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“Votes for Women” on the edge of urbanization

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Abstract

This paper explores the existence of a gender voting gap in an economy that lies on the edge of urbanization. Building on a unique community level dataset for Greece in 1950s we investigate: (i) the impact of women’s enfranchisement on party vote shares and (ii) the role of female labour force participation on the observed gender voting gap. Our analysis provides strong evidence in favour of the “traditional gender voting gap” (women vote more conservatively compared to men) in the urbanized communities of our sample, and no gender voting differences in the rural ones. Our empirical findings also suggest that the observed gender voting gap is highly conditional upon the level of “Out of Labour Force” female population. This is because in an economic environment characterized by limited demand of female labour force, women tend to support more vigorously the sanctity of family values and therefore vote more conservatively compared to men.

JEL classification: D72

Keywords: women’s suffrage; political preferences; women’s labour market participation

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1. Introduction

Women's suffrage has been achieved in the majority of countries around the world, many times through persistent collective action and struggle (see, Banaszak 1996). A rich and growing empirical literature has associated women's enfranchisement with various public policy changes – such as increased government spending (see, e.g., Lott and Kenny, 1999; Aidt and Dallal, 2008; Bertocchi, 2011), or changes in the composition of the budget in favour of health and education spending (see, e.g., Miller, 2008; Moehling and Thomasson, 2012; Carruthers and Wanamaker, 2015; Kose et al., 2021).¹ However, the influence of women's enfranchisement on the electoral fortunes of political parties (that in turn shape these policy changes) has been much less investigated (see, e.g., Corder and Woldbrecht, 2016; Teele, 2018a). A potential explanation is that according to a number of scholars, the interests of family members are fully aligned (the so-called “family vote hypothesis”) and therefore extending voting rights to women would not have major consequences on the electoral strength of the political parties (see, e.g., McConaughy, 2013).²

However, starting from Tingsten (1937) and Duverger (1955) – the earliest systematic surveys of voting behaviour – a large number of empirical studies provide evidence of a substantial gender divergence in voting choices. In particular, most of the empirical studies that focus on US presidential elections, suggest that women were keener to vote for the Republican Party in the 1950s and 1960s (see, e.g., Campbell et al., 1960; Corder and Wolbrecht, 2016). Similarly, in most European countries, the female electorate supported Christian Democratic parties during the first half of the 20th century

¹ A parallel strand of the literature investigates how female political representation has shaped public policies. For an excellent review of this literature, see Hessami and da Fonseca (2020).

² A number of empirical studies employing household survey data provide evidence in favour of the *family vote hypothesis* (see, e.g., Zuckerman et al., 1998; Coffe and Need, 2010). This strand of the literature most usually suggests that families with incomes below the mean would favour more redistributive policies, in line with the standard Meltzer and Richard (1981) argument. For a detailed description of how the so-called *family vote hypothesis* leads to no gender gap in political preferences and concludes to the revival of the standard Meltzer and Richard (1981) argument, see Morgan-Collins and Teele (2018) and Teele (2018b).

(see, e.g., Duverger, 1955; Baxter and Lansing, 1983; Randall, 1987). This stylized fact is often described in the relevant literature as the “traditional gender voting gap” and it is mostly attributed to the social position of the female population, mostly with respect to its participation into the paid labour force (see, Baxter and Lansing, 1983; Mayer and Smith, 1985).

Interestingly, this trend in gender voting gap seems to have altered during the early 1980s. Specifically, from that period on, the female electorate voted more intensively in favour of the Democratic Party in the US presidential elections (see, e.g., Cascio and Shenvav, 2020; Gillion et al., 2020) and in favour of left-wing parties in most European countries (see, e.g., Inglehart and Norris, 2003; Giger, 2009). A number of scholars attribute this “modern gender voting gap” to the increased demand for female labour force that came as a result of the enormous expansion of the clerical sector during that period (see Inglehart and Norris, 2000; Iversen and Rosenbluth, 2010 for more details on this). The rationale is that women voted for left-wing parties since they are in favour of specific welfare policies (such as childcare and elderly care) that relieve them from family burdens and allow them to invest in marketable skills that increase their economic independence (see, Iversen et al., 2005; Iversen and Rosenbluth, 2006).

The paper at hand investigates empirically the potential existence of a gender voting gap in Greece using data of parliamentary elections before and after the enfranchisement of women in 1952. In particular, on 28 May 1952, a new electoral law provided voting rights to all adult women in Greece regardless of personal characteristics (such as education and income) – doubling as a result the electorate (see Samiou, 2013). Interestingly, the Ministry of Interior failed to update the electoral registers on time and therefore women could not participate in the general election that took place some months later, on 16 November 1952. Eventually, the reform was enacted and women went to the polls in seven specific electoral prefectures where by-elections took place in 1953 and 1954, aiming to fill seats that became vacant due to the death of an elected MP or the cancellation of the 1952 election result by the electoral court. A set of special characteristics that we discuss in Section 2 (e.g.,

temporal proximity to the election of 1952, stability of the political system) offer an appealing case study.³ To this end, we construct a unique community-level dataset for these seven Greek electoral prefectures where we can observe the change in electoral outcomes between 1953/54 and 1952 – i.e., with and without women in the electorate. This allows us to employ a difference-in-differences (DD) methodology where we exploit the uneven spatial variation of female electors as a measure of the received “dosage” of the franchise reform in different communities (see, e.g., Berlinski and Dewan, 2011; Larcinese, 2014; Carruthers and Wanamaker, 2015; de Bromhead et al., 2020).

This reform allows us to investigate the existence and the direction of a gender gap in political preferences on the edge of urbanization (i.e., as an economy moves away from the agricultural phase). An interesting characteristic during the early phase of industrialization, which is observable in the case of Greece during the 1950s, is that female labour force participation is higher in rural areas compared to the more developed/urbanized ones (see, e.g., Durand, 1975; Schultz, 1991; Goldin, 1995).⁴ This phenomenon – which appears to be of great importance for the purposes of our study – can be explained on the basis of the theoretical arguments developed in the pioneer studies of Boserup (1970) and Goldin (1995). Specifically, in the early phase of industrialization, the locus of the production shifts from the family business to the factory or to other places of paid labour. Therefore, in more urbanized areas, male family members work outside the family farm at a higher wage, whereas women stay at home and allocate most of their time to household activities, such as childbearing and rearing. This drop is attributed to a *social stigma* attached to women working in manual jobs outside the family (see, e.g., Goldin 1990; 1995 for more details on this).⁵

³ For instance, using data from the general election of 1956, rather than the by-elections, would be problematic in our setting since it was conducted under a new electoral law and structural changes in the formation of competing political parties.

⁴ For an excellent review of the relevant literature on female labour force participation, see Giuliano (2014).

⁵ The origins of this *social stigma* norm lie on the following rationale. Only a husband who is lazy and careless of his family would allow his wife to be employed in such a “loud, dirty and dangerous” working position, as those available in the manufacturing sector during the early stages of industrialization.

Our empirical findings provide evidence in favour of a *traditional gender voting gap* in the urban electoral prefecture of Thessaloniki – the second most urbanized prefecture of Greece after the capital city of Athens – whereas no effect is found in the panel of the remaining six predominantly rural electoral prefectures of Drama, Epidavros-Limira, Evros, Grevena, Phthiotis and Rethymno. Moreover, our empirical analysis suggests that the pro-right shift caused by the suffrage is positively associated with differences in the level of “*Out of Labour Force*” (*OLF, hereafter*) *Women*. These results - obtained from aggregate data- are in line with individual and intra-household evidence according to which in an economic environment characterized by limited demand for female labour force, women tend to support more vigorously the sanctity of family values and therefore to vote more conservatively compared to their male counterparts, giving rise to the *traditional gender voting gap* (see Iversen and Rosenbluth, 2010). This is because if the family were to break up, the man has the option to take his marketable skills and start a new family, while the woman, who is mostly equipped with household specific skills, would face a significant drop in her economic welfare (see Iversen and Rosenbluth, 2006; 2010).

To the best of our knowledge, our study is the first that employs advanced econometric tools and electoral data before and after the reform in Greece to investigate the existence of a gender voting gap during that period. Previous studies provide descriptive evidence in favour of the *traditional gender voting gap* using survey data from the mid of the 1970’s to the beginning of the 1980’s (see Macridis, 1981; Tsokou et al., 1986; Pantelidou-Maloutas, 1992). Second, we contribute to a literature that investigates the impact of suffrage extensions on the electoral fortunes of parties (see, e.g., Berlinski and Dewan, 2011; Larcinese, 2014). More specifically, though, we contribute to a literature that examines the existence of a gender gap in political preferences on the aftermath of women enfranchisement (see, e.g., Corder and Woldbrecht, 2016; Morgan-Collins, 2021). Since most of these studies focus on economies that are basically industrialized during the period of women’s

enfranchisement, an additional value added of our study is that we provide evidence for a country at the edge of urbanisation (see, also de Bromhead et al., 2020).

The rest of the paper is organised as follows. Section 2 provides the institutional background. Section 3 discusses the conceptual framework upon which we base our analysis. Section 4 describes our data, and Section 5 our empirical strategy, identification threats and baseline findings. Section 6 provides additional empirical results on the mechanism explaining the baseline results. Finally, Section 7 summarizes the main points of the analysis.

2. The reform and the by-elections of 1953/54

For a long period, none of the major political parties in Greece was actually in favour of women enfranchisement. Since the Greek civil war (1946-1949) had just finished, all major political actors were afraid that such a radical reform might have unintended consequences concerning the empowerment of the communist party and the stability of the Greek post-war political landscape.

Then, on 22 April 1949 the centre-right wing coalition government of Themistoklis Sofoulis took the initiative to introduce a Bill that provided full voting rights for local elections to all women 25 years old and over. This change was attributed to the plan of Greece to join the Security Council of the United Nations, which imposed to take specific steps that would ensure political equality between men and women (see, e.g., Samiou, 2013).⁶ However, since none of the major political parties in Greece was actually in favour of women enfranchisement, the Bill was never debated in the parliament and remained in abeyance for the next two years. Finally, in March 1951, the centre coalition government of Nikolaos Plastiras, decided to introduce the Bill for debate in the parliament. After long and harsh disagreements between deputies both across and within the parties, the Bill enacted as Law

⁶ The stylized fact that the extension of the franchise to women in Greece came as a response to foreign pressures (i.e., from the UN) -and therefore is orthogonal to domestic political claims- mitigates some important endogeneity concerns. For example, it is less likely women's vote to be driven by dues to specific parties that supported their demands for political rights. See Appendix A for more details on this.

on 31 March 1951.⁷ So, in the local elections that took place on 15 April 1951 (the first since 1934), a total of 734,750 women went to the polls. The major conclusion was that females voted in a more conservative way than it was generally expected and for sure more conservatively compared to males. According to Nikolakopoulos (2001), in the capital city of Athens Konstantinos Kotzias – who was the candidate supported by the right-wing People’s Party – received much higher vote shares in women’s polling stations relative to those of men.

The results of the local election, combined with the persistent and increased pressures from the United Nations to ensure political equality between men and women, led to an acceleration of the legislative procedures aiming to provide voting rights to women also in parliamentary elections. Hence, in February 1952, the centrist coalition government of Nikolaos Plastiras introduced a new Bill for debate in the parliament, which finally enacted as Law on 28 May 1952. At that point, the political parties and the electorate in Greece believed that women would participate in the upcoming parliamentary elections that had been arranged for 16 November 1952. However, the Ministry of Interior refuted that option by stating that it was technically impossible to update the electoral registers in a time period of less than six months.⁸ Therefore, women did not participate in the parliamentary elections of 1952, though they voted in seven special elections between 1953 and 1954 that took place in order to fill parliamentary seats that became vacant due to the death of an elected MP or the cancellation of the 1952 election result by the electoral court – in the prefectures of Thessaloniki,

⁷ More precisely, the right-wing *People’s Party* (Laikon Komma) – the largest party during that period – voted massively against women enfranchisement, whereas two of the major centre-liberal parties, the *Liberal Party* (Komma Fileleftheron) and the *Georgios Papandreou Party* (Komma Georgiou Papandreou) were split with some of their deputies finally voting in favour of the Bill and others deciding to abstain from the process. Only two smaller parties voted in favour of the Bill. Namely, the left-wing *Democratic Alignment* (Dimkratiki Parataxis) of Alexandros Svolos and the *National Progressive Center Union* (Ethniki Proodeytiki Parataxis Kentrou) of Nikolaos Plastiras that was the third major center-liberal party of that period (see Appendix A2 for more details on this).

⁸ It is important to note that the electorate -and therefore the electoral registers-for the national elections, was different to that of the local elections (see Samiou, 2013 for more details on this).

Drama, Epidavros-Limira, Evros, Grevena, Phthiotis and Rethymno.⁹ (In Appendix A we provide more details about the history of female enfranchisement in Greece).

Our analysis focuses on the sample of by-elections for several reasons. First, their timing was obviously exogenous to economic conditions and parties' influence (see Baskaran et al., 2015). Second, and most important, by exploiting information from two sequential elections with close temporal proximity (i.e., the 1952 pre-reform elections and the 1953/54 by-elections) our analysis seeks to mitigate concerns that our results are affected by time-varying community characteristics, or other compound treatments, such as major changes in the political landscape. In particular, the purely majoritarian electoral system did not change between the election of 1952 and the by-elections of 1953/54. In addition, during the period under investigation the major political parties remained the same, and they were governed by the same political leaders.¹⁰ In sharp contrast, the Greek political landscape presents two major changes before the general election of 1956 - the first in which women had the right to vote in the whole Greek territory. First, parties competed under a very different and highly controversial electoral system enacted by PM Konstantinos Karamanlis: a reinforced (weighted) proportional representation system, the so-called "trifasiko" (see, e.g., Nikolakopoulos, 2001). Also, the political parties that participated in the elections of 1952 and the by-elections of 1953/54, were replaced by two broad coalition of parties, namely the (conservative) National Radical Union and the Liberal Democratic Union, under new political leaders.

⁹ It is worth noting that the electoral law [2228/1952] at the time of the 1952 election was purely majoritarian with 99 small prefecture-wide electoral constituencies. This law had provision for filling vacant seats in electoral constituencies between national elections through a by-election (see Nikolakopoulos, 2001 for more details on this).

3. Conceptual framework

3.1 Female labour force participation and the gender gap in political preference

Several studies on economic development suggest that there is a U-shaped relationship between economic development and female labour force participation (see e.g., Durand, 1975; Schultz, 1991; Goldin, 1995). Specifically, when incomes are extremely low and the agricultural sector dominates, women are in the labour force in a great extent. They sometimes work in the fields along with men, but more often work with the rest household members in home workshop production.¹¹ There is an obvious productivity advantage of the male brown in food production (see, e.g., Iversen and Rosenbluth, 2010), but, at the same time, a number of important economic activities take place in home workshop production (e.g., spinning, weaving and food processing) leading to a vibrant economic role for female labour. During this phase, it is expected that each family vote as a unit (i.e., there are no gender gaps in the political preferences of the family members) and the so-called *family vote hypothesis* is validated (see Morgan-Collins and Teele, 2018 for more details on this).

As incomes rise, often because of an expansion of the market or the introduction of a new production technology, in most societies the rate of *OLF Women* rises (see Goldin 1990; 1995). This is because economic development increases the productivity outside family enterprises, shifting the locus of the production from the family farm and business to the factory (and in other places of wage labour). Family income rises because the male family members work for the factory at a higher wage, whereas women remain outside the labour force allocating their time mostly to household activities (e.g., children bearing and rearing) due to an income effect.¹² A number of scholars suggest that the

¹¹ Earlier research by Boserup (1970) has suggested that the use of plough agriculture generated a division of labour where men worked in the fields and women specialized in work within home. This is because the use of plough requires significant physical strength and this gives a clear cut productivity advantage to the males in food production. More recently, a number of studies provide evidence that, in societies that did not use the plough, women tended to participate in the agriculture as actively as men, and this appears to have persistent effects on the contemporaneous beliefs about gender equality (Alesina et al., 2013).

¹² See Goldin (1995) for a formal theoretical model that builds upon Gronau (1977).

reluctance of females to enter the labour market outside the home, can be explained by the existence of a strong *social stigma* which is attached to manual jobs that take place outside the family (or, alternatively, by fixed costs, such as *travel costs from home to the factory*) (see, e.g., Boserup, 1970; Goldin, 1990, 1995). According to Iversen and Rosenbluth (2010), in this economic environment women support more vigorously – than their male counterparts – the sanctity and the strength of family values and tend to vote more conservatively compared to their husbands, giving rise to the *traditional gender voting gap*. This is because if the family were to break up, the man has the option to take his marketable skills and start a new family, while the woman, who is mostly equipped with household specific skills, would face a significant drop in her economic welfare.

Women start to participate more actively into the paid labour force, when female education improves and they are enabled to work in non-manual jobs due to their increased human capital.¹³ This takes place in later phases of industrialization (particularly with the rise of service jobs in retail, banking insurance and clerical work), but even more in post-industrial service economies (see, e.g., Iversen and Rosenbluth, 2006; 2010). The rise of service jobs, combined with the improvement in female education, raise the value of women's time away from the family and thus a substitution effect is starting to operate. At this stage of economic development – and since there is no *social stigma* attached to women working in the white-collar sector – the substitution effect dominates and the rate of female labour force participation is starting to rise again. In this economic environment, the *modern gender voting gap* emerges, since the female electorate is expected to support left-wing parties that are more likely to adopt pro-welfare policies. This is because welfare policies achieve a partial socialization of family work (such as childcare and elderly care) and allows women to invest in marketable skills that boost their income and the level of their economic independence (see Iversen et al., 2005; Iversen and Rosenbluth, 2006).

¹³ More precisely, as income rises, education resources are freed and both male and female human capital rise. However, female education rates rise faster and begins to converge to those of males (see Durand, 1975; Schultz, 1991).

3.2 Greece on the edge of urbanization: The case of an economy in transition

In the beginning of the 20th century Greece was still an agrarian economy with most of its population living in rural and semi-urban areas. As can be seen in Table 1A, in 1928, 58 percent of the population was living in rural areas. However, after the end of WWII, the structure of the economy was starting to change. During the decades of 1950s and 1960s, a large share of population moved from the countryside to the cities and a wide group of urban population that was working outside the family business was formed (see, e.g., Kanellopoulos, 1995). The driving forces behind this transformation were the increase in the number of small and medium-sized firms in the industrial sector and the gradual development of the white-collar sector (see Svoronos, 1981; Avdela, 1990). This the case of Thessaloniki – the second most urbanized prefecture of Greece after the capital city of Athens – that is part of our sample.

Table 1A here

Interestingly, female labour force participation was affected negatively by increasing urbanization in Greece during that period. As shown in Table 1A, there seems to exist an inverse (direct) U-shaped relationship between urbanization and *OLF Women*. In particular, according to the census of 1928, when most of the population was living in rural areas, women were outside (inside) the labour force to a lower (higher) extent in comparison to 1951 where the level of urbanisation increased. In later decades, due to the explosive expansion of the service sector in Greece and the improvement of female education, female labour force participation started to rise again. Table 1B provides a similar message when the more detailed census data of 1961 are decomposed between urban, semi-urban and rural areas: the rate of women outside the labour force is lower in rural and semi-urban areas compared to the urban ones.

Table 1B here

This is also verified in our sample of seven prefectures where by-elections took place between 1953/54. In particular, in Thessaloniki - the second most urbanized prefecture of Greece after the capital city of Athens – the percentage of *OLF Women* is on average 64 percent, whereas in the remaining six predominantly rural electoral prefectures of Drama, Epidavros-Limira, Evros, Grevena, Phthiotis and Rethymno this percentage drops to 41 percent. According to our theoretical priors, we would expect with higher probability the existence of a *traditional gender voting gap* in the former. That would also be consistent with the observation of this gender gap in the local elections of 1951 in Athens, the most urbanised prefecture of the country.

4. Data

4.1 Sample

The empirical analysis that follows is based on a dataset of 361 communities located in seven prefectures that by-elections took place. The administrative divisions of Greece at that time were the following: (i) prefecture; (ii) province; (iii) municipality; and (iv) community. Nearly 30 percent of the sampled communities (108) were located in Thessaloniki, that witnessed two by-elections on 18 January 1953 and on 24 January 1954 due to the death of elected MP.¹⁴ An important and unique characteristic of the first by-election in Thessaloniki was that the candidates of the right party (Greek Rally) and the center-liberal coalition (National Progressive Center Union and Liberal Party) were women, as opposed to the by-elections in the remaining prefectures and the second by-election in Thessaloniki, where all candidates were men.¹⁵ Having women standing as candidates for the first time creates a “backdoor” pathway from treatment to outcome. For instance, men could be incentivised to

¹⁴ The information from the censuses is available in many cases at a more disaggregated level compared to the election records. To make the data from the two sources comparable, we aggregated the information for the census communities up to the level of the election record communities.

¹⁵ Helen Skoura (right) was elected the first woman MP, and, together with Virginia Zanna (center-liberal), were the first ever women candidates for office. Paradoxically, Helen Skoura had supported the postponement of women’s suffrage during the Civil War.

turnout at higher levels in localities with a higher percentage of women electors. Alternatively, the women candidates may have induced a higher mobilization of women supporting the relevant parties.¹⁶ To avoid such identification threats our analysis uses information only from the second special election of Thessaloniki.

The remaining 253 communities were located in the (predominantly rural) “Rest prefectures” of our sample, namely Drama, Epidavros-Limira, Evros, Grevena, Phthiotis and Rethymno, with one by-election being held in each prefecture. These by-elections took place on the following dates: 29 March 1953 (Grevena and Rethymno); 27 September 1953 (Evros); 6 December 1953 (Epidavros-Limira); 24 January 1954 (Drama); 14 March 1954 (Phthiotis). Also, it should be noted that in the prefectures of Grevena and Rethymno seats became vacant due to the cancellation of the 1952 election result by the electoral court, whereas the death of an elected MP is the reason in the remaining four cases.

4.2 Measurement of key variables

Dependent variable. Our dependent variable $Electoral\ Support_{it}$ measures the percentage of votes parties with a given political ideology receive in national elections in community i at election time t .¹⁷ We construct this variable for three blocks of parties that dominated the political landscape in Greece between 1951 and 1954: the right parties (Greek Rally and People’s Party); the center-liberal parties (National Progressive Center Union, Liberal Party, Agricultural and Labour Party, and Georgios

¹⁶ Indeed, in tests we conduct (available upon request) we observe that changes in party vote shares between 1952 and the first by-election can be explained, to some extent, by an endogenous response of men to women’s suffrage and an increased electoral participation of center-liberal women.

¹⁷ In a few cases, voters from different geographic communities voted in the same polling station and thus it would be more accurate to use the term “electoral community” to define the main administrative unit of our analysis. However, for brevity reasons, we use the term community.

Papandreou Party); and the left parties (United Democratic Left and Socialist Party of Greece).¹⁸ We have to note that the percentages of the right, centre and left-wing parties in all elections do not sum up to one. This is because we have small extreme parties as well as independent candidates that are excluded from the analysis. Definitions and sources of the variables can be found in Table B1 of the Appendix. Table B2 displays descriptive statistics of our main variables, while distinguishing between the prefecture of Thessaloniki and the Rest Prefectures.

Main independent variable. Following studies of the relevant literature (e.g., Berlinski and Dewan, 2011; Larcinese, 2014), to capture the addition of women in the electorate in community i at the time of the 1953/54 by-elections (Bye) we use the following formula:

$$Women\ in\ Electorate_{iBye} = \frac{Total\ Electorate_{iBye} - Total\ Electorate_{i1952}}{Total\ Electorare_{iBye}} * 100$$

where $Total\ Electorate_{iBye}$ includes men and women voters registered to vote in the by-elections of 1953/54, whereas $Total\ Electorate_{i1952}$ includes men registered to vote in the election of 1952. As a result, their difference divided by the total electorate of the by-elections aims to proxy for the percentage of female electors. It should be noted that registering to vote was essentially automatic (i.e., handled by election authorities based on age) imposing no costs on individuals. Related to that, as can be seen in Table B2 in the Appendix, our proxy does not differ significantly between the prefecture of Thessaloniki (47.3 percent), and the Rest Prefectures (48.9 percent), indicating that the level of urbanisation does not affect (on average) the percentage of women in the electorate.

¹⁸ In robustness checks we use a different classification that takes into account the largest party/parties in each block (Greek Rally as “right”, National Progressive Center Union and Liberal Party as “center-liberal” and United Democratic Left as “left”).

Following previous studies, ideally we would prefer to have separate data for men and women electors (see, de Bromhead et al., 2020), or women of eligible voting age (see, e.g., Morgan-Collins, 2021). However, an advantage of our data though is that in nearly one fifth of the sampled communities (43 in Thessaloniki and 32 in Rest Prefectures), men and women voted in different polling stations at the time of the by-elections. Using this sub-sample, to be referred to as the “restricted sample”, allow us to perform tests to support the validity of our treatment variable. Figure B1 in the Appendix shows the kernel density of this variable. An immediate and important observation is that there is a wide variance in the share of women in the post-reform electorate across the sampled communities, with 90 percent of observations lying between 38 percent and 57 percent. To exclude the possibility that our results are driven by outliers outside this range we perform robustness checks that we limit our sample.

Mediating variable. To examine the role of female labour force participation on political preferences we consider the interactive effect of the variables $Women\ in\ Electorate_{iBye}$ and $OLF\ Women_i$. The latter measures the percentage of women outside the labour force over the age of 10 in community i to the total population of women over the age of 10 in the same community.

Controls. In our model specification, we also control for a number of observable community characteristics, which are captured by the vector \mathbf{X}_i . In particular, this vector includes the *Distance from Largest City_i*, the logarithm of the number of inhabitants ($Population\ (log)_i$) and the altitude in meters ($Altitude_i$). In Table B3 of the Appendix we conduct a “test of balance” of these covariates for the samples of Thessaloniki and the Rest prefectures conditional on province fixed effects.¹⁹ As can be seen, none of the estimates is significantly different from zero at the 10 percent level.

¹⁹ Each province includes on average 18 communities.

5. Women at the polls and electoral outcomes

5.1 Empirical model specification

To examine the existence of a gender voting gap in the era of women’s enfranchisement in Greece, we employ an estimation strategy that exploits the observed heterogeneity of the variable *Women in Electorate Bye* across communities (see, e.g., Carruthers and Wanamaker 2015). This method builds on the idea that communities with a larger percentage of women in the electorate received a higher “dosage” of treatment and thus should exhibit stronger post-reform support for parties of a certain political ideology.²⁰ We estimate a DD specification that takes the following form:

$$\Delta \text{Electoral Support}_{i\text{Bye}-1952} = a + \beta \text{Women in Electorate}_{i\text{Bye}} + \theta_1 X_i + \Delta \varepsilon_{i\text{Bye}-1952} \quad (1)$$

where $\Delta \text{Electoral Support}_{i\text{Bye}-1952}$ is the change in the electoral support for right, left or center-liberal parties between the by-election and the election of 1952 (before the enfranchisement) in community i ; $\text{Women in Electorate}_{i\text{Bye}}$ is our proxy of female electors in the electorate in community i ; X_i captures community i ’s characteristics as defined above; and $\Delta \varepsilon_{i\text{Bye}-1952}$ is an i.i.d. error term.²¹ We estimate the above model separately for the urbanised prefecture of Thessaloniki and the predominantly rural Rest Prefectures of our sample.

Using a specification in changes rather than levels eliminates any unobserved, community-specific and time-invariant characteristics that may confound the true relationship between suffrage and party vote shares. However, we are still concerned that this approach does not control for unobserved time-varying characteristics that could be correlated with the outcome of interest, leading

²⁰ The idea of using the ‘dosage’ of suffrage was firstly introduced by Berlinski and Dewan (2011) and was subsequently applied by several studies to investigate the political and economic outcomes of men’s and women’s enfranchisement (see, e.g., Larcinese, 2014; Carruthers and Wanamaker, 2015; Kroth et al., 2016).

²¹ It should be noted that when we employ Seemingly Unrelated Regression (SUR) models to account that our dependent variables are competing shares our results remain intact. Results available upon request.

to biased and inconsistent estimates of the suffrage effect. To tackle this possibility, Eq. (1) is augmented with the lagged value of our dependent variable $\Delta Electoral Support_{i1952-1951}$ (capturing the change in partisan outcomes between the two pre-reform general elections of 1952 and 1951) and we also add province fixed effects. As the dependent variable is a difference, such fixed effects capture province-specific shocks. In our main estimates we report standard errors robust to heteroskedasticity. However, we also experiment by clustering errors according to the date of the by-election or the sub-region that communities are nested. Because our data contain a small number of clusters we employ the wild cluster bootstrap method that has been shown to behave well with as few as five clusters (Cameron et al., 2008; Roodman et al., 2019).

5.2. Identification threats

The first concern associated with our identification strategy is that our estimates could capture pre-existing trends. We examine this possibility by checking whether our variable of interest *Women in Electorate Bye* affects political outcomes before the reform (when it should not). Specifically, we run Eq. (1) using $\Delta Electoral Support_{i1952-1951}$ (with data from the two general elections before the reform) as the dependent variable and test if $\beta = 0$. Failure to reject this hypothesis confirms that our results are not influenced by pre-existing trends in communities mostly affected by the reform that were simply “catching-up”. As can be seen in Table B4 in the Appendix none of the placebo regressions return statistically significant estimates.

Another concern is that men responded endogenously to women’s suffrage. If, for instance, men mobilized at higher levels in communities with a higher proportion of women in the electorate, then the resulting effects of suffrage could be driven by men rather than the addition of women in the electorate. To address this issue, we exploit the restricted sample of communities, where men and women voted in different polling stations at the time of the by-elections, and investigate the impact of our treatment variable on the change in men’s turnout between 1952 and the by-elections

$(\Delta \text{Men's Turnout}_{i\text{Bye}-1952})$.²² Results are reported in Table B5 in the Appendix. Because of the size of the restricted sample, we abstain from using province fixed effects. However, we control for the lagged dependent variable and the variables included in vector X_i . As can be seen, there is no evidence of a strong association between men's mobilisation and the variable *Women in Electorate Bye*. If anything, we observe a weak negative effect on their turnout in the by-election of Thessaloniki.

Finally, to strengthen the confidence in our treatment variable we exploit again the restricted sample to investigate if the turnout of women in the by-election (*Women's Share of Turnout_{iBye}*) is correlated with our proxy for the percentage of women in the electorate. As can be seen in Table B6 in the Appendix, and despite the small number of observations, our treatment variable is positively correlated with women's share of the overall turnout both in Thessaloniki and the Rest prefectures. Overall, understanding the limitations of making inferences with aggregate data about individual relationships (see, e.g., Corder and Wolbrecht, 2006), the three tests presented provide some security about the viability of our empirical specification.

5.3. Baseline findings

Table 2 shows the estimates of Eq. (1). Columns (1)-(6) report estimates for Thessaloniki, whereas columns (7)-(12) for the sample of the Rest prefectures. Within each sample we present estimates for each of the three blocks of parties, for the restricted and the full samples of communities. For instance, columns (1) and (2) present estimates for the block of right parties for the restricted and full samples of communities in Thessaloniki, respectively. Just to note that the only difference in the empirical specification between the restricted and full sample of communities, is that the former does not control for province fixed effects (it includes only a lagged dependent variable and the variables included in

²² To make sure that men's registration levels before and after the reform are comparable, we exclude communities with at least one mixed-gender polling station at the by-elections; that is, our sample includes only communities where all polling stations were separated by gender.

vector X_i). The same logic applies for the left (columns (3)-(4)) and centre block of parties (columns (5)-(6)). Columns (7)-(12) for the sample of Rest prefectures follow a similar structure.

As can be seen in columns (1) and (2), the coefficient of the variable *Women in Electorate Bye* for right parties is positive and statistically significant at the 1 percent confidence level. Therefore, in the urbanised prefecture of Thessaloniki right parties achieved higher vote shares in communities more affected by the reform. This result reflects also in the voting outcomes of the centre in columns (5) and (6) though the effect is weaker. Regarding the magnitude of the coefficients, a one percentage point increase in the treatment variable, increases (decreases) the strength of right (centre) parties in the full sample by 0.43 (0.25) percentage points. This suggests that a one-standard deviation increase in the percentage of women in the electorate leads to an increase in the vote share of right parties by 2.9 percentage points, and a decrease in the vote share of center-liberal parties by 1.9 percentage points; which correspond to an increase of 6.7 and a decrease of 7.9 percent on the average strength of the parties. In contrast, in columns (7)-(12), there is no relationship between suffrage and partisan outcomes in the case of the predominantly rural prefectures of our sample.

Table 2 here

One important concern is that our findings are ultimately driven by only a few communities with highly unequal gender distribution (see Figure B1). These communities provide significant identifying variation, but they can differ along many other characteristics from the more equal communities of our sample. To check if our results are sensitive to these communities, we remove 5 percent of observations on each side of the distribution of our treatment variable. As can be seen in Table B7 in the Appendix, results for the full sample of communities remain statistically insignificant for the Rest Prefectures, whereas in the case of Thessaloniki the effect on right wing parties becomes even stronger. Second, we test whether our results persist when we use the vote shares of the largest party of each political ideology to construct our dependent variable. Third, from the sample of the Rest Prefectures we exclude Grevena and Rethymno where the by-elections took place because of

cancellation of the 1952 election results, rather than the death of an elected MP. As can be seen in Tables B8 and B9 in the Appendix, our findings continue to hold. Therefore, consistent with expectations we observe a gender gap in political preferences in the urbanised prefecture of Thessaloniki.

6. The role of OLF Women

To illuminate the mechanism behind the empirical finding presented above, in this section our analysis investigates whether women's participation in the labour market plays a role on the observed gender gap in political preferences. Starting from Tilly and Scott (1978), a large literature highlights the importance of the model of production on issues related to gender differences on political preferences. More recently, Iversen and Rosenbluth (2010) argued that, when the model of production generates limited demand for female labour (e.g., during the early stages of industrialization), women are obliged to allocate most of their time to household activities, thus investing in household-specific skills which are non-valuable outside of the family. This loss of economic independence restricts the available "exit options" of women and gives rise to social norms according to which marriage is the ultimate goal for a woman. Thus, in this environment women support more vigorously – than their male counterparts – the sanctity and the strength of family values and tend to vote more conservatively compared to their husbands, giving rise to the *traditional gender voting gap* (see Iversen and Rosenbluth, 2010). In contrast, in an economic environment characterized by increased demand for female labour force participation, a *modern gender voting gap* emerges, since the female electorate is expected to support left-wing parties that are more likely to adopt pro-welfare policies.²³

²³ This is because welfare policies achieve a partial socialization of family work (such as childcare and elderly care) and allows women to invest in marketable skills that boost their income and the level of their economic independence (see Iversen et al., 2005; Iversen and Rosenbluth, 2006).

To this end, we add to the right-hand-side of Eq. (1) the variable $OLF\ Women_i$ and its interaction with our treatment variable as follows:

$$\Delta Electoral\ Support_{iBye-1952} = a + \beta Women\ in\ Electorate_{iBye} + \gamma OLF\ Women_i + \delta Women\ in\ Electorate_{iBye} * OLF\ Women_i + \theta_1 X_i + \Delta \varepsilon_{iBye-1952} \quad (2)$$

Obviously, a positive and statistically significant δ parameter in the regressions for right parties -and a negative and statistically significant in the regressions for left or center-liberal parties- suggests that the “traditional gender voting gap” presented in Table 2, is conditional on the level of $OLF\ Women_i$.

We test this hypothesis in Table 3 by pooling together the communities in Thessaloniki and Rest Prefectures – though we also check below the conditionality of the effect within the two samples. As can be seen, the interaction term enters the regressions with the expected sign (positive for right parties and negative for center-liberal parties) and is highly statistically significant. Moreover, Figure 1 illustrates how the variable $Women\ in\ Electorate_{iBye}$ affects electoral support at different values of the variable $OLF\ Women$. As can be seen, the suffrage-induced change in the vote shares of the two party blocks (as implied by the *traditional gender voting gap* thesis) becomes statistically significant when the variable $OLF\ Women$ takes a value of about 60 percent, and the magnitude of this change becomes very large when the variable reaches values as high as 90 percent. For instance, when the value of $OLF\ Women$ is 75 percent, a one-standard deviation increase in the percentage of women in the electorate leads to an increase in the vote share of right parties by 2.3 percentage points and a decrease in the vote share of center-liberal parties by 2.6 percentage points. This result that we obtain with aggregate data is consistent with individual and intra-household evidence according to which $OLF\ Women$ support more vigorously – than their male counterparts – the sanctity and the strength of family values and tend to vote more conservatively, giving rise to the *traditional gender voting gap* (see Iversen and Rosenbluth, 2010).

Table 3 and Figure 1 here

Of course, the rate of *OLF Women* can be correlated with other dimensions of community heterogeneity, especially those induced by level of local economic development.²⁴ To alleviate concerns that we simply capture the latter, we replace the variable *OLF Women* in Eq. (2) with a proxy of local development, namely the percentage of households in community *i* with access to electricity (*Electricity Access_i*). As can be seen in Figure B2 in the Appendix, calculating the margins of the treatment variable over the respective values of the new variable renders insignificant results. In addition, in Table B10 in the Appendix, we augment Eq. (2) with the variable *Electricity Access* and its interaction with *Women in Electorate Bye*. As shown, only the main interaction term has a statistically significant effect. Moreover, the magnitude and significance of our main variable of interest remains intact when on top of that we add interactions between *Women in Electorate Bye* and the rest of the covariates.²⁵ Although these results are not reassuring that we capture causal effects, they provide support for the mediating role of female labour force participation.

Next, we examine the possibility that our results are affected by pre-existing trends. Therefore, once again, we replace the dependent variable with its lagged value ($\Delta \text{Electoral Support}_{i1952-1951}$) and run the same regression set-up as in Table 3, and then use the estimates to calculate the conditional

²⁴ At this point it is important to note that previous empirical studies that are seeking to establish female labour force participation as the main driving force behind gender gap in political preferences, employ data from developed countries during the 1960s and onwards (see, e.g., Manza and Brooks, 1998). The main shortcoming in these studies is that by focusing on developed countries (i.e., countries that are located on the second half of the U-shaped relationship between economic development and female labour force participation), it is very difficult to establish a convincing relationship between female labour force participation and gender gap in political preferences. This is because, at this phase of development, many structural changes took place simultaneously. More precisely, the expansion of the white-collar sector – the leading force behind increased female labour force participation from 1960s and onwards – was accompanied by major shifts in cultural attitudes (e.g., increased secularization, higher divorce rates, different reproductive choices) in most Western societies (see Inglehart, 1977; Inglehart and Norris, 2000) - something not observed in a country at the edge of urbanisation like Greece.

²⁵ Results available upon request.

effects. The results are shown in Figure B3 in the Appendix. As can be seen, we reject the violation of the parallel trend assumption: all effects are small and far from conventional levels of statistical significance.

Third, we check if our results are sensitive when we cluster our standard errors. Although our treatment is at the community level, it is also true that observations can be related to each other based on the date of the by-election or the geographical region that communities are nested. In the former case, we have five clusters a number that overlaps significantly with the number of prefectures. Because of the small number of clusters, we rely on the six-point weight distribution as suggested by Webb (2014), which has been shown to behave well with as few as five clusters (see, Roodman et al., 2019). Alternatively, we cluster our standard errors at the province level that increases the number of clusters to 17. The logic is that provinces are the broadest geographical units within prefectures with common characteristics (e.g., the degree of rurality). In addition, the increase in the number of clusters allows us to experiment with the two-point weight distribution as suggested by Cameron et al. (2008). Table B11 in the Appendix reports p-values estimated using robust standard errors, and wild cluster bootstrap methods at the election date and province levels. As can be seen, our findings retain their statistical significance.

Fourth, we calculate and plot the conditional effects of Figure 1 separately for Thessaloniki and the Rest Prefectures (see Figures 2 and 3). Although the former is more urbanised and as a result has a significantly higher percentage of *OLF Women* than the latter - 64 percent versus 41 percent on average – at the same time the sample of the Rest Prefectures displays significant variation on that dimension and some of their communities have the same high levels of *OLF Women* as Thessaloniki and as high as 90 percent. When comparing the two graphs, the effect in Thessaloniki is much stronger, however the pro-right shift caused by the suffrage can also be observed at the 10% level of significance in other communities as long as they had a sufficiently high level of women outside the labour force.

Finally, in Figures B4-B6 we repeat the three robustness checks of the previous section (outliers, main parties, reason of by-election) and results continue to hold.

Figures 2 and 3 here

7. Conclusions

The paper at hand seeks to examine the effect of women's enfranchisement on party vote shares in Greece in the early 1950s. The case of Greece is appealing as women's enfranchisement took place during a period that the economy was still agrarian especially in the countryside. This allows us to investigate the existence of an early gender voting gap during the first phases of economic development (i.e., as an economy moves away from agriculture). Our empirical analysis builds upon a *unique community-level dataset* located in seven prefectures that by-elections were held in 1953 and 1954 for purely exogenous reasons. Our identification strategy exploits the uneven spatial variation in the concentration of female electors as a measure of the received "dosage" of the franchise reform in different communities, in a DD design that holds unobserved local characteristics fixed. Obtained empirical findings provide evidence of a *traditional gender voting gap* in the urban area of Thessaloniki, while it fails to establish a gender voting gap in the rest (six) predominantly rural prefectures of our sample. Furthermore, our analysis suggests that the size and significance of the gender voting gap is driven by differences in the level of *OLF Women*. We argue that in an economic environment characterized by limited demand for female labour force participation, women support more vigorously the sanctity and the strength of family values and tend to vote more conservatively compared to men.

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Table IA: Demographic Data

	1928	1951	1971	1991
Population (Total)	6,204,684	7,632,801	8,768,641	10,259,900
Population Female >10 years old	2,449,142	2,847,955	3,729,436	4,610,708
OLF Total Population >10 years old	2,211,167	2,717,762	3,820,072	5,048,005
OLF Women > 10 years old	1,772,952	2,373,327	2,824,028	3,375,221
Ratio (OLF Women >10 / Total women >10)	0.72	0.83	0.76	0.73
Ratio (OLF Women >10 / OLF Total >10)	0.80	0.87	0.74	0.67
Share of population living in urban areas	0.33	0.38	0.43	0.53
Share of population living in semi-urban areas	0.09	0.15	0.13	0.12
Share of population living in rural areas	0.58	0.47	0.44	0.35
Urbanization Rate [(urban+semi-urban)/total]	0.42	0.53	0.65	0.72

Notes: "OLF" stands for Out of Labour Force. Population data are obtained from censuses of the ELSTAT (1928, 1951, 1971, 1991). Urbanization data are obtained from the Statistical Yearbook of Greece (1991).

Table IB: Demographic Data

YEAR=1961	urban	semi-urban	rural
Population (Total)	3,628,105	1,085,856	3,674,592
Population Female >10 years old	1,587,800	453,500	1,513,600
OLF Total Population >10 years old	1,626,700	402,400	1,055,500
OLF Women > 10 years old	1,235,000	309,000	806,100
Ratio (OLF Women >10 / Total Women >10)	0.78	0.68	0.53
Ratio (OLF Women >10 / OLF Total >10)	0.76	0.77	0.76

Notes: "OLF" stands for Out of Labour Force. Population data are obtained from the 1961 census of the ELSTAT.

Table 2: The effect of women's suffrage on change in electoral support

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Sample:</i>			<i>Thessaloniki</i>		<i>Rest prefectures</i>							
	<i>Restricted</i>	<i>All</i>	<i>Restricted</i>	<i>All</i>	<i>Restricted</i>	<i>All</i>	<i>Restricted</i>	<i>All</i>	<i>Restricted</i>	<i>All</i>	<i>Restricted</i>	<i>All</i>
<i>Dependent variable:</i>			Δ Electoral Support Bye-1952									
<i>Women in Electorate Bye</i>	<i>Right</i>	<i>Right</i>	<i>Left</i>	<i>Left</i>	<i>Centre</i>	<i>Centre</i>	<i>Right</i>	<i>Right</i>	<i>Left</i>	<i>Left</i>	<i>Centre</i>	<i>Centre</i>
	0.403*** (0.103)	0.432*** (0.138)	-0.074 (0.204)	-0.143 (0.109)	-0.312* (0.176)	-0.246** (0.124)	-0.142 (0.219)	0.013 (0.097)	0.031 (0.305)	0.024 (0.032)	0.193 (0.392)	-0.014 (0.094)
<i>Observations</i>	43	108	43	108	43	108	32	253	32	253	32	253
<i>R2</i>	0.676	0.472	0.270	0.343	0.208	0.286	0.257	0.611	0.280	0.343	0.367	0.634
<i>Province FE</i>	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
<i>Lagged DV</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Controls</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

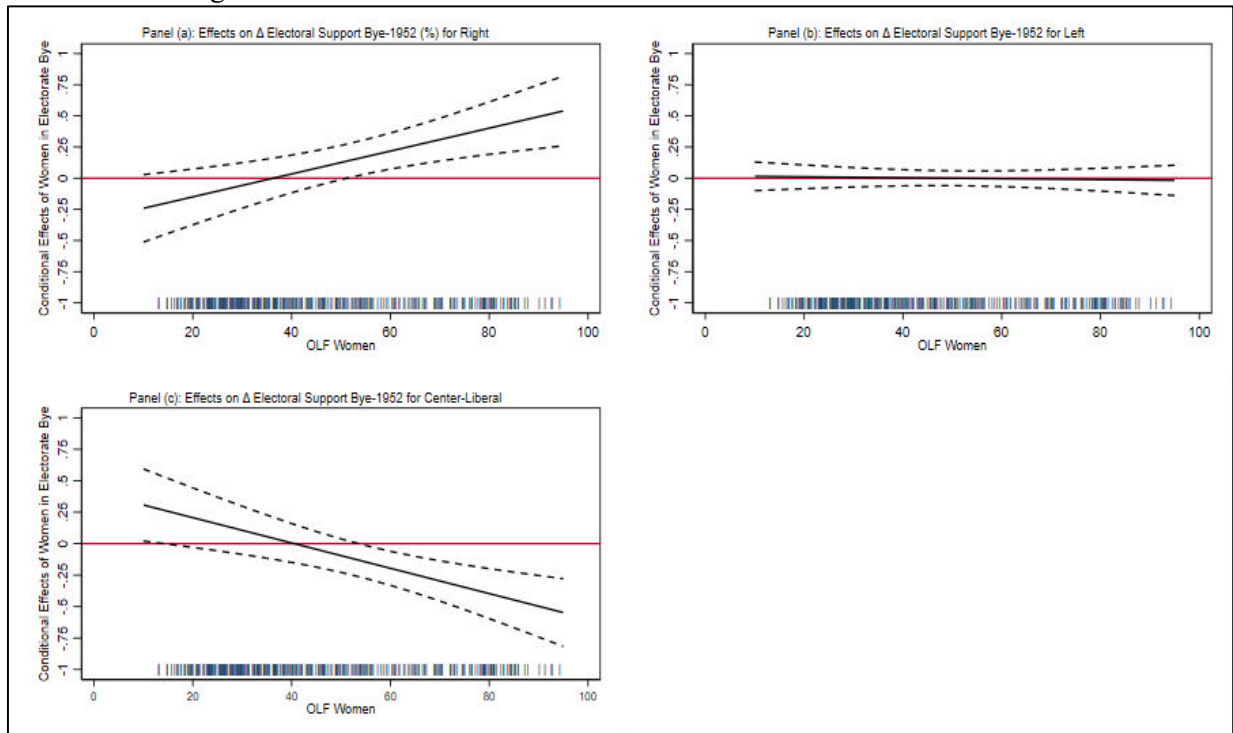
Notes: The table reports OLS estimates of Eq. (1). "Restricted" refers to the sample of communities where men and women voted in different polling stations at the time of the by-elections, whereas "All" includes all available communities of the sample. The Lagged DV stands for Δ Men Electoral Support 1952-1951 for each block of parties. Controls include the variables Population (log), Altitude, and Distance from Largest City. Estimates in columns (2), (4), (6), (8), (10), (12) include province fixed effects. Robust standard errors in parentheses; ***, **, *, Statistically significant at the 1%, 5% and 10% confidence level respectively.

Table 3. The interactive relationship with Out of Labour Force (OLF) Women

	(1)	(2)	(3)
<i>Sample:</i>	All prefectures		
<i>Dependent variable:</i>	Δ Electoral Support Bye-1952		
	<i>Right</i>	<i>Left</i>	<i>Centre</i>
<i>Women in Electorate Bye</i>	-0.334* (0.194)	0.019 (0.083)	0.408** (0.205)
<i>OLF Women</i>	-0.427** (0.168)	0.051 (0.073)	0.468*** (0.176)
<i>Interaction Term</i>	0.009*** (0.003)	-0.000 (0.001)	-0.010*** (0.003)
Observations	361	361	361
R2	0.606	0.453	0.609
<i>Province FE</i>	Yes	Yes	Yes
<i>Lagged DV</i>	Yes	Yes	Yes
<i>Controls</i>	Yes	Yes	Yes

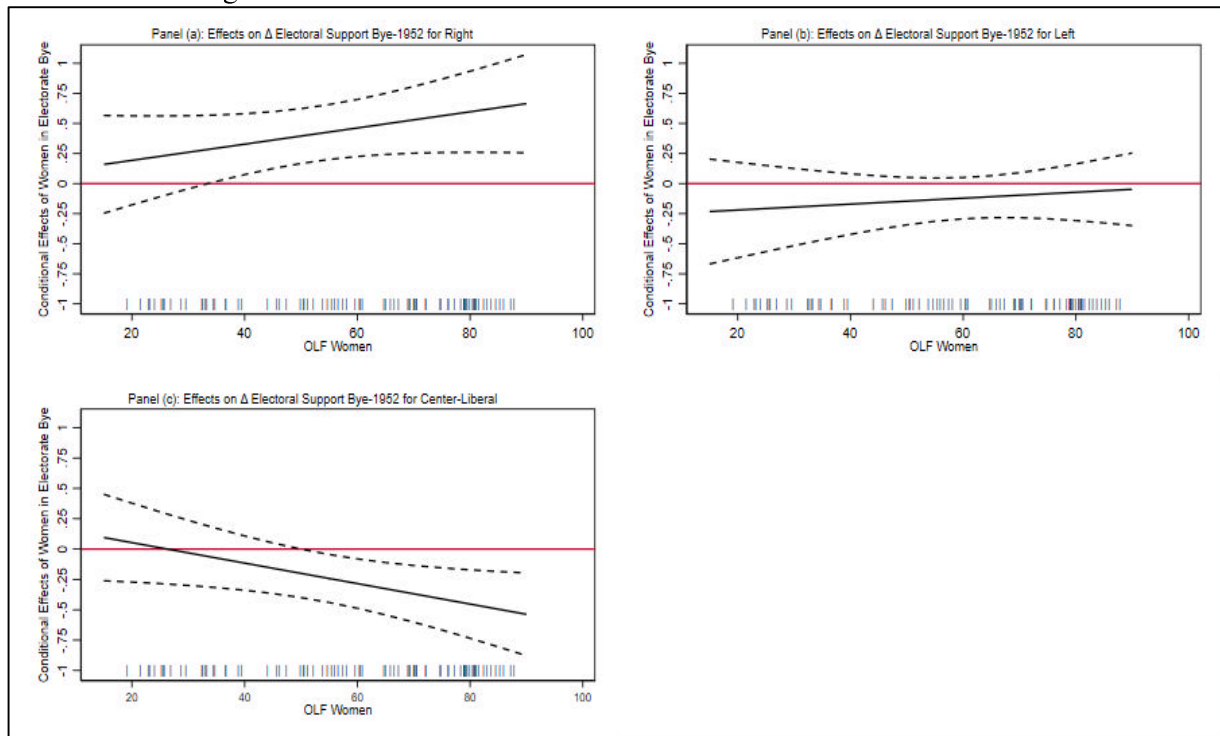
Notes: The table reports OLS estimates of Eq. (2). "Interaction Term" is the product of the variables Women in Electorate Bye and OLF Women. The Lagged DV is Δ Men Electoral Support 1952-1951 for each block of parties. Controls include the variables Population (log), Altitude, and Distance from Largest City. All estimates include province fixed effects. Robust standard errors in parentheses; ***, **, * Statistically significant at the 1%, 5% and 10% confidence level respectively.

Figure 1: Conditional effects of women in electorate for All Prefectures



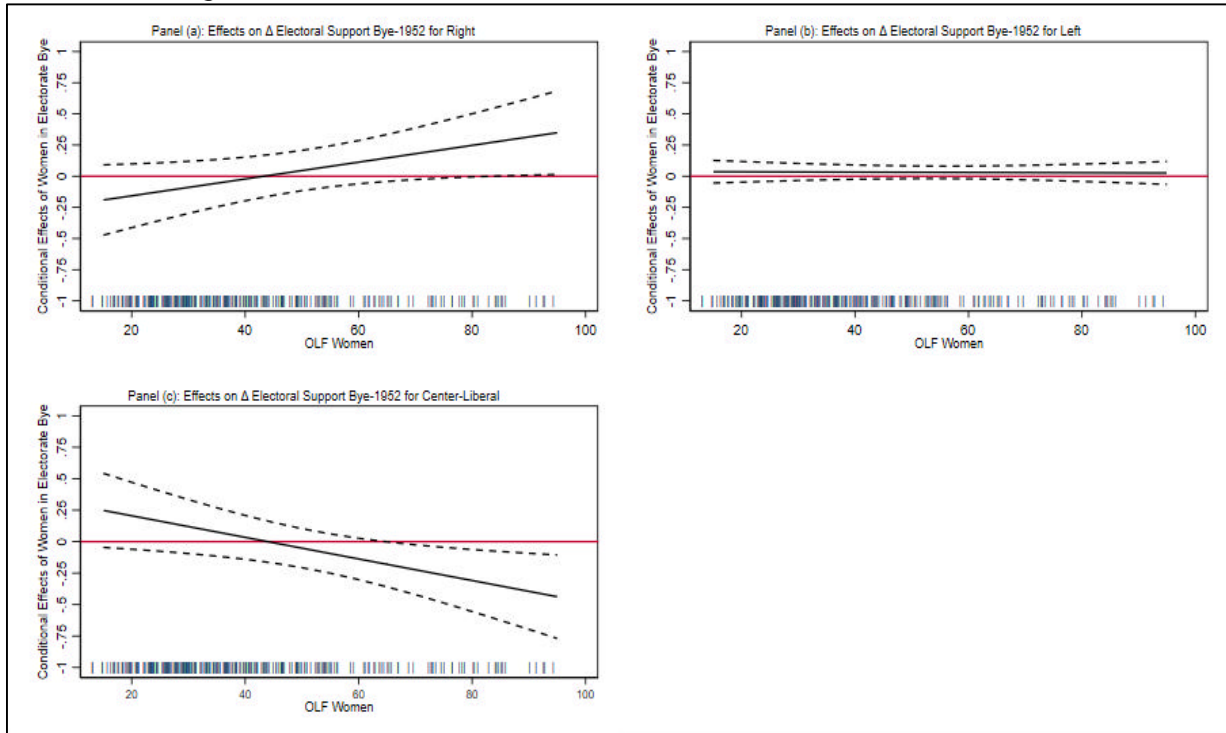
Notes: This graph shows the conditional effects of women’s suffrage on the change in electoral support for right, left and center-liberal parties at different values of OLF Women; The conditional effects are calculated based on the specifications of Table 3; All other covariates are held constant at their means; Dashed lines signify 90% confidence intervals; Rug plot at horizontal axis illustrates distribution of OLF Women in All Prefectures; Red horizontal line marks marginal effect of 0.

Figure 2: Conditional effects of women in electorate for Thessaloniki



Notes: This graph shows the conditional effects of women's suffrage on the change in electoral support for right, left and center-liberal parties at different values of OLF Women; The conditional effects are based on the same specification described in Table 3 for the communities of Thessaloniki; All other covariates are held constant at their means; Dashed lines signify 90% confidence intervals; Rug plot at horizontal axis illustrates distribution of OLF Women in Thessaloniki; Red horizontal line marks marginal effect of 0.

Figure 3: Conditional effects of women in electorate for Rest Prefectures



Notes: This graph shows the conditional effects of women’s suffrage on the change in electoral support for right, left and center-liberal parties at different values of OLF Women; The conditional effects are based on the same specification described in Table 3 for the communities of the Rest Prefectures; All other covariates are held constant at their means; Dashed lines signify 90% confidence intervals; Rug plot at horizontal axis illustrates distribution of OLF Women in Rest Prefectures; Red horizontal line marks marginal effect of 0.

Appendix A. Brief history of female suffrage in Greece

A1. The early feminist movement and the local elections of 1934

During the first decades after its independence in 1833, Greece's political regime was a monarchy under the reign of King Otto. A series of events that started in 1862 led to the ascension of King George I to the Greek throne in 1863 (see Alivizatos, 2011). The following year an important constitutional reform took place: establishing a “*democracy under a King*” with universal suffrage for all males 21 years old and over. Although the Greek constitution of 1864 extended the voting rights to the whole male population (without property restrictions or literacy requirements), it abstained from providing political voting rights to females. The exclusion of women from the political procedures was taken as granted by all the parties from all over the political spectrum during that period (see Samiou, 2013).²⁶

On 8 March 1887, Kallirhoe Parren, a Greek journalist and writer, founded a newspaper titled “Women’s Journal” (Ephimeris ton Kirion) that run entirely by women and was aiming to inform the Greek society for issues related to gender discrimination. For many scholars that was the formal date of the beginning of the feminist movement in Greece (see, e.g., Avdela and Psara, 1985; Varika, 1987). It must be noted that the basic priorities of that early feminist movement were the rights of women on: (i) education and (ii) wage labour. The issue of equal political rights was considered as fairly radical during that period and most of the feminists – including Kallirhoe Parren – decided to follow a strategy of downgrading the demand for extension of the suffrage on females in order to achieve a series of other political goals at first (see, e.g., Varika, 1987; Samiou, 2013).²⁷

²⁶ We note that until the end of the 1920s only five countries had provided “full” (i.e., more than half of all adults women) and “active” (i.e., right to vote rather than the right to stand in office) suffrage to women. The territory of Wyoming (1869), New Zealand, Chile, Finland and Australia.

²⁷ Although the first volumes of the “Women’s Journal” were highly supportive of female suffrage, the editorial board soon realized that promoting the demand of equal political rights between men and women had generated wide disagreements -

This situation started to change gradually after the end of WWI. During that period Eleftherios Venizelos and Dimitrios Gounaris, the leaders of the two major parties in Greece, made political statements about the need of ensuring equal political rights between women and men in Greece. These political views were affected by a series of affairs that took place in the international political market during the interwar period, and especially the first wave of women enfranchisement that ensured “full” and “active” voting rights to women in about 40 different countries (see Teele, 2018a for more details on this). After a decade of harsh disagreements that took place within major political parties, the government of liberal leader Eleftherios Venizelos extended the voting rights to the female population on 5 February 1930. However, the relevant law provided voting rights solely for local elections and by imposing strict age and literacy requirements. More precisely, the electorate was restricted to all literate women that were above the age of 30. It must be noted that these literacy requirements as well as a large number of bureaucratic barriers – mostly related to electoral registration – restricted substantially the number of eligible women voters in the local elections of 1934. As a result, a total of 10,571 women went on the polls whereas the adult female population in Greece during that period was more than 2.5 million (see, e.g., Samiou, 2013)

A2. The Greek political system in the era of suffrage and the local elections of 1951

The subsequent dictatorships of George Kondylis in 1935 and Ioannis Metaxas between 1936-1941, and in turn the German Occupation between 1941-1944 and the Greek civil war between 1946-1949 blocked for more than a decade any progress concerning the issue of female enfranchisement in Greece. Then, on 22 April 1949 the government of Themistoklis Sofoulis – a coalition government of the right-wing *People’s Party* (Laikon Komma) and the centre-liberal, *Liberal Party* (Komma Fileleftheron) – took the initiative to introduce a Bill that provided full voting rights for local elections

even within the female population- that could harm the rest political goals of the feminist movement. Therefore, they decided strategically to postpone for later the demand of equal political rights.

(i.e. without literacy requirements) to all women 25 years old and over. This – almost sudden – political development came mostly as a result of political directives from the United Nations. A month ago, the United Nations’ meeting that took place in Beirut decided that all members-states were obliged to extend voting rights to women within the next twelve months. Given that Greece was planning to join the Security Council of the United Nations, it had to take specific steps that would ensure political equality between men and women (see, e.g., Samiou, 2013).

Since none of the major political parties in Greece was actually in favour of women enfranchisement, the Bill was not debated in the parliament and remained in abeyance for the next two years. Then, on March of 1951, the coalition government of Nikolaos Plastiras – a coalition government of the two centre-liberal parties (i.e. *National Progressive Center Union* (Ethniki Poodeytiki Parataxis Kentrou) and the *Liberal Party* (Komma Fileleftheron)) introduced the Bill for debate in the parliament. In that debate, it became clear the existence of harsh disagreements between deputies both across and within parties. The right-wing *People’s Party* (Laikon Komma) – that was the largest party during that period – voted massively against women enfranchisement whereas two of the major centre-liberal parties, the *Liberal Party* (Komma Fileleftheron) and the *Georgios Papandreou Party* (Komma Georgiou Papandreou) were split with some of their deputies voting in favour of the Bill and others deciding to abstain from the process.²⁸ The only two parties that voted massively in favour of the Bill were the *National Progressive Center Union* (Ethniki Poodeytiki Parataxis Kentrou) of Nikolaos Plastiras – the third major center-liberal party of that period – and the left-wing *Democratic Alignment* (Dimkratiki Parataxis) of Alexandros Svolos. As a consequence, the Bill enacted as Law on 31 March 1951 with the votes of the left-wing and some center-liberal deputies (see Samiou, 2013 for more details on this).

²⁸ The abstention rate of the deputies from the *Liberal Party* (Komma Fileleftheron) and the *Georgios Papandreou Party* (Komma George Papandreou) reached the level of 59 percent in that parliament debate.

In the local elections that took place on 15 April 1951, a total of 734,750 women went to the polls (i.e., about 82 percent). The major conclusion driven from the electoral results was that females voted in a more conservative way than it was generally expected and for sure more conservatively compared to males. According to Nikolakopoulos (2001), in the municipality of Athens Konstantinos Kotzias – who was the candidate supported by the right-wing *People's Party* – received much higher vote shares in women's polling stations relative to those of men.²⁹ The stylized fact that women's votes were mainly directed to right-wing and centre-liberal parties was also verified by a relevant report sent from the Greek government to the United Nations just after the local elections. In that report it was noted that: “[...] Female population had shown strong national consciousness and political maturity”.

A3. The parliamentary elections of 1952

The results of the local election, combined with the persistent and increased pressures from the United Nations to ensure political equality between men and women, led to an acceleration of the legislative procedures aiming to provide voting rights to women in national elections. To this end, on 4 February 1952 the government of Nikolaos Plastiras introduced a new Bill of full female enfranchisement in legislative elections for debate in the parliament. The debate that lasted for months made obvious that the harsh disagreements of the past – between different parties but also between different deputies within the same party – had disappeared. Parties from all over the political spectrum were now in agreement that it was the time to provide full voting rights to all adult women. As a result, on 28 May 1952, the Bill enacted as law and voting rights were provided in parliamentary elections to all adult women.

At that point, the political parties and the electorate in Greece believed that women would participate in the upcoming parliamentary elections that had been arranged for 16 November 1952.

²⁹ More precisely, Konstantinos Kotzias received 70.4 percent in women polling stations and 55.2 percent in the corresponding male polling stations (see Nikolakopoulos, 2001 for more details on this).

However, the Ministry of Interior refuted that option by stating that it was technically impossible to update the electoral registers in a time period of less than six months. Women did not participate in the parliamentary elections of 1952, though they voted in seven special elections between 1953 and 1954 that took place in order to fill seats that became vacant due to the death of an elected MP or the cancellation of the 1952 election result by the electoral court. However, they participated in the whole Greek territory in the next parliamentary election that were held on 19 February 1956 (see Samiou, 2013).

References (mentioned only in the Appendix)

Alivizatos, N. (2011). *The Constitution and Its Enemies: Modern Greek History 1800– 2010*, Athens: Polis Publishers (in Greek).

Avdela, E., & Psara, A. (1985). *Feminism in Greece During the Interwar Period*. Athens: Gnosis (in Greek).

Varika, E. (1987). *The Rebellion of the Ladies. The Genesis of Feminist Consciousness in Greece 1833-1907*. Athens: Papazisis (in Greek).

Appendix B. Further analysis and robustness tests

Table B1: Definition and sources of variables

Variable name	Definition	Source
Women in Electorate Bye	Proxy for the percentage of female electors in the electorate in the by-elections of 1953 and 1954	Ministry of Interior, Directorate of Elections
OLF Women	The percentage of women outside the labour force over the age of 10 in community i to the total population of women over the age of 10 in the same community	Census of 1961
Distance from Largest City (kilometres)	The three-dimensional distance in kilometres between community i and the prefecture's largest city	90m Digital Elevation Database of the NASA Shuttle Radar Topographic Mission (SRTM)
Population	The logarithm of the number of inhabitants in electoral community i	Census of 1951
Altitude (meters)	The altitude of community i in meters	Census of 1951
Δ Electoral Support Right Bye-1952	The change in the electoral support for the Right parties between the by-election after the enfranchisement and the 1952 election before the enfranchisement	Ministry of Interior, Directorate of Elections
Δ Electoral Support Left Bye-1952	The change in the electoral support for the Left parties between the by-election after the enfranchisement and the 1952 election before the enfranchisement	Ministry of Interior, Directorate of Elections
Δ Electoral Support Center-Liberal Bye-1952	The change in the electoral support for the Center-Liberal parties between the by-election after the enfranchisement and the 1952 election before the enfranchisement	Ministry of Interior, Directorate of Elections
Δ Electoral Support Right 1952-1951	The change in the electoral support for the Right parties between the 1952 and 1951 general elections	Ministry of Interior, Directorate of Elections
Δ Electoral Support Left 1952-1951	The change in the electoral support for the Left parties between the 1952 and 1951 general elections	Ministry of Interior, Directorate of Elections
Δ Electoral Support Center-Liberal 1952-1951	The change in the electoral support for the Center-Liberal parties between the 1952 and 1951 general elections	Ministry of Interior, Directorate of Elections

Table B2: Descriptive statistics

	All Prefectures			Thessaloniki			Rest Prefectures			
	Obs	Mean	SD	Min	Max	Obs	Mean	SD	Min	Max
PANEL I										
Variables in levels										
Women in Electorate Bye (%)	361	48.45	7.54	19.27	65.23	108	47.26	6.82	26.38	61.18
OLF Women (%)	361	47.96	21.77	13.14	94.35	108	63.78	19.82	19.18	87.86
Distance from Largest City (kilometres)	361	27.23	22.96	1.00	97.40	108	17.07	15.94	1.00	64.16
Population (not in log)	361	2741.92	3498.79	194.00	33842.00	108	4372.41	3633.81	606.00	17022.78
Altitude (meters)	361	261.75	260.93	5.00	1030.00	108	142.60	176.08	5.00	740.00
PANEL II										
Variables in changes										
Δ Electoral Support Right Bye-1952 (%)	361	4.67	15.91	-32.05	52.54	108	-0.27	8.29	-21.11	21.78
Δ Electoral Support Left Bye-1952 (%)	361	2.04	7.00	-25.48	38.78	108	7.61	8.19	-25.48	38.78
Δ Electoral Support Center-Liberal Bye-1952 (%)	361	-6.49	17.16	-51.68	87.35	108	-9.75	7.87	-41.77	18.08
Δ Electoral Support Right 1952-1951 (%)	361	9.13	11.40	-33.50	87.42	108	10.77	7.32	-12.59	35.38
Δ Electoral Support Left 1952-1951 (%)	361	0.00	6.04	-44.31	30.55	108	-1.21	7.66	-44.31	19.37
Δ Electoral Support Center-Liberal 1952-1951 (%)	361	-11.40	13.71	-79.54	26.15	108	-9.58	9.06	-34.89	26.15

Notes: The table reports the number of observations, mean, standard deviation, minimum and maximum values of the main regression variables of Tables 2-3.

Table B3: Balancedness of treatment

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Sample:</i>		<i>Thessaloniki</i>			<i>Rest prefectures</i>	
<i>Dependent variable:</i>	<i>Population (log)</i>	<i>Altitude</i>	<i>Distance from Largest City</i>	<i>Population (log)</i>	<i>Altitude</i>	<i>Distance from Largest City</i>
<i>Women in Electorate Bye</i>	-0.018 (0.012)	0.208 (0.171)	-4.275 (2.822)	-0.002 (0.007)	0.134 (0.103)	-2.297 (1.469)
<i>Observations</i>	108	108	108	253	253	253
<i>R2</i>	0.329	0.632	0.311	0.153	0.740	0.533
<i>Province FE</i>	Yes	Yes	Yes	Yes	Yes	Yes

Notes: All estimates include province fixed effects. Robust standard errors in parentheses; ***, **, * Statistically significant at the 1%, 5% and 10% confidence level respectively.

Table B4: Test of parallel trends

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Sample:</i>	<i>Thessaloniki</i>			<i>Rest Prefectures</i>		
<i>Dependent variable:</i>	<i>Δ Electoral Support 1952-1951</i>					
	<i>Right</i>	<i>Left</i>	<i>Centre</i>	<i>Right</i>	<i>Left</i>	<i>Centre</i>
<i>Women in Electorate Bye</i>	0.048 (0.093)	0.140 (0.139)	-0.188 (0.157)	0.121 (0.094)	0.036 (0.041)	-0.100 (0.094)
<i>Observations</i>	108	108	108	253	253	253
<i>R2</i>	0.230	0.042	0.131	0.254	0.242	0.475
<i>Province FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Controls</i>	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Controls include the variables Population (log), Altitude, and Distance from Largest City. All estimates include province fixed effects. Robust standard errors in parentheses; ***,**,* Statistically significant at the 1%, 5% and 10% confidence level respectively.

Table B5: The effect of women's suffrage on men's preferences and turnout (restricted sample)

	(1)	(2)
<i>Sample:</i>	<i>Thessaloniki</i>	<i>Rest Prefectures</i>
<i>Dependent variable:</i>	Δ <i>Men's Turnout Bye-1952</i>	
<i>Women in Electorate Bye</i>	-0.285* (0.159)	-0.149 (0.178)
Observations	43	32
R2	0.603	0.647
Lagged DV	Yes	Yes
Controls	Yes	Yes

Notes: The Lagged DV 1952-1951 is Δ Men's Turnout 1952-1951. Controls include the variables Population (log), Altitude, and Distance from Largest City. Robust standard errors in parentheses; ***, **, * Statistically significant at the 1%, 5% and 10% confidence level respectively.

Table B6: Women in electorate and their share of turnout (restricted sample)

	(1)	(2)
<i>Sample:</i>	<i>Thessaloniki</i>	<i>Rest Prefectures</i>
<i>Dependent variable:</i>	<i>Women's Share of Turnout</i>	
	<i>Bye</i>	
<i>Women in Electorate Bye</i>	0.420** (0.159)	0.454** (0.184)
<i>Observations</i>	44	34
<i>R2</i>	0.485	0.222
<i>Controls</i>	Yes	Yes

Notes: Controls include the variables Population (log), Altitude, and Distance from Largest City. Robust standard errors in parentheses; ***, **, * Statistically significant at the 1%, 5% and 10% confidence level respectively.

Table B7. Robustness tests for results in Table 2 – testing for the impact of outliers in the variable Women in Electorate Bye

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Sample:</i>	<i>Thessaloniki</i>			<i>Rest prefectures</i>		
<i>Dependent variable:</i>	Δ Electoral Support Bye-1952					
	<i>Right</i>	<i>Left</i>	<i>Centre</i>	<i>Right</i>	<i>Left</i>	<i>Centre</i>
<i>Women in Electorate Bye</i>	0.722*** (0.162)	-0.175 (0.145)	-0.447** (0.187)	-0.048 (0.151)	0.007 (0.050)	0.062 (0.155)
<i>Observations</i>	96	96	96	228	228	228
<i>R2</i>	0.516	0.356	0.312	0.620	0.370	0.632
<i>Province FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Lagged DV</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Controls</i>	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The table reports OLS estimates of Eq. (1). Regressions exclude 5 percent of observations on each side of the distribution of the variable Women in Electorate Bye. The Lagged DV stands for Δ Men Electoral Support 1952-1951 for each block of parties. Controls include the variables Population (log), Altitude, and Distance from Largest City. All estimates include province fixed effects. Robust standard errors in parentheses; ***, **, * Statistically significant at the 1%, 5% and 10% confidence level respectively.

Table B8: Robustness tests for results in Table 2 – using the main parties

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Sample:</i>	<i>Thessaloniki</i>			<i>Rest prefectures</i>		
<i>Dependent variable:</i>	Δ Electoral Support Bye-1952					
	<i>Right</i>	<i>Left</i>	<i>Centre</i>	<i>Right</i>	<i>Left</i>	<i>Centre</i>
<i>Women in Electorate Bye</i>	0.414*** (0.136)	-0.144 (0.109)	-0.233* (0.124)	-0.018 (0.117)	0.024 (0.037)	0.054 (0.104)
<i>Observations</i>	108	108	108	253	253	253
<i>R2</i>	0.523	0.343	0.282	0.625	0.343	0.620
<i>Province FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Lagged DV</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Controls</i>	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The table reports OLS estimates of Eq. (1). The dependent variables are constructed using the vote shares of the largest party/parties of each political ideology. The Lagged DV stands for Δ Men Electoral Support 1952-1951 for each block of parties. Controls include the variables Population (log), Altitude, and Distance from Largest City. All estimates include province fixed effects. Robust standard errors in parentheses; ***, **, * Statistically significant at the 1%, 5% and 10% confidence level respectively.

Table B9: Robustness tests for results in Table 2 – excluding prefectures with cancellation as the reason for the by-elections

	(1)	(2)	(3)
<i>Sample:</i>	<i>Rest prefectures</i>		
<i>Dependent variable:</i>	Δ Electoral Support Bye-1952		
	<i>Right</i>	<i>Left</i>	<i>Centre</i>
<i>Women in Electorate Bye</i>	-0.050 (0.152)	0.001 (0.017)	0.019 (0.142)
<i>Observations</i>	189	189	189
<i>R2</i>	0.382	0.293	0.605
<i>Province FE</i>	Yes	Yes	Yes
<i>Lagged DV</i>	Yes	Yes	Yes
<i>Controls</i>	Yes	Yes	Yes

Notes: The table reports OLS estimates of Eq. (1). Regressions exclude communities in the prefectures of Grevena and Rethymno. The Lagged DV stands for Δ Men Electoral Support 1952-1951 for each block of parties. Controls include the variables Population (log), Altitude, and Distance from Largest City. All estimates include province fixed effects. Robust standard errors in parentheses; ***, **, * Statistically significant at the 1%, 5% and 10% confidence level respectively.

Table B10. Robustness tests for results in Table 3 – Controlling for Electricity Access

	(1)	(2)	(3)
<i>Sample:</i>	<i>All prefectures</i>		
<i>Dependent variable:</i>	<i>Δ Electoral Support Bye-1952</i>		
	<i>Right</i>	<i>Left</i>	<i>Centre</i>
<i>Women in Electorate Bye</i>	-0.372* (0.198)	-0.006 (0.087)	0.469** (0.211)
<i>OLF Women</i>	-0.510** (0.198)	-0.011 (0.093)	0.610*** (0.211)
<i>Interaction Term</i>	0.011*** (0.004)	0.001 (0.002)	-0.013*** (0.004)
<i>Electricity Access</i>	0.104 (0.145)	0.090 (0.069)	-0.191 (0.138)
<i>Interaction Term 2</i>	-0.001 (0.003)	-0.002 (0.001)	0.004 (0.003)
<i>Observations</i>	361	361	361
<i>R2</i>	0.607	0.457	0.611
<i>Province FE</i>	Yes	Yes	Yes
<i>Lagged DV</i>	Yes	Yes	Yes
<i>Controls</i>	Yes	Yes	Yes

Notes: The table reports OLS estimates of Eq. (2) augmented with the variable Electricity Access and its interaction with Women in Electorate Bye (“Interaction Term 2”). “Interaction Term” is the product of the variables Women in Electorate Bye and OLF Women. The Lagged DV is Δ Men Electoral Support 1952-1951 for each block of parties. Controls include the variables Population (log), Altitude, and Distance from Largest City. All estimates include province fixed effects. Robust standard errors in parentheses; ***, **, * Statistically significant at the 1%, 5% and 10% confidence level respectively.

Table B11. Robustness tests for results in Table 3 – Clustered errors

	(1)	(2)	(3)
<i>Sample:</i>	<i>All prefectures</i>		
<i>Dependent variable:</i>	Δ Electoral Support Bye-1952		
	<i>Right</i>	<i>Left</i>	<i>Centre</i>
<i>Women in Electorate Bye</i>	-0.334 (0.087) [0.000] {0.235}	0.019 (0.819) [0.625] {0.826}	0.408 (0.048) [0.000] {0.120}
<i>OLF Women</i>	-0.427 (0.012) [0.000] {0.045}	0.051 (0.489) [0.125] {0.454}	0.468 (0.008) [0.000] {0.036}
<i>Interaction Term</i>	0.009 (0.007) [0.000] {0.041}	-0.000 (0.795) [0.375] {0.761}	-0.010 (0.004) [0.000] {0.029}
<i>Observations</i>	361	361	361
<i>R2</i>	0.606	0.453	0.609
<i>Province FE</i>	Yes	Yes	Yes
<i>Lagged DV</i>	Yes	Yes	Yes
<i>Controls</i>	Yes	Yes	Yes

Notes: The table reports the estimates of Table 3 with p-values inside the parentheses estimated using robust standard errors. Inside the brackets p-values are estimated using the wild cluster (election date) bootstrap method to account for within-election date dependence, relying on a six-point weight distribution as suggested by Webb (2014). Inside the curly brackets p-values are estimated using the wild cluster (province) bootstrap method to account for within-province dependence, relying on a two-point weight distribution as suggested by Cameron et al. (2008). Reported p-values for wild bootstrap derived from running 9,999 replications in each case. “Interaction Term” is the product of the variables Women in Electorate Bye and OLF Women. The Lagged DV is Δ Men Electoral Support 1952-1951 for each block of parties. Controls include the variables Population (log), Altitude, and Distance from Largest City. All estimates include province fixed effects.

Figure B1: Distribution of women in electorate across communities

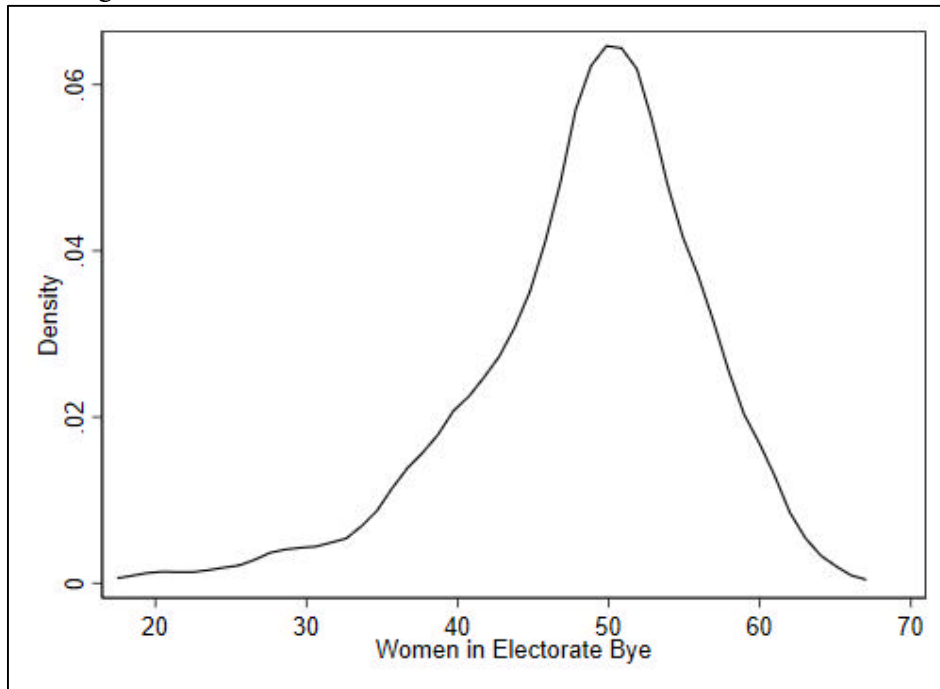
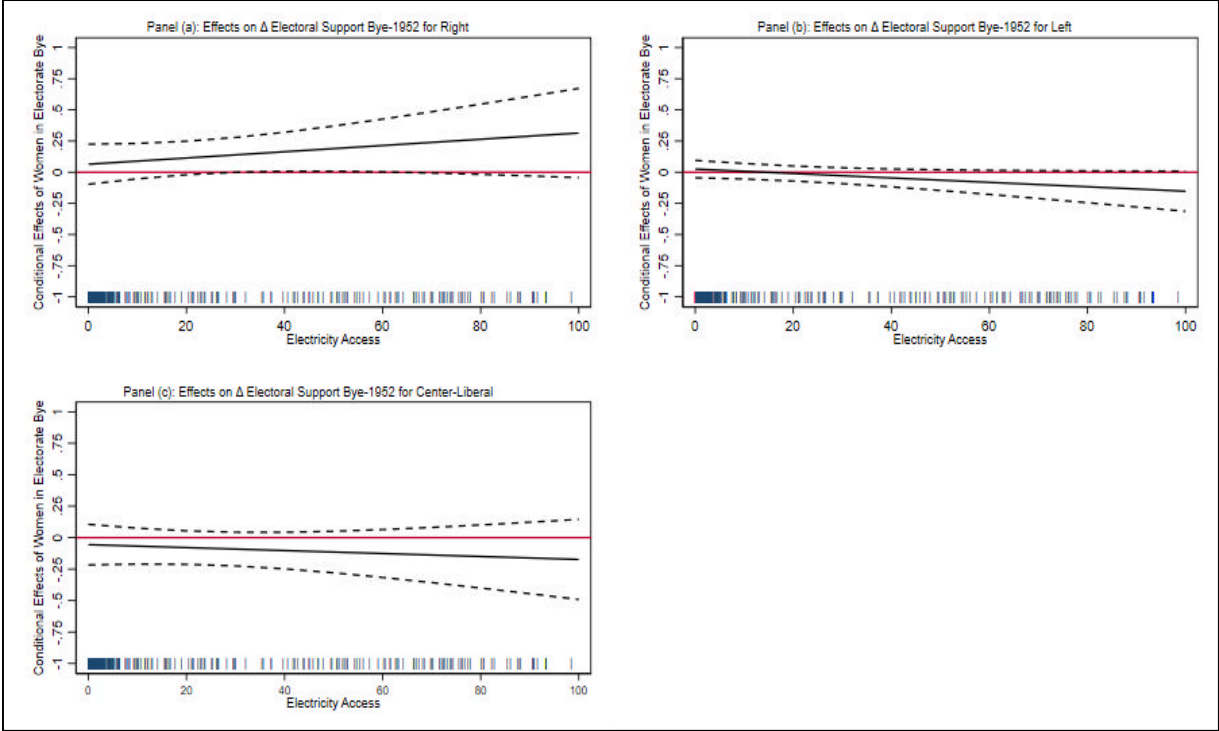
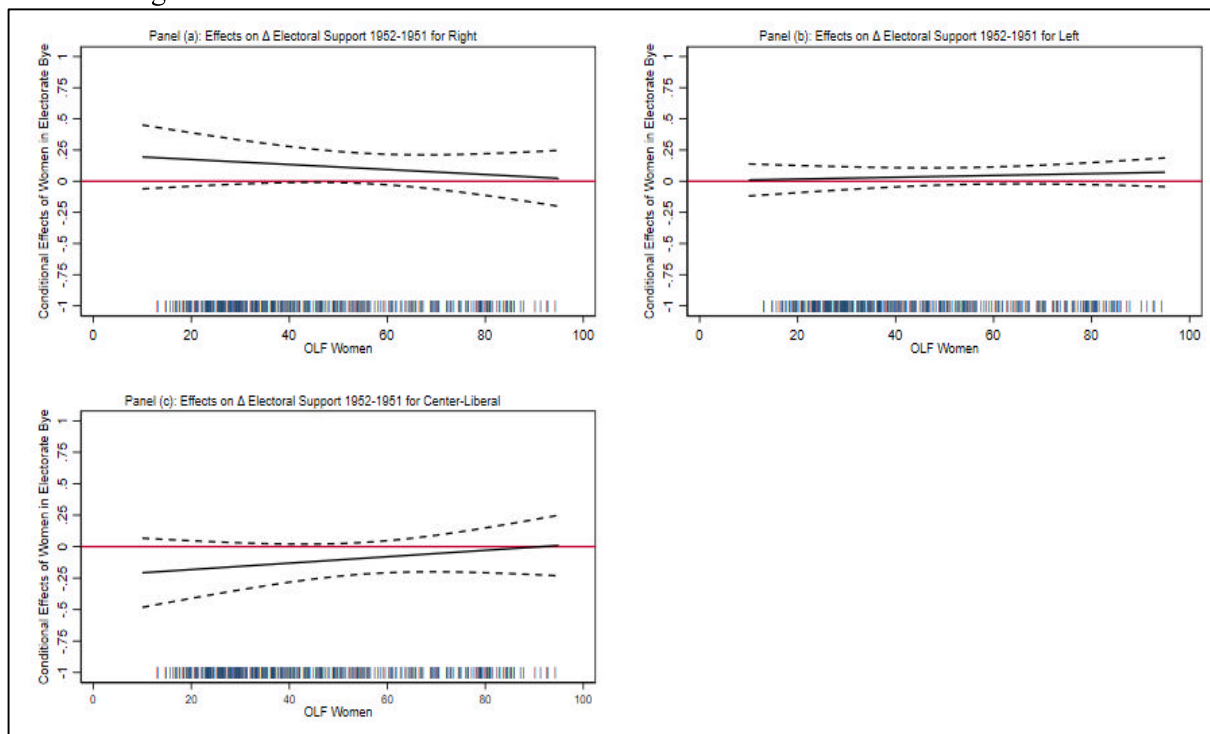


Figure B2: Robustness tests for results in Figure 1 - interactive relationship with Electricity Access



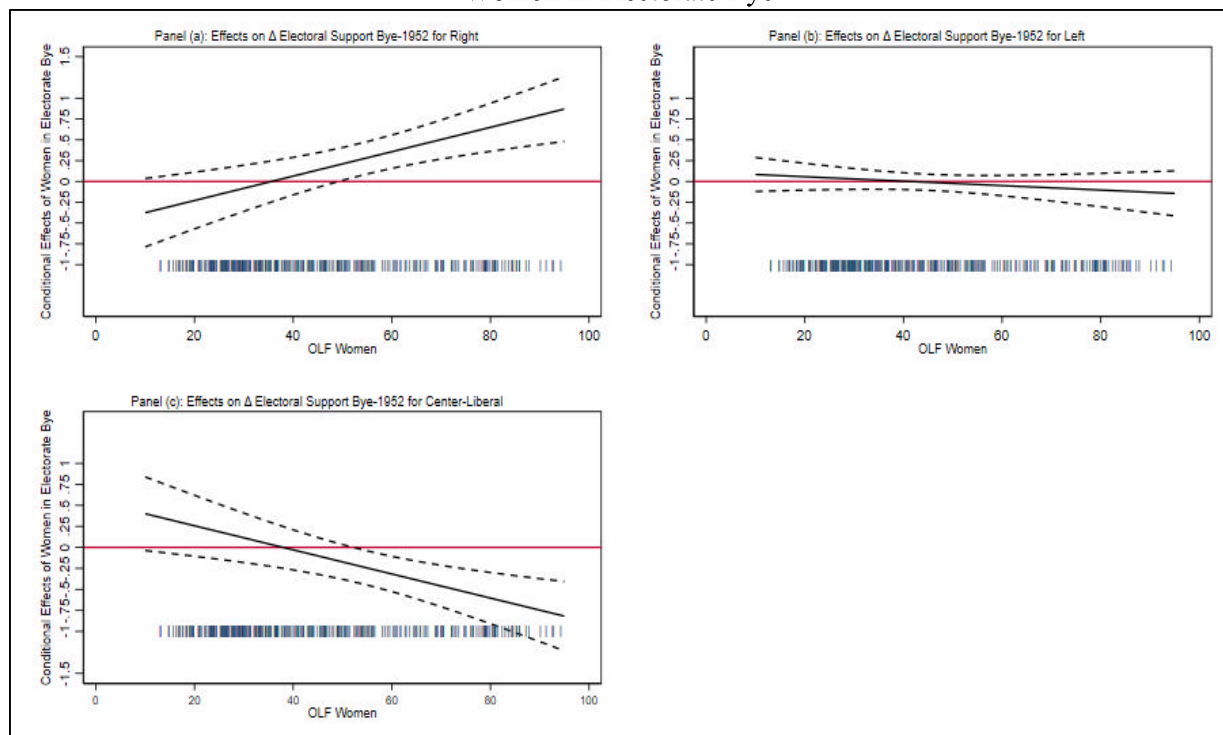
Notes: This graph shows the conditional effects of women’s suffrage on the change in electoral support for right, left and center-liberal parties at different values of Electricity Access in All Prefectures; The conditional effects are based on the same specification described in Table 3 - after replacing OLF women with Electricity access; All other covariates are held constant at their means; Dashed lines signify 90% confidence intervals; Rug plot at horizontal axis illustrates distribution of Electricity Access in All Prefectures; Red horizontal line marks marginal effect of 0.

Figure B3: Placebo conditional effects of women in electorate for All Prefectures



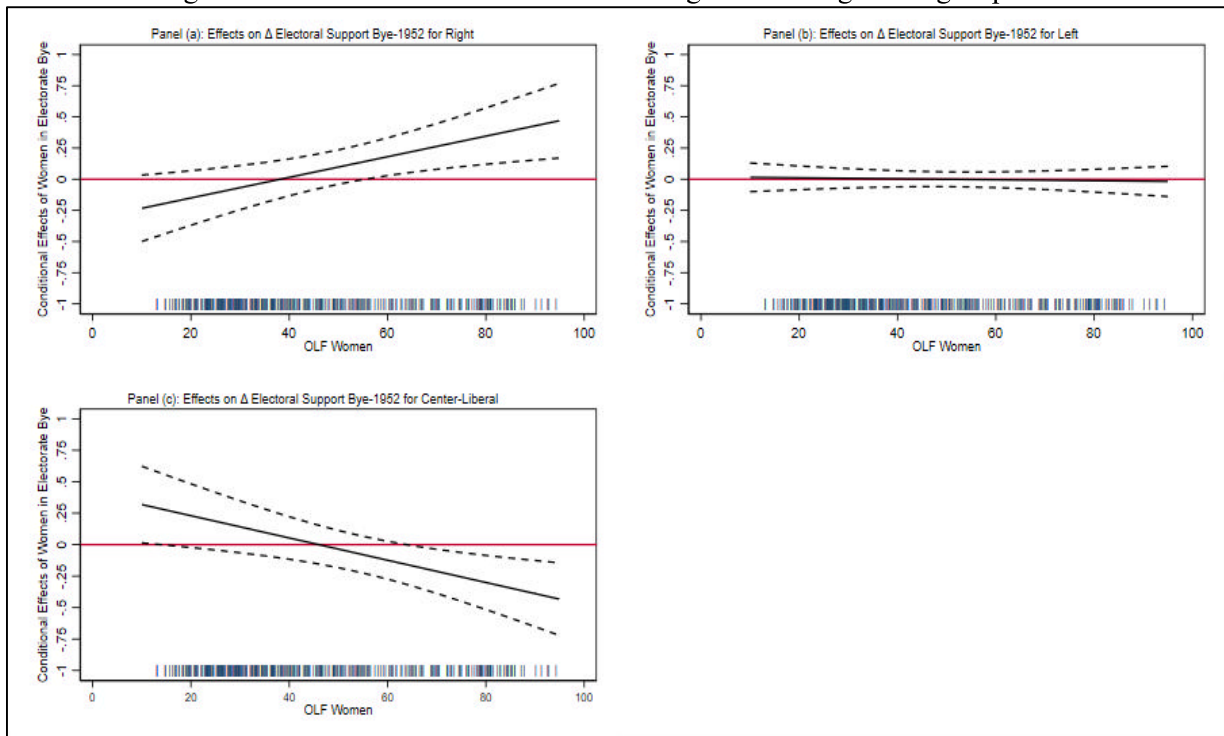
Notes: This graph shows the placebo conditional effects of women’s suffrage on the change in electoral support for right, left and center-liberal parties at different values of OLF Women; The conditional effects are based on the same specification described in Table 3- using as dependent variable Δ Men Electoral Support 1952-1951 instead of Δ Electoral Support Bye-1952; All other covariates are held constant at their means; Dashed lines signify 90% confidence intervals; Rug plot at horizontal axis illustrates distribution of OLF Women in All Prefectures; Red horizontal line marks marginal effect of 0.

Figure B4: Robustness tests for results in Figure 1 – testing for the impact of outliers in the variable Women in Electorate Bye



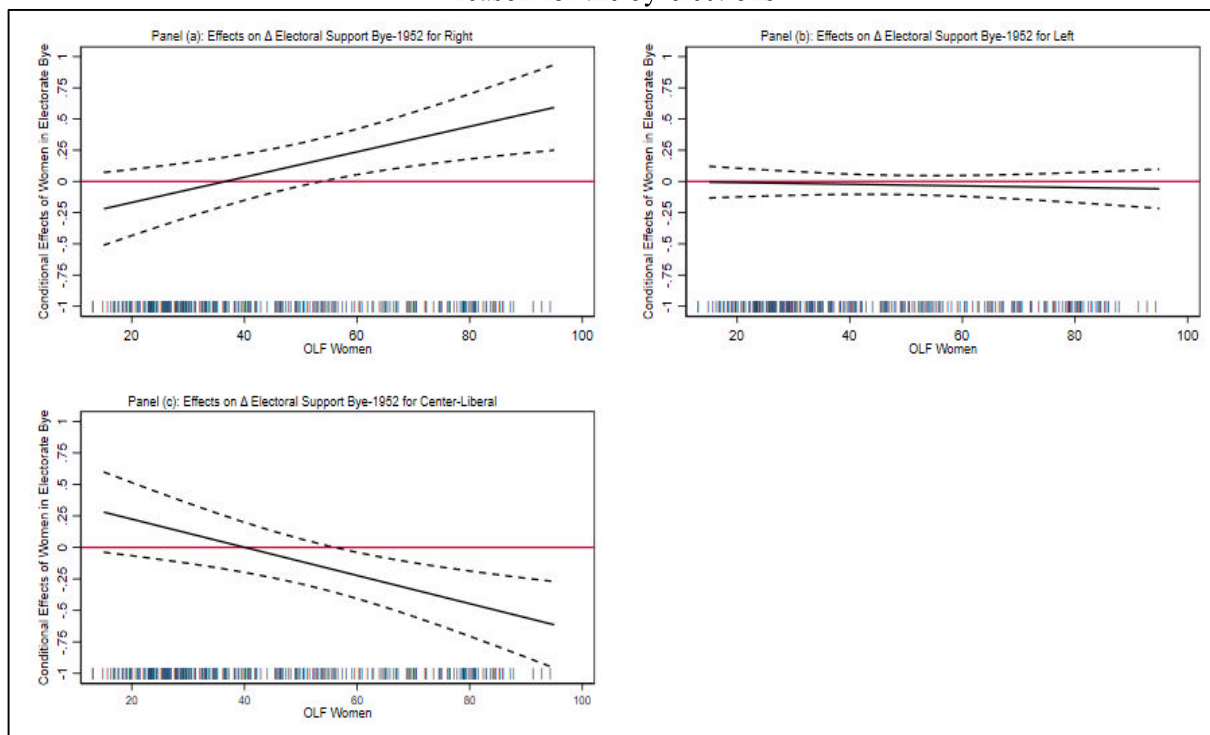
Notes: This graph shows the conditional effects of women’s suffrage on the change in electoral support for right, left and center-liberal parties at different values of OLF Women in All Prefectures; The conditional effects are based on the same specification described in Table 3, after excluding 5 percent of observations on each side of the distribution of the variable Women in Electorate Bye; All other covariates are held constant at their means; Dashed lines signify 90% confidence intervals; Rug plot at horizontal axis illustrates distribution of OLF Women in All Prefectures; Red horizontal line marks marginal effect of 0.

Figure B5: Robustness tests for results in Figure 1 - using the largest parties



Notes: This graph shows the conditional effects of women’s suffrage on the change in electoral support for the right, left and center-liberal parties at different values of OLF Women in All Prefectures; The conditional effects are based on the same specification described in Table 3; The dependent variables are constructed using the vote shares of the largest party/parties of each political ideology; All other covariates are held constant at their means; Dashed lines signify 90% confidence intervals; Rug plot at horizontal axis illustrates distribution of OLF Women in All Prefectures; Red horizontal line marks marginal effect of 0.

Figure B6: Robustness tests for results in Figure 1 - excluding prefectures with cancellation as the reason for the by-elections



Notes: This graph shows the conditional effects of women's suffrage on the change in electoral support for right, left and center-liberal parties at different values of OLF Women in All Prefectures; The conditional effects are based on the same specification described in Table 3; Regressions exclude communities in the prefectures of Grevena and Rethymno; All other covariates are held constant at their means; Dashed lines signify 90% confidence intervals; Rug plot at horizontal axis illustrates distribution of OLF Women in All Prefectures; Red horizontal line marks marginal effect of 0.