in the labour market and gender unbalanced distribution of care responsibilities. Thus, the pro-conservative effect of the existential threat inherent in the pandemic, which is demonstrated for men, could be countervailed and eventually dominated by a pro-progressive effect of the experience of discrimination in the labour market and unequal gender distribution of home production in the case of women. It is relevant in this context how gender politics and feminist ideals were embraced by the left to understand the turn of political ideology of women, and specifically, women employed in the labour market (Bari-sione, 2014; Ilkcaracan, 2019). Thus, the ultimate effect of the pandemic in political ideology differ by gender, as women and men experienced different existential threats and (paid and unpaid) work experiences.

The findings provided here are particularly interesting to understand the evolution of gender disparities in political ideology in Spain in the post-pandemic era. The perpetuation of gender disparities in the distribution of household production, and at the same time, gender inequalities and discrimination in the workplace, can further the gender cleavage in political ideology. The paper has breathed new life in the gender-generational gap, which could be an important feature in the Spanish party politics, as feminist populist parties and far-right parties might compete for gaining support from younger voters. This paper could be expanded in two main ways. First, using additional data on the role of motherhood and penalties in the labour market can allow for intra-gender considerations in political ideology divides. Second, a cross-country comparison using other Western countries can provide further leverage of the gender and pandemic linkages with political ideology.

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## References

Abendschön, S., & Steinmetz, S. (2014). The gender gap in voting revisited: Women's party preferences in a european context. *Social Politics*, 21(2), 315–344.

- Adams-Prassl, A., Boneva, T., Golin, M., & Rauh, C. (2020). Inequality in the impact of the coronavirus shock: Evidence from real time surveys. *Journal of Public Economics*, *189*, 104245.
- Alon, T., Coskun, S., Doepke, M., Koll, D., & Tertilt, M. (2022). From mancession to shecession: Women’s employment in regular and pandemic recessions. *NBER Macroeconomics Annual*, *36*(1), 83–151.
- Alon, T., Doepke, M., Olmstead-Rumsey, J., & Tertilt, M. (2020). *This time it’s different: The role of women’s employment in a pandemic recession* (Tech. Rep.). National Bureau of Economic Research.
- Altuzarra, A., Gálvez-Gálvez, C., & González-Flores, A. (2020). Do spanish dual-earner couples share unpaid work equally? *Social Indicators Research*, *150*(3), 731–763.
- Amat, F., Arenas, A., Falcó-Gimeno, A., & Muñoz, J. (2020). Pandemics meet democracy. experimental evidence from the covid-19 crisis in spain.
- Anduiza, E., & Rico, G. (2022). Sexism and the far-right vote: The individual dynamics of gender backlash. *American Journal of Political Science*.
- Ares, M., Bürgisser, R., & Häusermann, S. (2021). Attitudinal polarization towards the redistributive role of the state in the wake of the covid-19 crisis. *Journal of Elections, Public Opinion and Parties*, *31*(sup1), 41–55.
- Barberia, L., Plümper, T., & Whitten, G. D. (2021). The political science of covid-19: An introduction. *Social Science Quarterly*, *102*(5), 2045–2054.
- Barisione, M. (2014). Debunking the myth of a “traditional” gender gap in the electoral support for silvio berlusconi in italy (1994–2013). *Electoral Studies*, *36*, 117–128.
- Bauer, P. C., Barberá, P., Ackermann, K., & Venetz, A. (2017). Is the left-right scale a valid measure of ideology? individual-level variation in associations with “left” and “right” and left-right self-placement. *Political Behavior*, *39*, 553–583.
- Bol, D., Giani, M., Blais, A., & Loewen, P. J. (2021). The effect of covid-19 lockdowns on political

- support: Some good news for democracy? *European Journal of Political Research*, 60(2), 497–505.
- Box-Steffensmeier, J. M., De Boef, S., & Lin, T.-M. (2004). The dynamics of the partisan gender gap. *American Political Science Review*, 98(3), 515–528.
- Caravantes, P. (2021). Tensions between populist and feminist politics: The case of the spanish left populist party podemos. *International Political Science Review*, 42(5), 596–612.
- Dassonneville, R. (2020). Change and continuity in the ideological gender gap a longitudinal analysis of left-right self-placement in oecd countries. *European Journal of Political Research*.
- Del Boca, D., Oggero, N., Profeta, P., & Rossi, M. (2020). Women’s and men’s work, housework and childcare, before and during covid-19. *Review of Economics of the Household*, 18(4), 1001–1017.
- De Vries, C. E., Hakhverdian, A., & Lancee, B. (2013). The dynamics of voters’ left/right identification: The role of economic and cultural attitudes. *Political Science Research and Methods*, 1(2), 223–238.
- Diekman, A. B., & Schneider, M. C. (2010). A social role theory perspective on gender gaps in political attitudes. *Psychology of Women Quarterly*, 34(4), 486–497.
- Donovan, T. (2023). Measuring and predicting the radical-right gender gap. *West european politics*, 46(1), 255–264.
- Edlund, L., & Pande, R. (2002). Why have women become left-wing? the political gender gap and the decline in marriage. *The Quarterly Journal of Economics*, 117(3), 917–961.
- Emmenegger, P., Marx, P., & Schraff, D. (2015). Labour market disadvantage, political orientations and voting: how adverse labour market experiences translate into electoral behaviour. *Socio-Economic Review*, 13(2), 189–213.
- Farré, L., Fawaz, Y., González, L., & Graves, J. (2021). Gender inequality in paid and unpaid work during covid-19 times. *Review of Income and Wealth*.
- Fortunato, D., Stevenson, R. T., & Vonnahme, G. (2016). Context and political knowledge: Ex-



- plaining cross-national variation in partisan left-right knowledge. *The Journal of Politics*, 78(4), 1211–1228.
- Gethin, A., Martínez-Toledano, C., & Piketty, T. (2022). Brahmin left versus merchant right: Changing political cleavages in 21 western democracies, 1948–2020. *The Quarterly Journal of Economics*, 137(1), 1–48.
- Giger, N. (2009). Towards a modern gender gap in europe? a comparative analysis of voting behavior in 12 countries. *The Social Science Journal*, 46(3), 474–492.
- Glenn, N. D. (1974). Aging and conservatism. *The ANNALS of the American Academy of Political and Social Science*, 415(1), 176–186.
- Hernández-Albújar, Y., Sáez, G., & Garrido-Macías, M. (2022). The impact of household labor distribution on domestic conflicts during covid-19 confinement orders. *Feminist Economics*, 1–25.
- Hupkau, C., & Ruiz-Valenzuela, J. (2022). Work and children in spain: challenges and opportunities for equality between men and women. *SERIEs*, 13(1), 243–268.
- Ilkharacan, I. (2019). Economic and political gender gaps and the rise of populism. *Journal of International Affairs*, 72(2), 191–208.
- Inglehart, R., & Klingemann, H.-D. (1976). Party identification, ideological preference and the left-right dimension among western mass publics. *Party identification and beyond*, 243–273.
- Inglehart, R., & Norris, P. (2000). The developmental theory of the gender gap: Women’s and men’s voting behavior in global perspective. *International Political Science Review*, 21(4), 441–463.
- Inglehart, R., Norris, P., Ronald, I., et al. (2003). *Rising tide: Gender equality and cultural change around the world*. Cambridge University Press.
- Iversen, T., & Rosenbluth, F. (2008). Work and power: The connection between female labor force participation and female political representation. *Annu. Rev. Polit. Sci.*, 11, 479–495.
- Iversen, T., Rosenbluth, F., & Soskice, D. (2005). Divorce and the gender division of labor in

- comparative perspective. *Social Politics: International Studies in Gender, State & Society*, 12(2), 216–242.
- Jost, J. T., Banaji, M. R., & Nosek, B. A. (2004). A decade of system justification theory: Accumulated evidence of conscious and unconscious bolstering of the status quo. *Political psychology*, 25(6), 881–919.
- Jost, J. T., Federico, C. M., & Napier, J. L. (2009). Political ideology: Its structure, functions, and elective affinities. *Annual review of psychology*, 60, 307–337.
- Jost, J. T., Glaser, J., Kruglanski, A. W., & Sulloway, F. J. (2003). Political conservatism as motivated social cognition. *Psychological bulletin*, 129(3), 339.
- Kabeer, N., Razavi, S., & van der Meulen Rodgers, Y. (2021). *Feminist economic perspectives on the covid-19 pandemic* (Vol. 27) (No. 1-2). Taylor & Francis.
- Kostelka, F., Blais, A., & Gidengil, E. (2019). Has the gender gap in voter turnout really disappeared? *West European Politics*, 42(3), 437–463.
- Kroh, M. (2007). Measuring left–right political orientation: The choice of response format. *Public Opinion Quarterly*, 71(2), 204–220.
- Kurer, T. (2020). The declining middle: Occupational change, social status, and the populist right. *Comparative Political Studies*, 53(10-11), 1798–1835.
- Liddell, T. M., & Kruschke, J. K. (2018). Analyzing ordinal data with metric models: What could possibly go wrong? *Journal of Experimental Social Psychology*, 79, 328–348.
- Likert, R. (1932). A technique for the measurement of attitudes. *Archives of psychology*.
- Lipset, S. M. (1963). *Political man: the social basis of modern politics*. Doubleday, NY.
- Lipset, S. M., Rokkan, S., et al. (1967). *Cleavage structures, party systems, and voter alignments: an introduction*. Free Press New York.
- Marx, P. (2014). Labour market risks and political preferences: The case of temporary employment.

- European Journal of Political Research*, 53(1), 136–159.
- Mazza, J., & Scipioni, M. (2022). The gender gap in support for governments during the covid crisis. *Journal of European Public Policy*, 1–17.
- Nieves, C. D. P., Gaddis, I., & Muller, M. (2021). *Gender and covid-19: What have we learnt, one year later?* World Bank.
- Norrander, B., & Wilcox, C. (2008). The gender gap in ideology. *Political Behavior*, 30(4), 503–523.
- Rosenfeld, D. L., & Tomiyama, A. J. (2021). Can a pandemic make people more socially conservative? political ideology, gender roles, and the case of covid-19. *Journal of Applied Social Psychology*, 51(4), 425–433.
- Schraff, D. (2021). Political trust during the covid-19 pandemic: Rally around the flag or lockdown effects? *European journal of political research*, 60(4), 1007–1017.
- Sevilla, A., & Smith, S. (2020). Baby steps: The gender division of childcare during the covid-19 pandemic. *Oxford Review of Economic Policy*, 36(Supplement\_1), S169–S186.
- Shorrocks, R. (2018). Cohort change in political gender gaps in europe and canada: the role of modernization. *Politics & Society*, 46(2), 135–175.
- Stockemer, D., Plank, F., & Niemann, A. (2021). The covid-19 pandemic and government responses: A gender perspective on differences in public opinion. *Social Science Quarterly*, 102(5), 2383–2393.
- Van Ditmars, M. M. (2023). Political socialization, political gender gaps and the intergenerational transmission of left-right ideology. *European Journal of Political Research*, 62(1), 3–24.
- Wiertz, D., & Rodon, T. (2021). Frozen or malleable? political ideology in the face of job loss and unemployment. *Socio-Economic Review*, 19(1), 307–331.
- Zaslove, A., Geurkink, B., Jacobs, K., & Akkerman, A. (2021). Power to the people? populism, democracy, and political participation: a citizen's perspective. *West European Politics*, 44(4), 727–751.

# Appendix

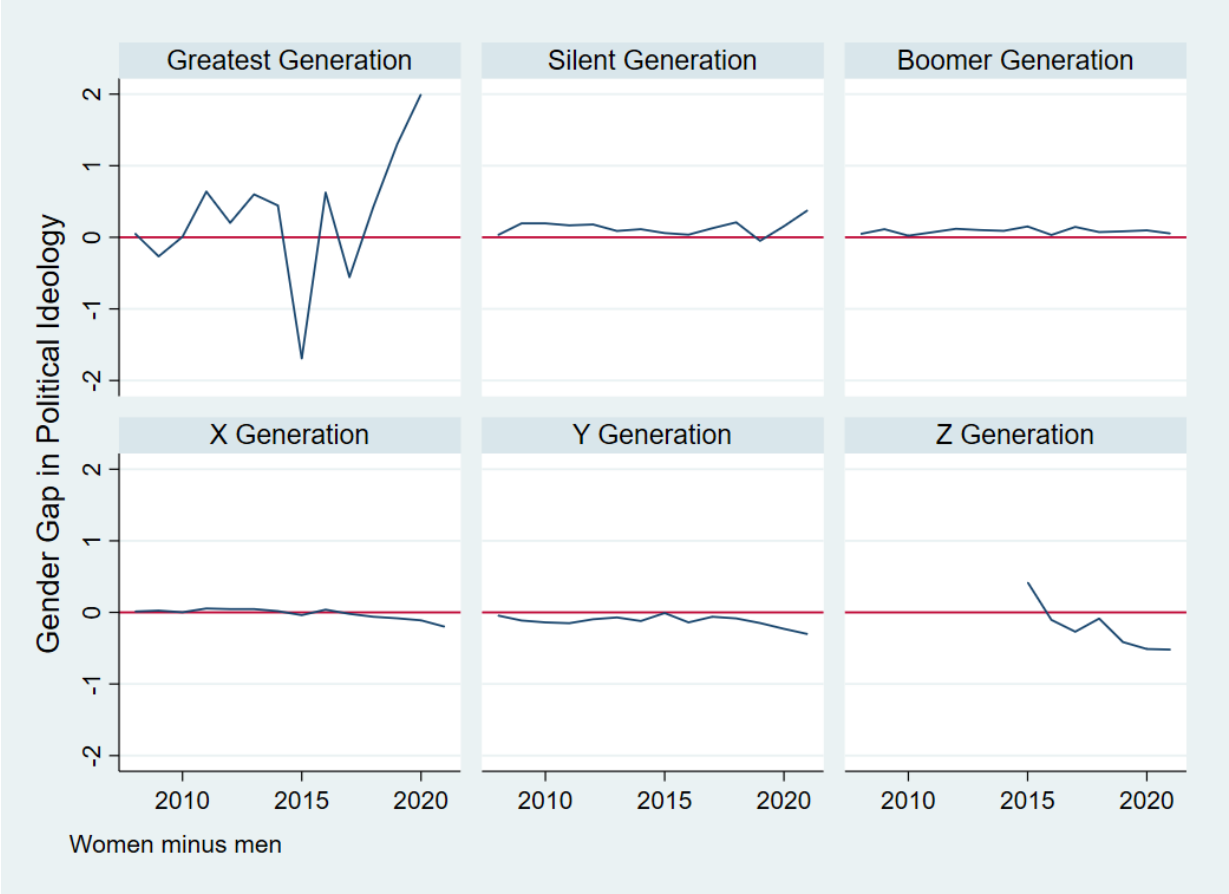


Figure A1: Evolution of Gender Gaps by Generations

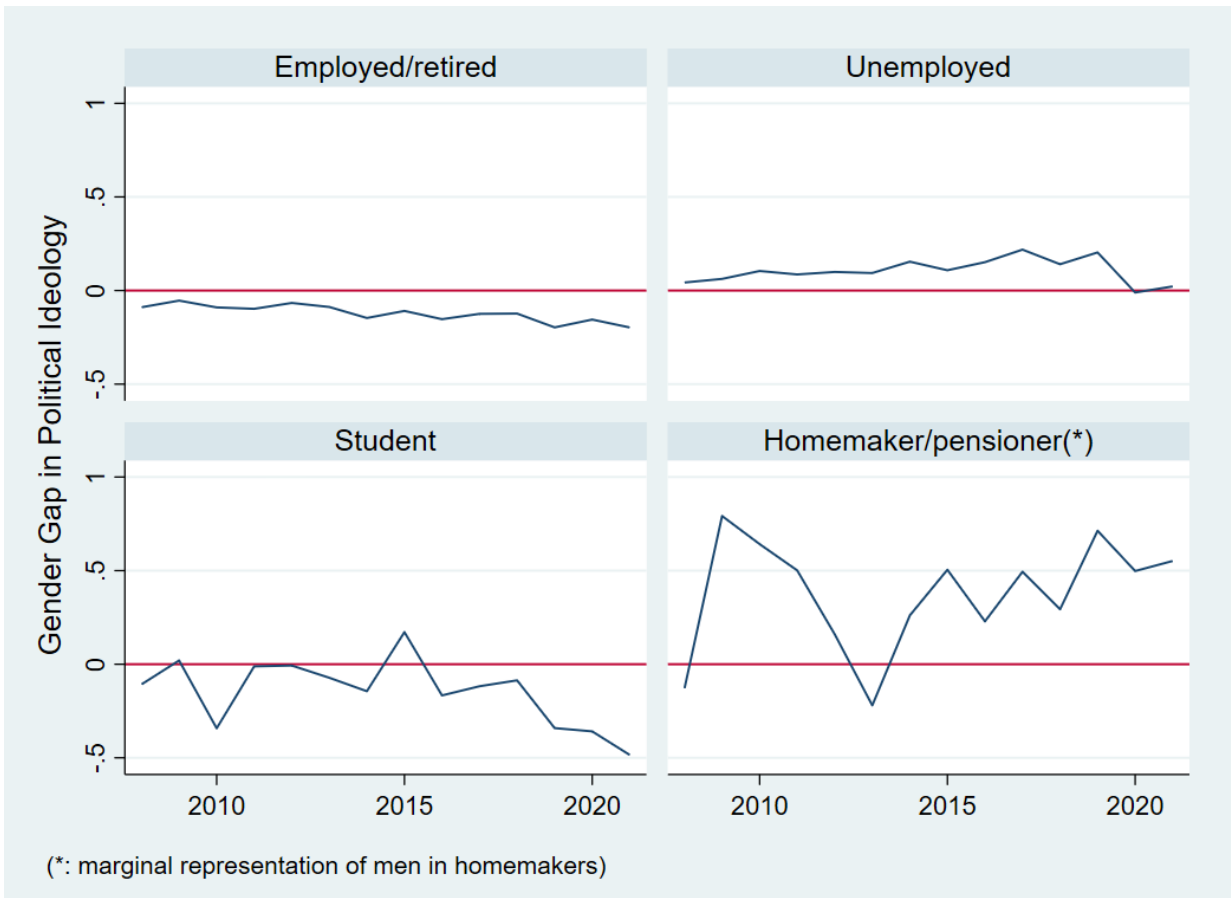


Figure A2: Evolution of Gender Gaps by LMS

Table A1: Summary statistics

Variable	Mean	Std. Dev.	Min	Max
Political Ideology	4.67	1.94	1.00	10.00
Women	0.49	0.50	0.00	1.00
No education	0.05	0.21	0.00	1.00
Primary or secondary education	0.38	0.48	0.00	1.00
Upper secondary education	0.14	0.35	0.00	1.00
Vocational education	0.18	0.38	0.00	1.00
Tertiary education	0.26	0.44	0.00	1.00
Married or cohabits	0.51	0.50	0.00	1.00
Age	48.31	17.33	18.00	98.00
Religiosity	0.71	0.45	0.00	1.00
Migrant	0.02	0.15	0.00	1.00
Voting turnout	0.84	0.36	0.00	1.00
Working class	0.33	0.47	0.00	1.00
Employed or retired	0.68	0.47	0.00	1.00
Unemployed	0.18	0.38	0.00	1.00
Student	0.05	0.21	0.00	1.00
Home-maker/pensioner	0.09	0.29	0.00	1.00
Greatest generation	0.00	0.06	0.00	1.00
Silent generation	0.14	0.34	0.00	1.00
Boomer generation	0.30	0.46	0.00	1.00
X generation	0.33	0.47	0.00	1.00
Y generation	0.21	0.41	0.00	1.00
Z generation	0.02	0.15	0.00	1.00
COVID-19 deaths (national level)	.32	2.47	-.23	25.38
COVID-19 cases (regional level)	-.30	2.03	-.73	20.67

Observations used in Column 4 in Table 1 ( $N = 287,546$ )

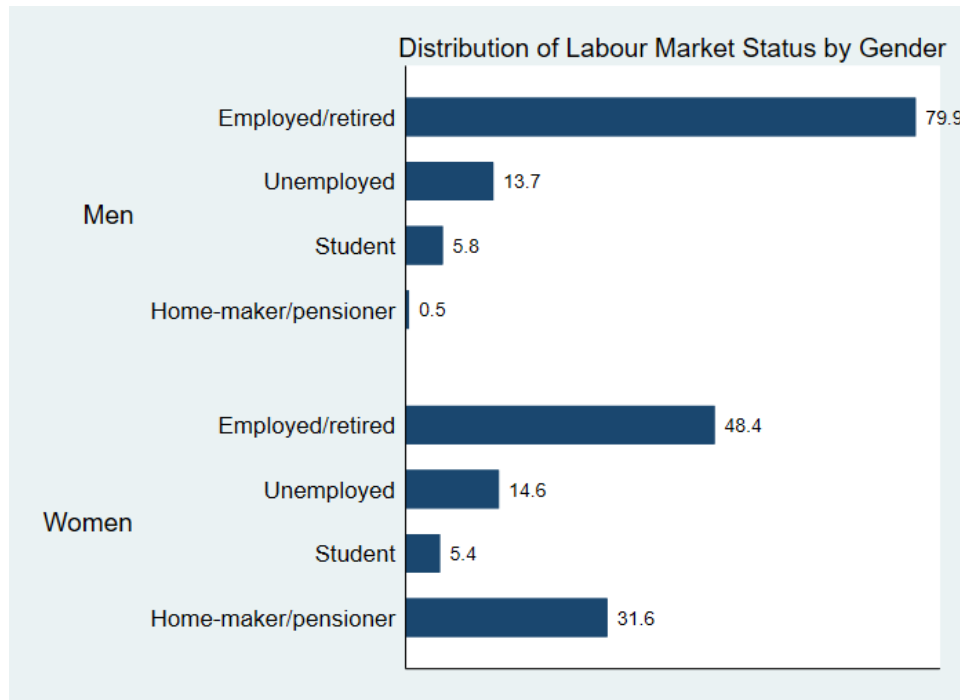


Figure A3: Distribution of Labour Market Status by Gender

Table A2: Gender-Generational Gap and the Pandemic in Political Ideology

Dependent variable: 1-10 left-right self-placement		
	(1)	(2)
Women	-0.189*** (0.018)	-0.185*** (0.017)
Unemployed	-0.130*** (0.032)	-0.129*** (0.032)
Student	-0.121** (0.046)	-0.121** (0.046)
Home-maker/pensioner	0.051 (0.078)	0.051 (0.078)
Women*Unemployed	0.083*** (0.031)	0.081*** (0.030)
Women*Student	-0.057 (0.038)	-0.058 (0.038)
Women*Home-maker	0.181** (0.079)	0.179** (0.079)
National-level COVID-19 deaths	0.015*** (0.005)	0.020*** (0.005)
Women*National-level COVID-19 deaths		-0.009** (0.004)
Region, and time FE	yes	yes
Full set of controls	yes	yes
Generation FE	yes	yes
No. of Observations	287546	287546
R-sq.	0.152	0.152

Note Table A2: Full set of controls include cohabitation, age, age sq., educational attainment, religiosity, marital status, migrant status, working class and voter turnout. Variable to measure the pandemic incidence is national total number of deaths attributed to COVID-19 virus. Clustered standard errors by region and cohort in parentheses.

Table A3: Gender-Generational Gap and the Pandemic in Political Ideology

	(1)
Dep. variable: Left-Right scale	
Women	-0.122 (0.118)
Silent	0.289** (0.122)
Boomer	0.052 (0.128)
X Gen	0.259* (0.132)
Y Gen	0.321** (0.137)
Z Gen	0.444*** (0.147)
Women*Silent	0.083 (0.123)
Women*Boomer	0.000 (0.120)
Women*X Gen	-0.109 (0.118)
Women*Y Gen	-0.217* (0.118)
Women*Z Gen	-0.355*** (0.126)
Women*Unemployed	0.129*** (0.024)
Women*Student	0.128*** (0.036)
Women*HM/pensioner	0.127 (0.077)
Unemployed	-0.152*** (0.030)
Student	-0.208*** (0.051)
Home-maker/pensioner	0.059 (0.078)
COVID-19	0.022*** (0.004)
Women*COVID-19	-0.014*** (0.004)
No. of Observations	287546
R-sq.	0.153

Note Table A3: Full set of controls include cohabitation, age, age sq., educational attainment, religiosity, marital status, migrant status, working class and voter turnout.

Clustered standard errors by region and cohort in parentheses.



Table A4: Gender-Generational Gaps in Political Polarization - Probit Models

	(1)	(2)	(3)
Dep. variable: Prob. of being	Leftist	Moderate	Rightist
Women	-0.109 (0.074)	-0.110* (0.059)	0.125** (0.052)
Silent	-0.207*** (0.072)	0.012 (0.044)	0.152*** (0.058)
Boomer	-0.078 (0.070)	-0.008 (0.054)	0.070 (0.069)
X Gen	-0.223*** (0.073)	-0.022 (0.062)	0.201*** (0.075)
Y Gen	-0.238*** (0.083)	-0.017 (0.060)	0.213*** (0.075)
Z Gen	-0.251*** (0.087)	-0.010 (0.066)	0.229*** (0.080)
Unemployed	0.084*** (0.021)	-0.057*** (0.012)	-0.004 (0.017)
Student	0.163*** (0.042)	0.047 (0.039)	-0.188*** (0.027)
Home-maker/pensioner	-0.020 (0.049)	-0.136*** (0.036)	0.171*** (0.040)
Women*Unemployed	-0.110*** (0.016)	0.043*** (0.016)	0.041** (0.017)
Women*Student	-0.066** (0.032)	0.031 (0.025)	0.026 (0.027)
Women*HM/pensioner	-0.117** (0.051)	0.084** (0.038)	-0.043 (0.042)
Women*Silent	0.066 (0.077)	-0.020 (0.056)	0.004 (0.051)
Women*Boomer	0.127* (0.076)	0.035 (0.058)	-0.042 (0.051)
Women*X Gen	0.189*** (0.072)	0.032 (0.059)	-0.104** (0.051)
Women*Y Gen	0.232*** (0.077)	0.021 (0.060)	-0.139** (0.055)
Women*Z Gen	0.336*** (0.080)	-0.070 (0.069)	-0.144** (0.059)
COVID-19 cases (regional level)	-0.019*** (0.002)	0.009*** (0.002)	0.003 (0.003)
Women*COVID-19	0.017***	-0.013***	0.001
No. of Observations	356500	356500	356500
Pseudo R-sq	0.1099	0.0225	0.0738

Note Table A4: Full set of controls include cohabitation, age, age sq., educational attainment, religiosity, marital status, migrant status, working class and voter turnout.

Clustered standard errors by region and cohort in parentheses.



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