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**Paper No. 146**

# Gender voting gap in the dawn of urbanization: evidence from a quasi-experiment with Greek special elections

**Georgios Efthyvoulou, Pantelis Kammas and Vassilis Sarantides**

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

March 2020

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# Gender voting gap in the dawn of urbanization: evidence from a quasi-experiment with Greek special elections

**Georgios Efthyvoulou[*], Pantelis Kammas[†] and Vassilis Sarandides[#]**

## ABSTRACT

The electoral law of 31 May 1952 extended the voting rights to all adult women in Greece. This paper examines the impact of women's enfranchisement on party vote shares by employing a unique dataset of 385 communities located in seven prefectures in Greece where by-elections took place in 1953 and 1954 (for strictly exogenous reasons). To estimate causal effects, we exploit the observed heterogeneity in the proportion of women in the electorate across communities as the identifying source of variation, and employ a difference-in-differences design that holds unobserved local characteristics fixed. Our results provide strong evidence in favour of the "traditional gender voting gap" (women voting more conservatively compared to men) in the urban prefecture of Thessaloniki, and no evidence of gender voting differences in the remaining (six) predominantly rural prefectures of our sample. Our results also reveal that the existence of a gender voting gap is highly conditional upon the proportion of economically inactive women; that is, women tend to vote for right parties when they are outside of the labour force. Interestingly, when we account for this conditionality, a suffrage-induced pro-right shift can also be observed in communities outside Thessaloniki. Building on the economic bargaining models of the family, 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.

**JEL classification:** D72

**Keywords:** women's suffrage; political preferences; women's labour market participation

**Acknowledgments:** We would like to thank the Greek Ministry of Interior for providing access to the electoral data of by-elections, the Economics Department at Sheffield for financial support, and Christiana Anaxagorou for research assistance. We have benefited from comments and suggestions by Tassos Adamopoulos, Nikos Benos, Nicos Christodoulakis, Mona Morgan-Collins, Andreas Drichoutis, Gikas Hardouvelis, Margarita Katsimi, Stathis Klonaris, Anastasia Litina, Thomas Moutos, Dimitris Panagiotopoulos, Costas Roumanias, Argyris Sakalis, Dawn Teele and Dimitris Xefteris. We are indebted to the participants of research seminars at *Athens University of Economic and Business,*

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*Agricultural University of Greece, Birkbeck University of London and University of Sheffield,* as well as the participants of the following conferences: the *European Public Choice Society Conference* 2019, the *CREA Workshop on Culture, and Comparative Development* 2018, the *Athenian Policy Forum Conference* (APF 2018) and the *International Ioannina Meeting on Applied Economics and Finance* (IMAEF 2018). Any remaining errors are ours.

# 1. Introduction

The relationship between democratic political institutions and the economy has been central to the political science and political economy literature (see, e.g., North, 1981, 1990; Acemoglu and Robinson, 2006). However, the role of women either as political actors that shaped the process of democratization or as electorate that voted in favour of specific fiscal policies – after women's enfranchisement – has received little attention by the relevant literature.[3] This is because, 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 implemented policies (see, e.g., McConnaughty, 2013; Acemoglu and Robinson, 2000).[4] Based on this rationale, the political conflict takes place along dimensions other than gender (such as, income or ethnic/religion differences), whereas the so-called "gender identity" is even totally absent, or not that important, compared to the common ethnic or income interests in voting behaviour. Hence, 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.[5]

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.[6] In particular, most of the empirical studies that focus on US presidential elections, suggest that women were more keen 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 (see, e.g., Duverger, 1955; Lipset and Rokkan, 1967; 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 increased religiosity of the female population and to differences in its social position, particularly with respect to 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., Caroll, 1988; Chaney et al.,

[3] To be more precise, there is a small but growing empirical literature showing that women's enfranchisement affected positively total government spending (see, e.g,. Abrams and Settle, 1999; Lott and Kenny, 1999; Aidt and Dallal, 2008; Bertocchi, 2011; Kose et al., 2018), while, at the same time, government budget allocation altered in favour of specific spending accounts, such as spending on health (see e.g. Miller, 2008) and public education (see e.g. Carruther and Wannamaker, 2015). However, the specific social and economic circumstances under which women won political rights, as well as the influence of women's enfranchisement on the electoral fortunes of political parties, has been much less investigated (see, e.g., Corder and Woldbrecht, 2016; Morgan-Collins and Teele, 2018; Teele, 2018b).

[4] A number of empirical studies employing household survey data provide evidence in favour of the *family vote hypothesis* (see, e.g., Lombard, 1997; Zuckerman et al., 1998; Jennings and Stoker, 2005; Zuckerman et al., 2005; Coffe and Need, 2010). Moreover, most of these studies agree that, prior to the 1970s, spousal agreement in party identification was stronger, with men exerting a greater political influence within the family compared to women.

[5] For a more 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 (2018a).

[6] More precisely, Duverger (1955) suggests that spouses usually vote in the same way - i.e., *family vote hypothesis* - but when differences in voting choices exist, women tend to vote more conservatively than men.

1998; Manza and Brooks, 1998; Trevor, 1999) and in favour of left-wing parties in most European countries (see, e.g., Togeby, 1994; Inglehart and Norris, 2000; 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; 2003; 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, child care 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).[7]

The paper at hand discusses the social and political circumstances under which the women enfranchisement took place in Greece in 1952, and investigates empirically the potential existence of a gender voting gap in Greece during that period.[8] A number of historical characteristics make the case of Greece unique both from a theoretical and an empirical point of view. First, the timing of the reform in Greece allows us to investigate the existence and the direction of a "gender gap in political preferences" in the dawn of urbanization. This is because, during the early 1950s, Greece was basically an agrarian economy with half of its population living in rural and semi-urban areas. Only in 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 was formed (see, e.g., Kanellopoulos, 1995). To the best of our knowledge, this is the first study that investigates gender political differences during that phase of economic development (i.e., as an economy moves away from the agricultural phase) since previous studies that investigate early gender voting gaps mostly focus on economies that are basically industrialized during the period of women's enfranchisement (see, e.g., Morgan-Collins, 2019; Morgan-Collins and Teele, 2018).[9] An interesting

[7] An alternative explanation is provided by Manza and Brooks (1998) who suggest that entering in the labour market exposes women to gender inequalities that they are less likely to experience as homemakers and this may lead them to support left-wing parties. Similarly, Sears and Citrin (1982) argue that women are more likely than men to be economically vulnerable and this may explain their increased support to redistributive policies and pro-welfare policies parties' agendas.

[8] Previous studies focusing on Greece include Macridis (1981) who provides descriptive evidence in favour of a *traditional gender voting gap* in the elections of 1974 and 1977, and Tsokou et al., (1986) who employ data from the 1980 Euro-Barometer survey suggesting that women supported disproportionately the right-wing New Democracy party. More recently, Pantelidou Maloutas (1992), based on the 1988 survey data from the National Centre for Social Research, provides evidence in favor of a *traditional gender voting gap* when the analysis focuses on participants above the age of 30, but traces the existence of a *modern gender voting gap* for the age cohort of 18-29 years old. Similarly, Limberes (1986) based on a public opinion survey that was conducted at the time of the 1981 general election, concludes that the traditional conservatism of Greek women seems to dissolve very rapidly from the early 1980s. To the best of our knowledge, our study is the first that employs advanced econometric tools and electoral data before and after the reform of women enfranchisement in Greece in order to investigate the aforementioned issues.

[9] Greece is a distinctive case – compared to the countries analysed in previous studies (e.g., US, UK, Sweden, Norway, Canada) – also concerning the dimension of culture. More precisely, Greece is a country characterized by *strong family ties* and in general a rather *collectivistic* culture (see, e.g., Hofstede, 2001). This appears to be a characteristic of major importance since the existence of strong family ties operate as a substitute of formal welfare state institutions (see, e.g., Kammas et al., 2018) and thus is expected to affect both the structure and the functioning of the welfare state (see, e.g., Espring and Andersen, 1999). The reason is that, in the absence of formal risk sharing institutions (i.e. before the formation of welfare state), societies facing increased risks, such as climate variability or a higher prevalence of lethal diseases, developed informal insurance contracts (i.e. extended networks of "in group" relationships) to tackle the issue of uncertainty (see, e.g., Murray and Schaller, 2010 for more details no this). These cultural traits tend to persist – as *heuristics* or *rules of thumb* in decision making (see, e.g., Boyd and Richerson (1985) – also in later phases of economic development and even

characteristic of that phase – which is observable in the case of Greece during the 1950s – is that female labour force participation is not affected positively by economic development (see, e.g., Durand, 1975; Schultz, 1991; Goldin, 1995), while it remains higher in rural areas compared to the more urbanized ones. 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 by Boserup (1970) and Goldin (1995). Specifically, in the early phase of industrialization, the rates of female labour force participation fell in most countries due 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).[10]

A second interesting characteristic in the case of Greece is that women enfranchisement came as a result of pressures from the United Nations, and it was never supported rigorously by any of the major domestic political parties (see, e.g., Samiou, 2013). This is because the late 1940s was an era of extremely high political uncertainty in Greece. The civil war (1946-1949) had just finished and the traditional centre-liberal and right-wing parties were postponing the extension of voting rights to women – that would double the size of the electorate – since they were afraid that such a radical reform might have significant unintended consequences concerning the vote share of the left-wing parties (see, e.g., Samiou, 2013). However, on 20 December 1951, Greece became member state of the Security Council of the United Nations. This political development altered the policy followed by the Greek governments that was under the obligation to take specific steps that would ensure equality of political rights between men and women.[11] The fact that suffrage was extended as a result of exogenous international pressures, and it was not outcome of domestic claims from specific parties and political movements, mitigates concerns of reverse causality in voting behaviour.[12] In Appendix 1, we provide a detailed description of the procedures that were followed until the Bill of "full voting rights to all adult females" was enacted as a Law on 31 May 1952.

Third, although the electoral law extended the voting rights to all adult women in Greece, the Ministry of Interior failed to update the electoral registers on time and therefore women could not participate in the parliamentary elections that took place some months later (16 November 1952). As a result, women went to the polls for the first time 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 deputy or the cancellation of the

after the development of formal welfare state institutions. Hence, a culture of strong family ties is expected to affect the whole functioning of the welfare state and consequently the voting behaviour of women.

[10] Building on the ideas of Boserup (1970), Goldin (1995) documents a U-shaped relationship between economic development and female labour force participation. Similarly, Mammen and Paxson (2000) provide evidence of a U-shaped relationship in a comparison of households of varying income within India and Thailand. For an excellent review of the relevant literature on female labour force participation, see Giuliano (2014).

[11] The international pressures towards the Greek government started in 1949, especially after the United Nations' meeting that took place in Beirut on March 1949. In that meeting, it was decided that all members states were obliged to extend voting franchise to women within the next twelve months (see, e.g., Samiou, 2013).

[12] Teele (2018a; 2018b) highlights the potential of *strategic enfranchisement* by elected leaders. More precisely, in an electoral landscape of high political competition, the legislators and parties that think they can mobilize women will be more supportive of women's enfranchisement since they believe that they will be benefited by this reform. Obviously, the existence of this reverse causality channel generates serious endogeneity concerns and makes extremely hard to establish empirically a convincing causal relationship between women's suffrage and party vote shares.

1952 election result by the electoral court.[13] The timing of these by-elections is obviously exogenous to economic conditions and parties' electoral influence, since an unexpected death is apparently a natural phenomenon (see Baskaran et al., 2015). Similarly, the timing of by-elections that came as a result of cancellations from the electoral court cannot be predicted. This set-up alleviates concerns regarding potential endogenous effects arising from knowing or being able to influence the timing of elections.

Our analysis seeks to identify the causal relationship between women's enfranchisement and party vote shares by employing a *unique community-level dataset* for seven Greek electoral prefectures that by-elections took place between 1953 and 1954. To this end, we employ a difference-in-differences (DD) method, where we exploit the uneven and exogenous spatial variation in the concentration of eligible (registered) women voters as a measure of the received "dosage" of the franchise reform in different communities (see, e.g., Cascio and Washington, 2013; Carruthers and Wanamaker, 2015; Vernby, 2013; Morgan-Collins, 2019). The basic idea is that, if women were biased in favour of a certain political party, the uneven "dosage" of women's enfranchisement will cause a different change in the electoral influence of that political party after the reform. An additional advantage of this approach is that it allows us to take into account unobserved fixed community characteristics that could confound the true relationship between suffrage and electoral outcomes (see, e.g., Vernby, 2013).

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 – where women were keener to vote in favor of the right-wing parties in comparison to men. In contrast, we find no effect in the panel of (the remaining) six predominantly rural electoral prefectures of Drama, Epidavros-Limira, Evros, Grevena, Phthiotis and Rethymno. When we pool together all electoral prefectures, our empirical analysis suggests a *traditional gender voting gap* in favor of right-wing parties driven by differences in the level of economically inactive women (i.e., decreased female labor force participation). Interestingly, when we calculate this conditional effect separately for Thessaloniki and the panel of the "Rest Prefectures", this result continues to hold. In other words, we provide evidence of a *traditional gender voting gap* even in rural areas at high levels of *female economic inactiveness*.

These findings can be interpreted as follows. In agricultural communities women work with the rest household members either on family farms or in home workshop production (see Goldin, 1995). Since women are part of the family business, their interests are fully aligned to those of the other family members and there is no gender gap in voting behaviour. Hence, in agricultural communities, our findings are consistent to the so-called *family vote hypothesis*. However, as economic development increases the productivity outside family enterprises, 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 and women stay at home and allocate most of their time to household activities, such as child bearing and rearing (see, e.g., Durand, 1975; Schultz, 1991; Goldin, 1995). Decreased female labor force participation in urban areas comes as a result of a widespread and strong *social stigma* against females working in

[13] 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).

manual jobs outside the family (see Goldin, 1995 for more details on this).[14] This drop in women labour force participation (or increase in inactivity) in more urbanised areas, or specific rural areas, affects the voting behaviour of the female electorate by giving rise to the *traditional gender voting gap*.

The rest of the paper is organised as follows. Section 2 discusses the theoretical considerations upon which we base our analysis. Section 3 presents the empirical specification and the data. Section 4 discusses the empirical results. Finally, Section 5 summarizes the main points of the analysis.

# 2. Theoretical considerations

## 2.1 Gender gap in political preferences and the effect of female labour force participation

The starting point for any theory of gender preferences over public policy is the question of whether the family can be treated as a unitary actor or as separate individuals. If we assume that the interests of the family members are fully aligned (see, e.g., Samuelson, 1956 and Becker, 1974; 1981), then there is no place for a gender gap in political preferences and consequently the political conflict takes place along dimensions other than gender. The most usual dimensions of political conflict are differences on income (see, e.g., Romer, 1975; Roberts, 1977; Meltzer and Richard, 1981) or ethnic/religion identities (see, e.g., Alesina et al., 2001; Desmet et al., 2009), whereas the so-called "gender identity" appears to be a factor of minor importance – compared to the common ethnic or income interests – for voting behaviour. By treating family as a unitary unit, this strand of the literature mostly concludes to the standard Meltzer and Richard (1981) argument according to which families with incomes below the mean would have an incentive to vote in favour of redistributive policies. If this is the case, 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).

The possibility of a gender gap in political preferences emerges when marriage is treated as an incomplete contract that could be potentially terminated. In this case, both men and women have an incentive to support their outside options by voting for economic policies that affect positively these options, even when they differ from those preferred by their spouse (see Iversen and Rosenbluth, 2006). In modern times, the obvious way of "walking away" from a family is divorce and thus a large number of scholars place the spotlight on the effect of divorce on gender gap in political preferences (see, e.g., Edlund and Pande, 2002; Edlund, 2006). However, marriage is not a precondition for forming households and nor is the divorce the only way to walk away from a marriage. For example, in hunter gathered societies, men and women formed households, or families, but they did not get married in the modern meaning of the term (see Dahlberg, 1981). In agricultural societies marriage became a usual social norm. However, it was still common for men to withdraw from their families by abandoning both physically and economically their wives and children (see Iversen and Rosenbluth, 2010). Therefore, focusing strictly on the economic

[14] 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.

consequences of divorce may be quite misleading in terms of explaining gender gap in political preferences.

Building on the economic bargaining models of the family (see, e.g., Lundberg and Pollak, 1996 for a review of this literature), a number of studies suggest that the ability to walk away from the family depends critically on having skills and assets that can be applied easily outside the household (see Estevan-Abe, 1999; Iversen and Rosenbluth, 2010). Hence, the division of labour between marketable skills and household specific skills (that is, skills which cannot be applied easily outside the household like children bearing and rearing) between spouses appears to be of great importance for the relative bargaining power of each family member. If one spouse has all of its own skills closely tied to the household, the cost of walking away from the family for this specific spouse can be prohibitive and this inevitably affects its economic behaviour and political preferences.

Starting from Tilly and Scott (1978), a large number of scholars highlight the importance of the model of production on issues related to gender equality and gender differences on political preferences. More recently, Iversen and Rosenbluth (2010) argue that when the model of production generates limited demand for female labour (e.g., 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. 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. Thus, in an economic environment characterized by limited demand for female labour force participation, 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).

Following a similar rationale, in an economic environment in which the demand for female labour force participation increases, 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 child care and elderly care) and allow women to invest in marketable skills that boost their income and the level of their economic independence (see Iversen and Rosenbluth, 2006; Iversen et al., 2005). In other words, by lifting some of the family burdens on the public budget, women are relieved from a number of non-marketable household activities, being free to invest in marketable skills just as their male counterparts.

## 2.2 The U-shaped relationship between economic development and female labour force participation

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 to a great extent (see Durand, 1975; Goldin, 1995). They sometimes work in the fields along with men, but more often

work with the rest household members in home workshop production.[15] More precisely, during this phase of economic development, there is an obvious productivity advantage of males 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. In other words, in an economy that agricultural sector dominates, women are not restricted to the standard household activities (children bearing and rearing, water and fuel collection, food preparation, etc), but in contrast – through home workshop production – they participate actively in the market.

As incomes rise, often because of an expansion of the market or the introduction of a new production technology, in most societies the rates of female labour force participation fall (inactivity 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 male family members work for the factory at a higher wage, whereas women remain labour inactive allocating their time mostly to household activities (e.g., children bearing and rearing) due to an income effect.[16] The big question in the relevant literature is why women do not follow the male family members into the factory. In other words, why women do not exploit the option of working for a higher labour wage in the factory like male family members? A number of scholars suggest that the 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*). Given that in the early stages of industrialization the available manual jobs in the manufacturing sector are often "loud, dirty and dangerous" there is a widespread and strong *social stigma* against wives working in paid manual jobs outside the home (see, e.g., Boserup, 1970; Goldin, 1990, 1995; Iversen and Rosenbluth, 2010). Social stigma is almost always attached to the work of women in traditional male-intensive industries (such as mining, iron and steel) but also exists in the female-intensive ones (such as clothing, textiles). The roots of this social norm lie in the following rationale. Only a husband who is lazy and careless of his family would allow his wife to do a manual job. This is because men are obliged to ensure a minimum level of living to their families and thus a woman employed in a manual job outside the family provides a clear cut signal of her husband's laziness.[17] As a consequence, if the only available working positions are manual jobs in the manufacturing sector, the female labour inactivity is expected to increase as income gets higher.

[15] 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) or even on the modern sex ratio (Alesina et al., 2018).

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

[17] Interestingly, this stigma does not appear to attach to widows (who are definitely in need) or to women working in the white-collar sector (such as teachers, nurses, clerical work). This is because working in the white-collar sector requires some level of education and across many cultures highly educated women are given license to work for pay. Thus, if higher class women are given the privilege of working in these sectors, then lower income women can work as well. This is because, by working in the white-collar sector, a wife does not signal that her husband is lazy or negligent since she could be a highly educated woman married to hard-working man (see Goldin, 1995 for more details on this).

Women start to participate more actively in the paid labour force, when female education improves and they are enabled to work in non-manual jobs due to their increased human capital.[18] 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. Therefore, the falling (rising) portion of the U-shaped curve of female labour force participation (inactivity) can be explained by the income effect (and the *social stigma* attached to manual jobs outside the home), which appears to be dominant during the early phases of industrialization. On the other hand, the second half of the U-shaped curve comes as a result of the substitution effect that dominates in later phases, particularly after the rise of service jobs (see Goldin, 1995 for more details on this).

By combining the first half of the inverse U-shaped relationship between economic development and female labour force inactivity, with the theoretical arguments linking female labour force participation/inactivity and gender gaps in political preferences discussed in Section 2.1, we conclude to the following hypotheses:

*Hypothesis 1a: In an economy in which the agricultural sector dominates, there is no gender gap in voting behaviour – i.e., results are consistent to the "family vote hypothesis".*

*Hypothesis 1b: In an economy in which the locus of the production has been shifted from the family business to the factory, women vote more conservatively than males – i.e., results provide evidence of a "traditional gender voting gap".*

According to our theoretical priors, in an early stage of economic development (i.e., agricultural economy) women are part of the family business and thus their political interests are fully aligned to those of the other family members (Goldin, 1995). Hence, during this phase of development voting, behaviour is not affected by the so-called "gender identity" which is even totally absent or rather unimportant compared to other dominant identities (e.g. ethnic identity or class/income interests).[19] In contrast, in the phase of the dawn of urbanisation women's interests differ from those of their male counterparts, since male family members work outside family business whereas women stay labour inactive at

[18] 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).

[19] The absence of "gender consciousness" in voting behaviour can be also attributed to the limited role of the suffragist movements during that phase of economic development. More precisely, the relevant literature suggests that a strong suffragist movement defines the group interests, develops the shares consciousness among the member of the group, and at the same time informs politicians about the group's preferences and the voters about the politician's agendas (see Morgan-Collins, 2019; Teele 2018a; 2018b for more details on this). Hence, in the absence of such movements the so-called "gender identity" is expected to be poorly developed and the "de-jure enfranchisement" (that takes place through the extension of the voting right) is not translated to "de-facto enfranchisement". In this case, women may have gained (legally) the right to vote but in practice vote similarly to their spouses.

home allocating most of their time to household activities (see Iversen and Rosenbluth, 2010).[20] The above are summarized by the following hypothesis.

*Hypothesis 2: The driving force behind the difference in the voting behaviour of the female electorate between the two phases of economic development is women labour force participation/inactivity – i.e., female labour inactivity would give rise to the "traditional gender voting gap".*

## 2.3 Greece in the dawn 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 A1, in 1928, 58% of the population was living in rural areas. However, after the end of the Second World War, 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 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).

**Table1A: 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 |
| Inactive Total Population >10 years old | 2,211,167 | 2,717,762 | 3,820,072 | 5,048,005 |
| Inactive Female Population > 10 years old | 1,772,952 | 2,373,327 | 2,824,028 | 3,375,221 |
| **Ratio (Inactive Female >10 /Total Female >10 )** | **0.72** | **0.83** | **0.76** | **0.73** |
| **Ratio (Inactive Female >10/ Inactive 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:** Population data are obtained from censuses of the ELSTAT (1928, 1951, 1971, 1991). Urbanization data are obtained from the Statistical Yearbook of Greece (1991).

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 female labour force inactivity (participation). In particular, according to the census of 1928, when most of the population was living in rural areas, women were economically inactive (active) to a lower (higher) extent in comparison to 1951 when large shares of population moved from the countryside to more urbanised areas. In later decades, due to the explosive expansion of the service sector in Greece and the improvement of female education, female labour force inactivity started to drop again. The inverse (direct) U-shaped relationship between

[20] We develop these hypotheses by focusing solely on the two first stages of economic development (and by skipping the later phase characterized by the rise of the service sector) since these were the phases that represented the economy of Greece during the early 50s, as explained in Section 2.3. From the analysis above, we would also expect a *modern gender voting gap* at a later phase of industrialisation, where inactivity falls as the demand for female labour force participation especially in the service sector increases.

urbanization and female economic inactivity (participation) in Greece could be explained on the basis of the theoretical arguments discussed in the previous sub-section. Table 1B provides a similar message when the more detailed census data of 1961 are decomposed between urban, semi-urban and rural areas: female economic inactivity (participation) appears to be lower (higher) in rural and semi-urban areas compared to the urban ones.

**Table1B: 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 |
| Inactive Total Population >10 years old | 1,626,700 | 402,400 | 1,055,500 |
| Inactive Female Population > 10 years old | 1,235,000 | 309,000 | 806,100 |
| **Ratio (Inactive Female >10 /Total Female >10 )** | **0.78** | **0.68** | **0.53** |
| **Ratio (Inactive Female >10 / Inactive Total >10)** | **0.76** | **0.77** | **0.76** |

**Notes:** Population data are obtained from the 1961 census of the ELSTAT.

The existence of a positive relationship between urbanization and female labour force inactivity in Greece during the 1950s as depicted in Table 1a, as well as the evidence in Table 1b that this inactivity was lower in rural and semi-urban areas compared to the urban ones, is very important for the purposes of our study. This is because, in the case of Greece, the areas that were characterized by higher levels of economically inactive women were urban in nature and thus we are able to isolate the effect of female labour force participation from other effects that take place simultaneously due to urbanization (e.g., increased secularization, higher divorce rates etc). 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 these countries during that specific time period (i.e., the second half of the U-shaped relationship), it is very difficult to establish a convincing relationship between female labour force participation and gender gap in political preferences. This is because, during that period, a large number of 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 altitudes (e.g., increased secularization, higher divorce rates, different reproductive choices) in most Western societies (see Inglehart, 1977; Inglehart and Norris, 2000). In contrast, in the case of Greece during the early 1950, female labour force participation follows an exact opposite pattern compared to urbanisation and this allows us to exclude alternative theoretical explanations and to argue convincingly that it is indeed the female labour force participation (and not some other forces related to economic development) that drives our empirical findings.

# 3. Empirical design

## 3.1. Data and variables

As discussed in Section 1, women in Greece voted for the first time in by-elections that took place in seven prefecture-wide electoral constituencies from 1953 to 1954. The empirical analysis of this paper is based on a dataset of 385 communities located in these seven constituencies. Nearly 30% of the sampled communities (111) were located in Thessaloniki, which is the second most urbanized prefecture of Greece after the capital city of Athens and

witnessed two by-elections over this short period; on 18 January 1953 and on 24 January 1954. The remaining 274 communities were located in the (predominantly) rural constituencies of Drama, Epidavros-Limira, Evros, Grevena, Phthiotis and Rethymno, with one by-election being held in each constituency either in 1953 or in 1954.[21]

Detailed voting results for the 1953/54 by-elections and the pre-reform general elections of 1951 and 1952 were retrieved from the historical archives of the Ministry of Interior in Greece, whereas data for socio-economic variables were obtained from the 1951 and 1961 censuses of the Hellenic Statistical Authority (ELSTAT).[22] Since this information was only available in a scanned format, we used the 'Optical Character Recognition' software to convert the scanned documents into text editable files.[23] Thus, an additional contribution of this paper is the resulting unique dataset, which creates opportunities to evaluate electoral outcomes at the community-level during a period of great importance for women in Greece.

*Dependent variable.* Our dependent variable $Electoral\ Support_{it}$ measures the vote share of parties with a given political ideology in community *i* at election time $t$.[24] 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 Papandreou Party); and the left parties (United Democratic Left and Socialist Party of Greece).[25] The party system in Greece was stable over the studied period, which allows us to explore the changes in the electoral support for these parties before and after the suffrage reform.

*Main independent variable.* Our main independent variable to test Hypotheses 1a and 1b is $Women\ in\ Electorate_{iBye}$ that captures the proportion of eligible (registered) women voters in the electorate in community *i* at the time of the 1953/54 by-elections (Bye) and is calculated as follows:

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

Figure 1 shows the kernel density of this variable.[26] 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% of observations lying between 35% and 59%. The median is nearly 50%, while the lower and upper percentiles take values of

[21] The by-elections in these six constituencies 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).

[22] The information from the censuses is available in many cases at a more disaggregated community 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, using either the sum of the census community values (for population-based variables) or the population-weighted average of these values (for the remaining variables).

[23] Figure B1 in Appendix 3 shows an example of a scanned document reporting part of the electoral results for the second by-election held in Thessaloniki.

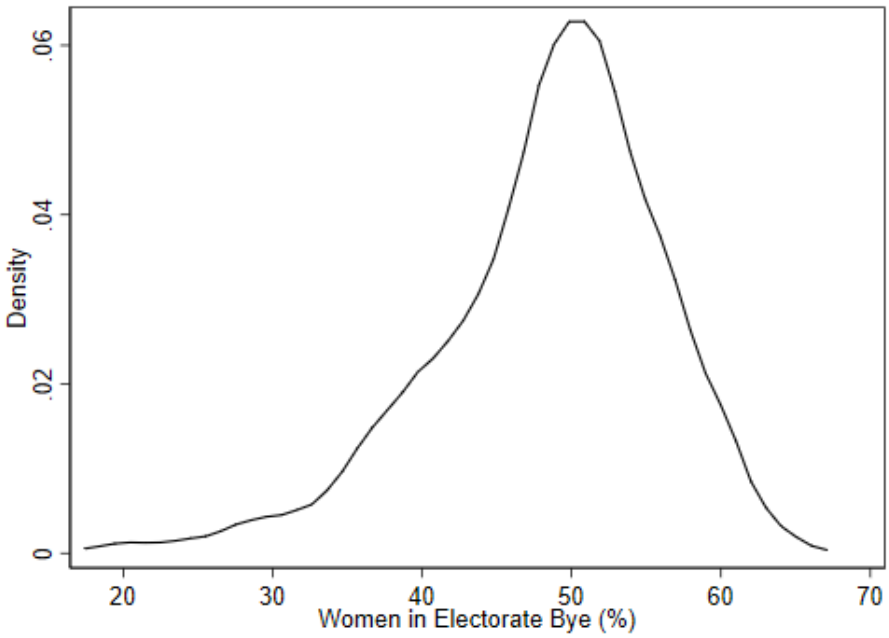
[24] In a few cases, registered voters from different geographic communities voted in the same polling station and thus it would be more accurate to use the term "electoral community" to define the main administrative unit of our analysis. However, for brevity reasons, we refer to "electoral communities" as simply "communities".

[25] In Section 4.4, 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'). This alternative classification leaves our results unchanged.

[26] Following the identification tests reported in Section 4.1, the values for Thessaloniki are based on the second by-election.

around 26% and 62%, respectively. The distribution of this variable is very similar to the one reported in prior relevant studies for other countries (see Carruthers and Wanamaker, 2015; Morgan-Collins, 2019).

**Figure 1: Distribution of women in electorate across communities**




*Interacted variable.* To examine the conditionality of the gender voting gap upon the level of women's labour force participation (Hypothesis 2) we consider the interactive effect of the variables $Women\ in\ Electorate_{iBye}$ and $Economically\ Inactive\ Women_i$. The latter is based on information from the 1961 census[27] and measures the proportion of economically inactive women over the age of 10 in community *i* to the total population of women over the age of 10 in the same community.

In our model specification, we also control for the effects of two additional political variables at the community level; namely, the percentage of total registered voters who actually voted in that election ($Total\ Turnout_{it}$) and the vote share of independent candidates ($Electoral\ Support\ ICs_{it}$). In addition, we control for a number of observable community characteristics, which are captured by the vector $\mathbf{X}_i$. In particular, this vector includes the three-dimensional distance in kilometres between community *i* and the prefecture's largest city[28] ($Distance\ from\ Largest\ City_i$) and two variables from the 1951 census: the logarithm of the number of inhabitants ($Population\ (log)_i$) and the altitude in meters ($Altitude_i$). Table 2 displays descriptive statistics of our main regression variables, while distinguishing between the prefecture of Thessaloniki and the other six prefectures of our sample (Rest Prefectures).[29] We can see that the communities in Thessaloniki were, on

[27] The censuses in Greece during the period 1940-1961 were carried out roughly every ten years and data on social and economic characteristics of population by gender at the community level were available only in the 1961 census.

[28] To construct this variable, we used the ArcGIS spatial analysis tool and introduced information from the 90m Digital Elevation Database of the NASA Shuttle Radar Topographic Mission (SRTM).

[29] The values of the electoral variables for communities in Thessaloniki are based on the second by-election, unless the difference between the two by-elections is taken. For regression variables based on the first by-

average, more populated with a smaller altitude, and were located much closer to the prefecture's largest city compared to the communities in Rest Prefectures. At the same time, they were characterized by a higher, on average, proportion of economically inactive women, even though the standard deviation of this variable within the two community groups is almost the same.

election of Thessaloniki, or the difference between the first by-election and the 1952 election, see Table B1a in Appendix 3.

## Table 2: Descriptive statistics

| | All Prefectures | | | | | Thessaloniki | | | | | Rest Prefectures | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Obs** | **Mean** | **SD** | **Min** | **Max** | **Obs** | **Mean** | **SD** | **Min** | **Max** | **Obs** | **Mean** | **SD** | **Min** | **Max** |
| **PANEL I** | | | | | | | | | | | | | | | |
| **Variables in levels** | | | | | | | | | | | | | | | |
| Women in Electorate Bye (%) | 385 | 48.4 | 7.6 | 19.3 | 65.2 | 111 | 47.3 | 6.9 | 26.4 | 61.2 | 274 | 48.9 | 7.8 | 19.3 | 65.2 |
| Economically Inactive Women (%) | 385 | 48.0 | 21.8 | 13.1 | 94.4 | 111 | 63.6 | 20.0 | 19.2 | 87.9 | 274 | 41.7 | 19.1 | 13.1 | 94.4 |
| Distance from Largest City (kilometres) | 385 | 27.6 | 23.0 | 1.0 | 99.7 | 111 | 17.3 | 16.0 | 1.0 | 64.2 | 274 | 31.8 | 24.0 | 1.0 | 99.7 |
| Population (not in log) | 385 | 2571.1 | 3428.2 | 194.0 | 33842.0 | 111 | 4254.2 | 3630.7 | 606.0 | 17022.8 | 274 | 1889.2 | 3098.6 | 194.0 | 33842.0 |
| Altitude (meters) | 385 | 265.8 | 263.4 | 5.0 | 1030.0 | 111 | 144.9 | 175.5 | 5.0 | 740.0 | 274 | 314.8 | 277.2 | 8.0 | 1030.0 |
| Electricity Access (%) | 385 | 24.5 | 32.6 | 0.0 | 98.5 | 111 | 50.7 | 39.2 | 0.0 | 98.5 | 274 | 13.8 | 22.0 | 0.0 | 88.2 |
| Men's Turnout Bye (%) | 88 | 73.2 | 8.0 | 42.9 | 88.8 | 48 | 73.8 | 6.1 | 59.6 | 86.2 | 40 | 72.6 | 9.9 | 42.9 | 88.8 |
| Women's Electoral Support Right Bye (%) | 88 | 44.7 | 15.7 | 16.0 | 95.0 | 48 | 37.9 | 12.8 | 16.0 | 78.5 | 40 | 52.8 | 15.2 | 28.0 | 95.0 |
| Women's Electoral Support Left Bye (%) | 88 | 24.0 | 17.3 | 0.0 | 61.3 | 48 | 35.0 | 12.2 | 12.5 | 61.3 | 40 | 10.8 | 12.8 | 0.0 | 47.2 |
| Women's Electoral Support Center-Liberal Bye (%) | 88 | 28.4 | 11.4 | 3.9 | 60.9 | 48 | 24.3 | 6.8 | 3.9 | 33.3 | 40 | 33.3 | 13.8 | 5.0 | 60.9 |
| Women's Turnout Bye (%) | 88 | 64.4 | 15.1 | 27.2 | 87.4 | 48 | 64.6 | 16.6 | 27.2 | 87.4 | 40 | 64.2 | 13.3 | 30.1 | 81.0 |
| **PANEL II** | | | | | | | | | | | | | | | |
| **Variables in changes** | | | | | | | | | | | | | | | |
| Δ Electoral Support Right Bye-1952 (%) | 385 | 5.2 | 15.9 | -32.0 | 52.5 | 111 | -0.1 | 8.5 | -21.1 | 22.9 | 274 | 7.3 | 17.6 | -32.0 | 52.5 |
| Δ Electoral Support Left Bye-1952 (%) | 385 | 2.0 | 6.8 | -25.5 | 38.8 | 111 | 7.6 | 8.1 | -25.5 | 38.8 | 274 | -0.3 | 4.6 | -20.9 | 23.6 |
| Δ Electoral Support Center-Liberal Bye-1952 (%) | 385 | -6.9 | 17.1 | -51.7 | 87.3 | 111 | -9.9 | 8.0 | -41.8 | 18.1 | 274 | -5.6 | 19.5 | -51.7 | 87.3 |
| Δ Electoral Support Right 1952-1951 (%) | 361 | 9.1 | 11.4 | -33.5 | 87.4 | 108 | 10.8 | 7.3 | -12.6 | 35.4 | 253 | 8.4 | 12.7 | -33.5 | 87.4 |
| Δ Electoral Support Left 1952-1951 (%) | 361 | 0.0 | 6.0 | -44.3 | 30.5 | 108 | -1.2 | 7.7 | -44.3 | 19.4 | 253 | 0.5 | 5.1 | -27.2 | 30.5 |
| Δ Electoral Support Center-Liberal 1952-1951 (%) | 361 | -11.4 | 13.7 | -79.5 | 26.2 | 108 | -9.6 | 9.1 | -34.9 | 26.2 | 253 | -12.2 | 15.2 | -79.5 | 25.9 |
| Δ Electoral Support ICs Bye-1952 (%) | 385 | -0.3 | 8.9 | -60.9 | 26.7 | 111 | 2.4 | 3.1 | -0.2 | 25.7 | 274 | -1.3 | 10.1 | -60.9 | 26.7 |
| Δ Total Turnout Bye-1952 (%) | 385 | -12.7 | 13.6 | -53.7 | 29.0 | 111 | -17.7 | 12.5 | -53.7 | 6.6 | 274 | -10.7 | 13.5 | -50.1 | 29.0 |
| Δ Men's Turnout Bye-1952 (%) | 88 | -5.4 | 7.2 | -31.9 | 22.6 | 48 | -7.9 | 6.4 | -31.9 | 3.2 | 40 | -2.5 | 7.2 | -17.2 | 22.6 |
| Δ Men's Turnout 1952-1951 (%) | 361 | -0.6 | 6.8 | -24.3 | 27.8 | 108 | 1.5 | 5.1 | -15.5 | 18.4 | 253 | -1.6 | 7.2 | -24.3 | 27.8 |
| Δ Men's Registration Bye-1952 | 88 | -32.8 | 297.7 | -1954.0 | 455.0 | 48 | 24.5 | 209.5 | -749.0 | 455.0 | 40 | -101.5 | 368.7 | -1954.0 | 279.0 |
| Δ Women's Electoral Support Right Bye2-Bye1 (%) | | | | | | 48 | 0.8 | 11.0 | -13.4 | 48.6 | | | | | |
| Δ Women's Electoral Support Left Bye2-Bye1 (%) | | | | | | 48 | 5.1 | 4.7 | -14.8 | 14.4 | | | | | |
| Δ Women's Electoral Support Center-Liberal Bye2-Bye1 (%) | | | | | | 48 | 7.0 | 4.3 | -0.2 | 18.5 | | | | | |
| Δ Women's Turnout Bye2-Bye1 (%) | | | | | | 48 | -3.2 | 8.6 | -29.5 | 26.6 | | | | | |
| Δ Women's Registration Bye2-Bye1 | | | | | | 48 | 15.6 | 66.7 | -250.0 | 278.5 | | | | | |

**Notes:** The table reports the number of observations, mean, standard deviation, minimum and maximum values of the main regression variables. The values of the electoral variables for communities in Thessaloniki are based on the second by-election, unless the difference between the two by-elections is taken (e.g., Δ Women's Electoral Support Right Bye2-Bye1 (%)). For regression variables based on the first by-election of Thessaloniki, or the difference between the first by-election and the 1952 election see Table B1a in Appendix 3. For additional regression variables discussed in the last paragraph of Section 4.4, and reported in Appendix 3, see Table B1b.

## 3.2 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 in the proportion of women in the electorate across communities as the identifying source of variation. This method builds on the idea that communities with a larger share 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; for instance, stronger support for right parties if the 'traditional voting gap' thesis holds. Specifically, drawing upon the recent works of Carruthers and Wanamaker (2015) and Morgan-Collins (2019) [30] and using the variables defined in the previous section, we estimate a difference-in-differences specification that takes the following form:

$$\Delta\, Electoral\, Support_{iBye-1952} = a + \beta Women\ in\ Electorate_{iBye} + \theta_1 X_i + \theta_2 \Delta Z_{iBye-1952} + \Delta\varepsilon_{iBye-1952} \quad (1)$$

where $\Delta\, Electoral\, Support_{iBye-1952}$ is community *i*'s change in the electoral support for right, left or center-liberal parties between the first election after the enfranchisement and the last election before the enfranchisement, $\Delta Z_{iBye}$ captures community *i*'s changes in total turnout and the electoral support for independent candidates between the two elections; and $\Delta\varepsilon_{iBye-1952}$ is an i.i.d. error term.

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 to biased and inconsistent estimates of the suffrage effect. For instance, it is possible that unobserved and heterogeneous trends in omitted variables are more prevalent in high-dosage communities and that these omitted variables cause a faster growth in the support for right parties that we falsely attribute to suffrage (Vernby, 2013; Carruthers and Wanamaker, 2015). To tackle this possibility, we augment Eq. (1) 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 1951 and 1952) and add prefecture fixed effects.[31] As the dependent variable is a difference, such fixed effects capture prefecture-specific shocks. To further ensure that our estimates do not reflect pre-reform trends in party vote shares, we follow a standard approach in the literature and perform placebo tests. Specifically, we re-run Eq. (1) using $\Delta\, Electoral\, Support_{i1952-1951}$ 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".

[30] 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., Vernby, 2013; Carruthers and Wanamaker, 2014; Larcinese, 2014; Kroth et al., 2015).

[31] The administrative divisions of Greece at that time were the following: (i) periphery; (ii) prefecture; (iii) province; (iv) municipality; and (v) community.

To test whether the direction and magnitude of the gender voting gap is different for communities located in rural versus more urbanized areas (as suggested by Hypotheses 1a and 1b), we carry out the analysis above separately for Thessaloniki and Rest Constituencies. Furthermore, to test whether these differences are driven by the level of labour market participation among women (as suggested by Hypothesis 2), we add to the right-hand-side of Eq. (1) the proportion of economically inactive women and its interaction with the 'dosage' of treatment as follows:

$$\Delta\ Electoral\ Support_{iBye-1952} = a + \beta Women\ in\ Electorate_{iBye} + \gamma Economically\ Inactive\ Women_i + \delta Women\ in\ Electorate_{iBye} * Economically\ Inactive\ Women_i + \theta_1 X_i + \theta_2 \Delta Z_{iBye-1952} + \Delta\varepsilon_{iBye-1952} \qquad (2)$$

Support for the conditionality of the 'traditional voting gap argument' upon the level of economically inactive women can be inferred from the estimated parameter $\delta$ being positive and statistically significant in the regressions for right parties, and negative and statistically significant in the regressions for left or center-liberal parties. To address the possibility of measurement errors and biases arising from using the 1961 census to construct the variable $Economically\ Inactive\ Women_i$, we check robustness to excluding communities with large population changes between the years 1951 and 1961. To further corroborate our findings, we also consider a number of alternative specifications and robustness tests, which we discuss in Section 4.4.

## 3.3. Identification threats

Greece offers an ideal setting for exploring the causal impact of women's suffrage on partisan outcomes, as it meets all the case selection criteria outlined in Morgan-Collins (2019). First, the suffrage reform took place at the national level and involved all women regardless of personal characteristics (such as education and income) and thus it was not endogenous to the proportion of women in the electorate across communities. Second, the electoral system and the parties dominating the political landscape in Greece between 1951-1954 did not change, which allows us to compare party vote changes before and after the reform.[32] Third, the suffrage reform was not concurrent with any other electoral reforms, and thus there are no concerns of 'multiple treatments'. Fourth, data from two elections prior to women's enfranchisement are available, enabling us to perform 'placebo' tests and investigate the plausibility of the parallel trends assumption discussed above.

The case of Greece, however, poses three additional advantages that are crucial for our identification strategy. First, the reform came as a result of exogenous international pressures and it was not the outcome of domestic claims from certain parties, which avoids the problem of reverse causality; that is, women repaying their dues to the party or parties that gave them political rights – see Appendix 1 for more details on this. Second, the 1953/54 by-elections (where women voted for the first time in general election) were held in order to fill seats that became vacant due to the death of an elected MP or because of

[32] The electoral system over the period 1951-1954 was purely majoritarian. On the other hand, in the 1956 general election, where women voted across the whole Greek territory, the parties competed under a complex and controversial electoral system enacted by PM Konstantinos Karamanlis: a 'reinforced' (weighted) proportional representation system, the so-called "trifasiko" (see, e.g., Nikolakopoulos, 2001).

cancellation of the 1952 election result by the electoral court. As such, the timing of these by-elections was exogenous to economic conditions and parties' influence. Third, in nearly one quarter of the sampled communities (48 in Thessaloniki and 40 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', we can perform additional tests and rule out alternative explanations for our findings (see Morgan-Collins, 2019).

The first remaining concern associated with our identification strategy 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's rather than women's voting behaviour. To address this issue, we exploit the restricted sample of communities, and investigate the impact of treatment on men's turnout at the by-elections ($Men's\ Turnout_{iBye}$) and on the change in men's turnout between 1952 and the by-elections ($\Delta\ Men's\ Turnout_{iBye-1952}$). Since men's registration level in community *i* is not constant over time and its change may be correlated with the treatment variable, we also present estimates where we control for the change in men's local registration levels, via the term $\Delta\ Men's\ Registration_{Bye-1952}$.

The second remaining concern associated with our identification strategy is that women supporting different parties had different turnout rates. If, for some reason, right women mobilized at higher levels compared to left or center-liberal women in certain communities, then our results could be the outcome of increased electoral participation rather than exposure to treatment. To tackle this possibility, we again exploit the restricted sample, and examine the impact of women's turnout at the by-elections ($Women's\ Turnout_{iBye}$) on women's electoral support for right, left or center-liberal parties at the same elections, as captured by $Women's\ Electoral\ Support_{iBye}$.

As mentioned in Section 3.1, Thessaloniki witnessed two by-elections over the studied period. 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,[33] as opposed to the by-elections in Rest Prefectures and the second by-election in Thessaloniki, where all candidates were men. This means that regression results based on the first by-election in Thessaloniki are much more likely to suffer from the identification problems discussed in the last two paragraphs. Having women standing as candidates may have indeed created incentives for men to turnout at higher levels in localities with a higher proportion of women electors, and, at the same time, may have induced a higher mobilization of women supporting the relevant parties. Following this argument, we perform the tests described in this section for both by-elections in Thessaloniki, and, based on the outcome of these tests, we select the sample(s) to be used for the estimation of Eqs. (1) and (2).

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

# 4. Empirical findings

## 4.1 Identification tests and sample selection

We start our analysis by examining whether the proportion of women in the electorate at the by-elections influenced men's turnout, based on information from the restricted sample of communities. To do so, we adopt an 'incremental' strategy and estimate alternative specifications where we progressively add new controls. In particular, we start from a simple specification that regresses men's turnout rate ($Men's\ Turnout_{iBye}$) on our treatment variable, and then add the change in men's registration levels between 1952 and the by-elections ($\Delta\ Men's\ Registration_{Bye-1952}$), the variables included in vector $\mathbf{X_i}$, and finally the change in men's turnout between the two elections preceding the women's enfranchisement ($\Delta\ Men's\ Turnout_{i1952-1951}$). Columns (1)-(4) of Table 3 display the corresponding results on three different panels.[34] Panel I features estimates for the first by-election in Thessaloniki (Thessaloniki Bye1), Panel II for the second by-election in Thessaloniki (Thessaloniki Bye2), and Panel III for the by-elections in Rest Prefectures. Overall, we find evidence that men's turnout was higher in communities with a higher proportion of women in the electorate: the estimated coefficient on the treatment variable is positive, large in magnitude, and reaches high levels of statistical significance across all three panels, especially when we consider more refined specifications, such as those of columns (3) and (4). While adding new controls improves the explanatory power of the model and produces more reliable estimates, these estimates are all subject to the limitation that unobserved fixed community characteristics are not accounted for. We thus follow the key identification strategy described in Section 3.2, and re-run all regressions using the change in men's turnout between 1952 and the by-elections ($\Delta\ Men's\ Turnout_{iBye-1952}$) as the dependent variable. As shown in columns (5)-(8) of Table 3, once fixed community characteristics are held constant, the positive and statistically significant effect of $Women\ in\ Electorate_{iBye}$ survives only in the regressions for Thessaloniki Bye1. This suggests that men mobilized at higher levels to 'negate' the effect of women's vote only when women stood as candidates for office.

[34] To make sure that men's registration levels before and after the reform are comparable, specifications in columns (2)-(4) exclude communities with at least one mixed-gender polling station at the by-elections; that is, they are estimated for the sample of communities where all polling stations were separated by gender.

**Table 3: The effect of women's suffrage on men's turnout (restricted sample)**

**Table 3: The effect of women's suffrage on men's turnout (restricted sample)**

| **Dependent Variable (DV):** | **Men's Turnout Bye (%)** | | | | **Δ Men's Turnout Bye-1952 (%)** | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| **PANEL I** | | | | | | | | |
| **Thessaloniki Bye1** | | | | | | | | |
| Women in Electorate Bye (%) | 0.56*** | 0.61*** | 0.72*** | 0.73*** | -0.08 | -0.03 | 0.14* | 0.17** |
| | (5.21) | (5.31) | (5.62) | (4.95) | (0.84) | (0.31) | (1.81) | (2.22) |
| Obs. | 49 | 45 | 45 | 44 | 49 | 45 | 45 | 44 |
| R2 | 0.34 | 0.40 | 0.50 | 0.50 | 0.01 | 0.21 | 0.56 | 0.62 |
| **PANEL II** | | | | | | | | |
| **Thessaloniki Bye2** | | | | | | | | |
| Women in Electorate Bye (%) | 0.11 | 0.31 | 0.52*** | 0.55*** | -0.52** | -0.32 | -0.06 | -0.02 |
| | (0.52) | (1.65) | (3.19) | (2.97) | (2.58) | (1.65) | (0.47) | (0.15) |
| Obs. | 48 | 44 | 44 | 43 | 48 | 44 | 44 | 43 |
| R2 | 0.01 | 0.32 | 0.49 | 0.49 | 0.25 | 0.54 | 0.75 | 0.80 |
| **PANEL III** | | | | | | | | |
| **Rest Constituencies** | | | | | | | | |
| Women in Electorate Bye (%) | -0.00 | 0.21 | 0.41 | 0.83** | -0.16 | -0.17 | -0.06 | 0.16 |
| | (0.01) | (0.82) | (1.54) | (2.67) | (0.94) | (0.84) | (0.31) | (0.87) |
| Obs. | 40 | 34 | 34 | 32 | 40 | 34 | 34 | 32 |
| R2 | 0.00 | 0.05 | 0.30 | 0.45 | 0.03 | 0.28 | 0.61 | 0.75 |
| **Communities** | ALL | NM | NM | NM | ALL | NM | NM | NM |
| **Controls** | | | | | | | | |
| Δ Men's Registration Bye-1952 | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |
| Vector $\mathbf{X}_i$ | | | ✓ | ✓ | | | ✓ | ✓ |
| Δ Men's Turnout 1952-1951 (%) | | | | ✓ | | | | ✓ |

**Notes:** 'ALL' includes all communities with polling stations separated by gender; 'NM' (no mixed-gender) excludes communities with at least one mixed-gender polling station; Vector $X_i$ includes the variables: Population (log), Altitude, and Distance from Largest City; Regressions are estimated using robust standard errors and include a constant; *t*-statistics in parentheses; ***,**,* Statistically significant at the 1%, 5% and 10% confidence level respectively.

Did women's electoral participation rates influence their vote choices? To answer this question, we utilize again the restricted sample of communities and regress women's turnout at the by-elections ($Women's\ Turnout_{iBye}$) on women's electoral support for right, left or center-liberal parties at the same elections ($Women's\ Electoral\ Support_{iBye}$). The results, displayed in columns (1), (3) and (5) of Table 4A, generally show negative coefficients for right parties and positive coefficients for left and center-liberal parties. However, the corresponding estimates vary significantly across the three panels with respect to their size and *t*-statistic, and respond strongly to the addition of vector $\mathbf{X_i}$. Indeed, once we control for the community characteristics included in vector $\mathbf{X_i}$ (see columns (2), (4) and (6) of Table 4A), the estimations return much smaller and statistically insignificant coefficients on $Women's\ Turnout_{iBye}$, with the exception of the regressions for center-liberal parties in Thessaloniki Bye1. This indicates that center-liberal parties enjoyed a larger vote share among women (at the first by-election in Thessaloniki) in communities where women mobilized at higher levels.

**Table 4A: The effect of women's turnout on women's electoral support (restricted sample)**

| **Dependent Variable (DV):** | **Women's Electoral Support Bye (%)** | | | | | |
|---|---|---|---|---|---|---|
| | **Right** | | **Left** | | **Center-Liberal** | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| **PANEL I** | | | | | | |
| **Thessaloniki Bye1** | | | | | | |
| Women's Turnout Bye (%) | -0.02 | 0.05 | 0.08 | -0.04 | 0.26*** | 0.26*** |
| | (0.20) | (0.37) | (0.66) | (0.17) | (5.06) | (3.69) |
| Obs. | 49 | 49 | 49 | 49 | 49 | 49 |
| R2 | 0.00 | 0.06 | 0.01 | 0.08 | 0.44 | 0.46 |
| **PANEL II** | | | | | | |
| **Thessaloniki Bye2** | | | | | | |
| Women's Turnout Bye (%) | -0.41*** | -0.11 | 0.14 | -0.03 | 0.22*** | 0.13 |
| | (3.66) | (0.96) | (1.04) | (0.16) | (3.19) | (1.17) |
| Obs. | 48 | 48 | 48 | 48 | 48 | 48 |
| R2 | 0.29 | 0.50 | 0.04 | 0.14 | 0.29 | 0.39 |
| **PANEL III** | | | | | | |
| **Rest Constituencies** | | | | | | |
| Women's Turnout Bye (%) | -0.23 | -0.12 | 0.24** | 0.14 | -0.14 | -0.13 |
| | (1.40) | (0.78) | (2.46) | (1.32) | (0.88) | (0.66) |
| Obs. | 40 | 40 | 40 | 40 | 40 | 40 |
| R2 | 0.04 | 0.19 | 0.06 | 0.18 | 0.02 | 0.19 |
| **Communities** | ALL | ALL | ALL | ALL | ALL | ALL |
| **Controls** | | | | | | |
| Vector $\mathbf{X}_i$ | | ✓ | | ✓ | | ✓ |

**Notes:** 'ALL' includes all communities with polling stations separated by gender; Vector $\mathbf{X}_i$ includes the variables: Population (log), Altitude, and Distance from Largest City; Regressions are estimated using robust standard errors and include a constant; *t*-statistics in parentheses; ***,**,* Statistically significant at the 1%, 5% and 10% confidence level respectively.

A possible interpretation of the latter finding is that center-liberal women were more supportive of electing women to office, compared to right women who tended to agree with the idea that "politics must be men's prerogative" (see Pantelidou Maloutas, 1992). Hence, center-liberal women mobilized at higher levels at the first by-election in Thessaloniki (compared to the second by-election in Thessaloniki and the by-elections in Rest Prefectures) to vote for the woman representing their party in that electoral race, whereas right women did not respond in the same way. To provide further empirical support for this interpretation, we estimate a DD specification using the 1953 and 1954 by-elections in Thessaloniki; that is, we regress the change in party vote shares among women between the two by-elections ($\Delta\ Women's\ Electoral\ Support_{iBye2-Bye1}$) on the change in turnout rates among women between the two by-elections ($\Delta\ Women's\ Turnout_{iBye2-Bye1}$). As shown in Table 4B, a negative and statistically significant effect is found for center-liberal parties (column (7)), which persists when we control for the change in women's registration levels between the two by-elections ($\Delta\ Women's\ Registration_{iBye2-Bye1}$) and when we add to the estimation vector $\mathbf{X}_i$ (see columns (8) and (9)). In line with the above arguments, center-liberal women in Thessaloniki

probably decreased their electoral participation in the second by-election (where all candidates were men), resulting in larger losses for center-liberal parties in communities where women mobilized at higher levels in the second rather than the first by-election.

**Table 4B: The effect of change in women's turnout on change in women's electoral support in Thessaloniki (restricted sample)**

| **Dependent Variable (DV):** | **Δ Women's Electoral Support Bye2-Bye1 (%)** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **Right** | | | **Left** | | | **Center-Liberal** | | |
| | **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** | **(7)** | **(8)** | **(9)** |
| Δ Women's Turnout Bye2-Bye1 (%) | 0.01 | -0.23 | -0.32 | 0.09 | 0.08 | 0.19 | -0.12* | -0.24* | -0.28* |
| | (0.05) | (0.47) | (0.74) | (0.73) | (0.50) | (1.24) | (1.83) | (1.82) | (1.95) |
| Obs. | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 |
| R2 | 0.00 | 0.03 | 0.42 | 0.03 | 0.03 | 0.16 | 0.06 | 0.11 | 0.25 |
| **Communities** | ALL | ALL | ALL | ALL | ALL | ALL | ALL | ALL | ALL |
| **Controls** | | | | | | | | | |
| Δ Women's Registration Bye2-Bye1 | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ |
| Vector $\mathbf{X}_i$ | | | ✓ | | | ✓ | | | ✓ |

**Notes:** 'ALL' includes all communities with polling stations separated by gender; Vector $\mathbf{X}_i$ includes the variables: Population (log), Altitude, and Distance from Largest City; Regressions are estimated using robust standard errors and include a constant; *t*-statistics in parentheses; ***,**,* Statistically significant at the 1%, 5% and 10% confidence level respectively.

In sum, the analysis in this section reveals that having women as candidates in the first by-election of Thessaloniki creates a 'backdoor' pathway from treatment to outcome: changes in party vote shares between 1952 and the by-elections 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. To be able to claim with confidence that our results capture the causal impact of women's suffrage on party votes shares, our estimation of Eqs. (1) and (2) will be based on the second by-election in Thessaloniki and the by-elections in Rest Prefectures, for which there is no evidence – at least in the restricted sample of communities – in favour of such alternative explanations.

The availability of the restricted sample of communities – where both male and female turnouts are known – also permits the opportunity to verify the accuracy of our approach to ecological inference (Corder and Wolbrecht, 2006). If women voters were simply an unpredictable or volatile addition to the electorate, then the estimation of intent-to-treat effects (as implied by Eqs. (1) and (2)) would fail to capture women's political preferences. Table B2 in Appendix 3 shows that our treatment variable is positively related to women's share of the overall turnout (women-to-total voters) for both chosen sub-samples: Thessaloniki Bye2 and Rest Prefectures. This suggests that, in communities with more eligible (registered) women, there were more women voters relative to men voters, providing support for the use of $Women\ in\ Electorate_{iBye}$ as the 'dosage' of exposure to the suffrage treatment (see also Morgan-Collins, 2019).

## 4.2 Baseline results: the traditional gender voting gap argument

We now proceed to test *Hypotheses 1a* and *1b* using the change in party vote shares as the dependent variable and the proportion of women in the electorate as the main independent variable, as in Eq. (1). Table 5 shows the corresponding estimates for the restricted sample of communities, while distinguishing between Thessaloniki Bye2 and Rest Prefectures. As before, we report results from several specifications, starting with a simple regression and progressively including the following controls: the lagged dependent variable (DV) as captured by the change in party vote shares between 1951 and 1952 ($\Delta\ Electoral\ Support_{i1952-1951}$), the change in men's registration levels between 1952 and the by-elections ($\Delta\ Men's\ Registration_{Bye-1952}$), and the variables included in vector $\mathbf{X_i}$. We finally include changes (between 1952 and the by-elections) in the vote share of independent candidates and the total turnout rate, via the terms $\Delta\ Electoral\ Support\ ICs_{iBye-1952}$ and $\Delta\ Total\ Turnout_{iBye-1952}$. As a first point, we can notice that our results lend strong support to Hypothesis 1b: there is strong evidence in favour of the *traditional gender voting gap* thesis for communities in Thessaloniki, which is by far the most urbanised prefecture of our sample. Specifically, the coefficient of interest for right parties has the expected positive sign, is statistically significant at the 1% confidence level, and retains its size and statistical significance across specifications (columns (1)-(5) of Panel I). Furthermore, we can see that the pro-right shift in Thessaloniki caused by women's suffrage was combined with withdrawal of support for center-liberal parties, even though the corroborating evidence is statistically weak and unstable across specifications (columns (11)-(15) of Panel I). Finally, our results fail to reveal a clear pattern of suffrage-induced voting differences for communities in the rural prefectures of our sample (see Panel II) – in line with Hypothesis 1a – and the absence of such effects is robust to alternative specifications.

As a preliminary test for Hypothesis 2, we focus on the prefecture of Thessaloniki and augment Eq. (1) with the binary variable *Municipality of Thessaloniki* and its interaction term with our dosage variable. The logic behind this test is that, within the *Municipality of Thessaloniki* (i.e., the city centre of Thessaloniki), the level of inactiveness is significantly higher compared to the rest areas of Thessaloniki when looking at the restricted sample.[35] As can be seen in Table B3 in Appendix 3, consistent with our expectations, the interaction term is negative and statistically significant for the centre-liberal party, though this effect becomes weaker when all controls are added. Although this first evidence does not seem supportive for Hypothesis 2, in the next section (Section 4.3), we test more formally for the role of economically inactive women based on Eq. (2) and the full sample of communities.

[35] In particular, the inactiveness in the city centre of Thessaloniki is 79.01 percent – 10 percentage points higher, on average, compared to the rest of the observations in the restricted sub-sample 'Thessaloniki Bye2'. We prefer here the simplistic approach of using dichotomous variation because the majority of our observations – i.e., electoral communities that come from the *Municipality of Thessaloniki* – take the same value in the census (i.e., 79.01 percent). Moreover, we perform this test only for Thessaloniki, because, in Rest Prefectures, there is no urban area within our restricted sample.

**Table 5: The effect of women's suffrage on change in electoral support (restricted sample)**

| **Dependent Variable (DV):** | **Δ Electoral Support Bye-1952 (%)** | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Right** | | | | | **Left** | | | | | **Center-Liberal** | | | | |
| | **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** | **(7)** | **(8)** | **(9)** | **(10)** | **(11)** | **(12)** | **(13)** | **(14)** | **(15)** |
| **PANEL I** | | | | | | | | | | | | | | | |
| **Thessaloniki Bye2** | | | | | | | | | | | | | | | |
| Women in Electorate Bye (%) | 0.48*** | 0.52*** | 0.65*** | 0.51*** | 0.49*** | -0.27 | -0.21 | -0.31 | -0.15 | -0.18 | -0.14 | -0.25 | -0.35** | -0.33 | -0.22 |
| | (3.55) | (4.44) | (6.72) | (5.27) | (4.93) | (1.21) | (0.86) | (1.16) | (0.71) | (0.87) | (1.00) | (1.62) | (2.05) | (1.65) | (1.18) |
| Obs. | 48 | 47 | 43 | 43 | 43 | 48 | 47 | 43 | 43 | 43 | 48 | 47 | 43 | 43 | 43 |
| R2 | 0.34 | 0.49 | 0.62 | 0.71 | 0.77 | 0.09 | 0.13 | 0.16 | 0.28 | 0.41 | 0.04 | 0.09 | 0.15 | 0.21 | 0.41 |
| **PANEL II** | | | | | | | | | | | | | | | |
| **Rest Constituencies** | | | | | | | | | | | | | | | |
| Women in Electorate Bye (%) | -0.35 | -0.31 | 0.08 | 0.10 | 0.14 | -0.03 | 0.03 | -0.05 | 0.27 | 0.27 | 0.44** | 0.35 | 0.08 | -0.44 | -0.27 |
| | (1.46) | (1.47) | (0.37) | (0.36) | (0.46) | (0.23) | (0.20) | (0.17) | (0.83) | (0.79) | (2.40) | (1.50) | (0.17) | (0.98) | (0.63) |
| Obs. | 40 | 38 | 32 | 32 | 32 | 40 | 38 | 32 | 32 | 32 | 40 | 38 | 32 | 32 | 32 |
| R2 | 0.07 | 0.30 | 0.21 | 0.29 | 0.31 | 0.00 | 0.04 | 0.07 | 0.32 | 0.33 | 0.05 | 0.19 | 0.20 | 0.45 | 0.64 |
| **Communities** | ALL | ALL | NM | NM | NM | ALL | ALL | NM | NM | NM | ALL | ALL | NM | NM | NM |
| **Controls** | | | | | | | | | | | | | | | |
| Lagged DV 1952-1951 (%) | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| Δ Men's Registration Bye-1952 | | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ | | | ✓ | ✓ | ✓ |
| Vector $\mathbf{X}_i$ | | | | ✓ | ✓ | | | | ✓ | ✓ | | | | ✓ | ✓ |
| Δ Electoral Support ICs Bye-1952 (%) | | | | | ✓ | | | | | ✓ | | | | | ✓ |
| Δ Total Turnout Bye-1952 (%) | | | | | ✓ | | | | | ✓ | | | | | ✓ |

**Notes:** 'ALL' includes all communities with polling stations separated by gender; 'NM' (no mixed-gender) excludes communities with at least one mixed-gender polling station; Vector $\mathbf{X}_i$ includes the variables: Population (log), Altitude, and Distance from Largest City; Regressions are estimated using robust standard errors and include a constant; *t*-statistics in parentheses; ***,**,* Statistically significant at the 1%, 5% and 10% confidence level respectively.

Next, Table 6 replicates the specifications of Table 5 using the full sample of communities (111 in Thessaloniki and 274 in Rest Prefectures). Since the number of observations for Rest Prefectures is now seven times larger, we add to the estimations prefecture-specific shocks, which allow us to control for fixed spatial autocorrelation.[36] Results are remarkably consistent with those of Table 5. Once again, we find strong evidence in favour of the *traditional gender voting gap* thesis in the case of Thessaloniki (right parties achieving higher vote shares in communities which were more affected by the reform) and no relationship between suffrage and partisan outcomes in the case of Rest Prefectures. In comparison to the restricted sample in Table 5, when all communities in Thessaloniki are taken into account, the (negative) suffrage effect for center-liberal parties appears to be more pronounced and reaches high levels of statistical significance across all specifications. The magnitude of the coefficient represents the effect of an increase in the treatment variable by one percentage point on the dependent variable, and ranges from 0.38 to 0.62 for right parties and from -0.26 to -0.38 for center-liberal parties in Thessaloniki. The lower bounds suggest that a one-standard deviation increase in the proportion of women in the electorate leads to an increase in the vote share of right parties by at least 2.6 percentage points, and a decrease in the vote share of center-liberal parties by at least 1.8 percentage points; which are both large effects.

[36] The specifications of Table 6 do not control for the variable $\Delta\ Men's\ Registration_{Bye-1952}$ since most communities in the full sample include at least one mixed-gender polling station, and thus men's registration levels before and after the reform are not comparable.

**Table 6: The effect of women's suffrage on change in electoral support (full sample)**

| **Dependent Variable (DV):** | **Δ Electoral Support Bye-1952 (%)** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Right** | | | | **Left** | | | | **Center-Liberal** | | | |
| | **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** | **(7)** | **(8)** | **(9)** | **(10)** | **(11)** | **(12)** |
| **PANEL I** | | | | | | | | | | | | |
| **Thessaloniki Bye2** | | | | | | | | | | | | |
| Women in Electorate Bye (%) | 0.53*** | 0.62*** | 0.39*** | 0.38*** | -0.22** | -0.23** | -0.07 | -0.12 | -0.26** | -0.38*** | -0.27** | -0.26* |
| | (4.18) | (4.91) | (3.79) | (3.35) | (2.17) | (2.00) | (0.68) | (1.01) | (2.61) | (3.07) | (2.39) | (1.87) |
| Obs. | 111 | 108 | 108 | 108 | 111 | 108 | 108 | 108 | 111 | 108 | 108 | 108 |
| R2 | 0.18 | 0.25 | 0.47 | 0.61 | 0.04 | 0.06 | 0.32 | 0.34 | 0.05 | 0.12 | 0.27 | 0.28 |
| **PANEL II** | | | | | | | | | | | | |
| **Rest Constituencies** | | | | | | | | | | | | |
| Women in Electorate Bye (%) | 0.04 | 0.07 | 0.06 | 0.08 | -0.00 | 0.01 | 0.01 | 0.01 | -0.01 | -0.05 | -0.03 | -0.09 |
| | (0.40) | (0.77) | (0.60) | (0.75) | (0.12) | (0.34) | (0.29) | (0.46) | (0.06) | (0.51) | (0.31) | (0.85) |
| Obs. | 274 | 253 | 253 | 253 | 274 | 253 | 253 | 253 | 274 | 253 | 253 | 253 |
| R2 | 0.52 | 0.56 | 0.57 | 0.58 | 0.23 | 0.29 | 0.30 | 0.30 | 0.56 | 0.61 | 0.61 | 0.64 |
| **Controls** | | | | | | | | | | | | |
| Constituency Fes | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Lagged DV 1952-1951 (%) | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |
| Vector $\mathbf{X}_i$ | | | ✓ | ✓ | | | ✓ | ✓ | | | ✓ | ✓ |
| Δ Electoral Support ICs Bye-1952 (%) | | | | ✓ | | | | ✓ | | | | ✓ |
| Δ Total Turnout Bye-1952 (%) | | | | ✓ | | | | ✓ | | | | ✓ |

**Notes:** Vector $\mathbf{X}_i$ includes the variables: Population (log), Altitude, and Distance from Largest City; Regressions are estimated using robust standard errors and include a constant; *t*-statistics in parentheses; ***,**,* Statistically significant at the 1%, 5% and 10% confidence level respectively.

The most severe identification concern is that our estimates could capture pre-existing trends in high-dosage communities. To rule this out, we check whether the proportion of women in the electorate can explain changes in party vote shares before the reform (when it should not). Specifically, we run the same regression set-up as in Table 6, but, instead of controlling for the change in party vote shares between 1951 and 1952 ($\Delta\ Electoral\ Support_{i1952-1951}$), we now use it as the dependent variable. Table 7 reports the estimates. Once additional controls are included, none of the placebo regressions return large and statistically significant estimates, confirming that partisan support was not trending differently in communities most affected by the reform.

**Table 7: Placebo regressions for the effect of women's suffrage on change in electoral support (full sample)**

| **Dependent Variable (DV):** | **Δ Electoral Support 1952-1951 (%)** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **Right** | | | **Left** | | | **Center-Liberal** | | |
| | **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** | **(7)** | **(8)** | **(9)** |
| **PANEL I** | | | | | | | | | |
| **Thessaloniki Bye2** | | | | | | | | | |
| Women in Electorate Bye (%) | 0.23** | 0.06 | -0.02 | 0.08 | 0.17 | 0.23 | -0.31** | -0.23 | -0.21 |
| | (2.52) | (0.64) | (0.17) | (0.75) | (1.36) | (1.50) | (2.24) | (1.60) | (1.34) |
| Obs. | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 108 | 108 |
| R2 | 0.05 | 0.22 | 0.24 | 0.01 | 0.03 | 0.04 | 0.05 | 0.12 | 0.12 |
| **PANEL II** | | | | | | | | | |
| **Rest Constituencies** | | | | | | | | | |
| Women in Electorate Bye (%) | 0.09 | 0.09 | 0.10 | 0.03 | 0.03 | 0.04 | -0.06 | -0.07 | -0.09 |
| | (0.92) | (0.99) | (0.95) | (0.77) | (0.67) | (0.85) | (0.64) | (0.74) | (0.82) |
| Obs. | 253 | 253 | 253 | 253 | 253 | 253 | 253 | 253 | 253 |
| R2 | 0.19 | 0.19 | 0.21 | 0.11 | 0.11 | 0.11 | 0.41 | 0.42 | 0.44 |
| **Controls** | | | | | | | | | |
| Constituency FEs | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Vector $\mathbf{X}_i$ | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ |
| Δ Electoral Support ICs Bye-1952 (%) | | | ✓ | | | ✓ | | | ✓ |
| Δ Total Turnout Bye-1952 (%) | | | ✓ | | | ✓ | | | ✓ |

**Notes:** Vector $\mathbf{X}_i$ includes the variables: Population (log), Altitude, and Distance from Largest City; Regressions are estimated using robust standard errors and include a constant; *t*-statistics in parentheses; ***,**,* Statistically significant at the 1%, 5% and 10% confidence level respectively.

## 4.3 The role of economically inactive women

We now turn to examine whether women's participation in the labour market mediated the extent to which they voted more conservatively compared to men. To do so, we pool together the communities in Thessaloniki and Rest Prefectures, and augment the regression specifications of Table 6 with the proportion of economically inactive women ($Economically\ Inactive\ Women_i$) and its interaction with the treatment variable, as in Eq. (2). The results, displayed in Table 8, provide empirical validity to Hypothesis 2: 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 throughout. This suggests that support gains for right parties at the expense of center-liberal parties (caused by the suffrage reform) were stronger in communities with higher levels of economically inactive women.

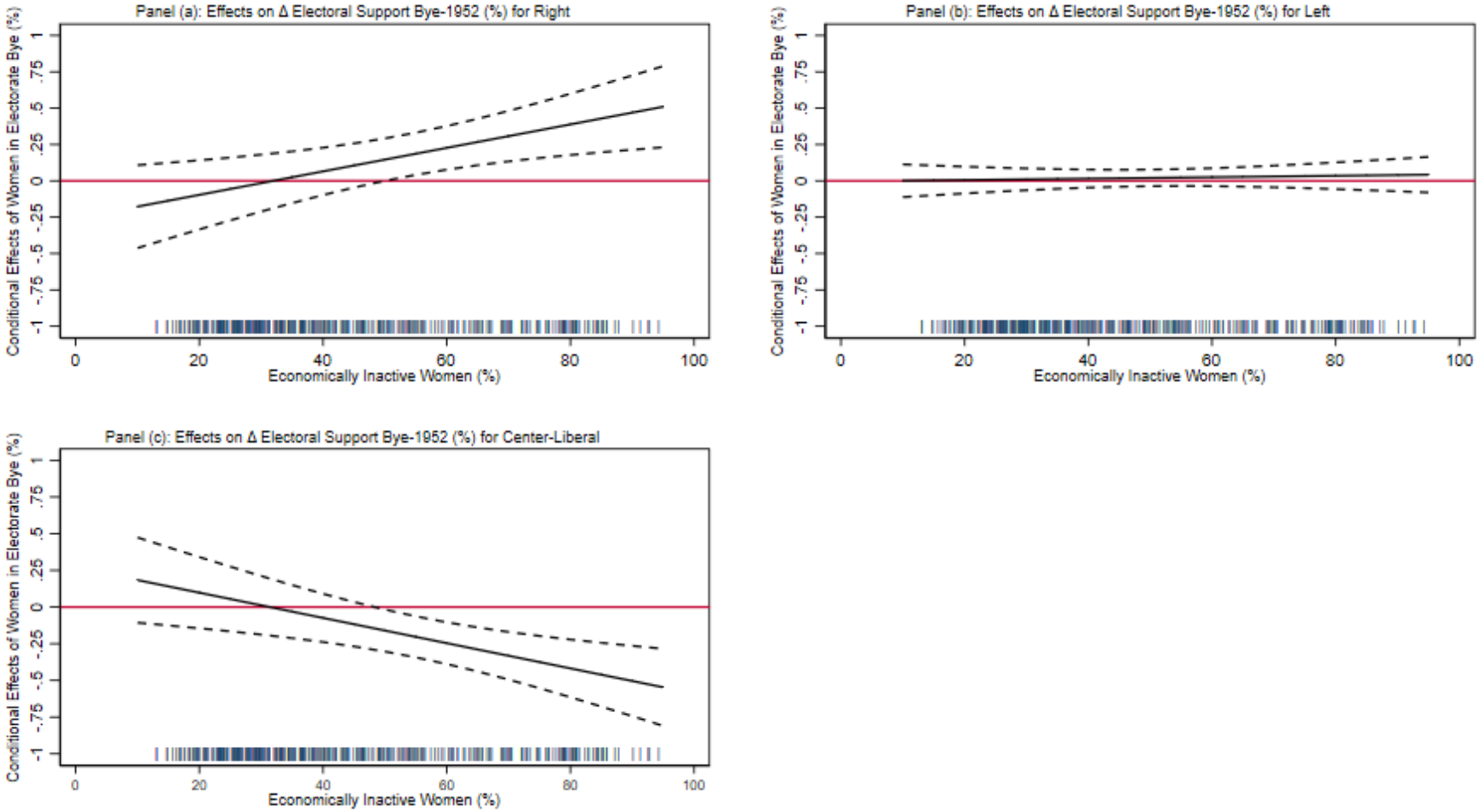
**Table 8: The interactive relationship with economically inactive women (full sample)**

| **Dependent Variable (DV):** | **Δ Electoral Support Bye-1952 (%)** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Right** | | | | **Left** | | | | **Center-Liberal** | | | |
| | **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** | **(7)** | **(8)** | **(9)** | **(10)** | **(11)** | **(12)** |
| **All Constituencies** | | | | | | | | | | | | |
| Women in Electorate Bye (%) | -0.35* | -0.29 | -0.21 | -0.26 | 0.01 | 0.03 | -0.04 | -0.00 | 0.42** | 0.34* | 0.36* | 0.27 |
| | (1.89) | (1.51) | (1.09) | (1.27) | (0.17) | (0.38) | (0.45) | (0.05) | (2.21) | (1.71) | (1.75) | (1.31) |
| Economically Inactive Women (%) | -0.52*** | -0.50*** | -0.35** | -0.39** | 0.10 | 0.11 | 0.01 | 0.02 | 0.47*** | 0.45*** | 0.44** | 0.39** |
| | (3.29) | (3.11) | (2.08) | (2.29) | (1.64) | (1.57) | (0.17) | (0.26) | (2.99) | (2.82) | (2.50) | (2.29) |
| Interaction Term | 0.01*** | 0.01*** | 0.01** | 0.01** | -0.00 | -0.00 | 0.00 | 0.00 | -0.01*** | -0.01*** | -0.01*** | -0.01** |
| | (2.97) | (2.80) | (2.16) | (2.34) | (0.58) | (0.58) | (0.44) | (0.33) | (3.09) | (2.87) | (2.72) | (2.53) |
| Obs. | 385 | 361 | 361 | 361 | 385 | 361 | 361 | 361 | 385 | 361 | 361 | 361 |
| R2 | 0.52 | 0.55 | 0.56 | 0.58 | 0.39 | 0.41 | 0.42 | 0.43 | 0.54 | 0.58 | 0.59 | 0.61 |
| **Controls** | | | | | | | | | | | | |
| Constituency Fes | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Lagged DV 1952-1951 (%) | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |
| Vector $\mathbf{X}_i$ | | | ✓ | ✓ | | | ✓ | ✓ | | | ✓ | ✓ |
| Δ Electoral Support ICs Bye-1952 (%) | | | | ✓ | | | | ✓ | | | | ✓ |
| Δ Total Turnout Bye-1952 (%) | | | | ✓ | | | | ✓ | | | | ✓ |

**Notes:** 'Interaction Term' is the product of the variables 'Women in Electorate Bye (%)' and 'Economically Inactive Women (%)'; Vector $\mathbf{X}_i$ includes the variables: Population (log), Altitude, and Distance from Largest City; Regressions are estimated using robust standard errors and include a constant; *t*-statistics in parentheses; ***,**,* Statistically significant at the 1%, 5% and 10% confidence level respectively.

To explore more thoroughly the conditionality of the gender voting gap upon the proportion of economically inactive women, we calculate the margins of the variable $Women\ in\ Electorate_{iBye}$ (based on estimates from the regressions in columns (4), (8) and (12) of Table 8) and plot them over the respective values of the variable $Economically\ Inactive\ Women_i$. As shown in Figure 2, women's enfranchisement affected partisan outcomes only when women were predominantly out of the labour force. While the treatment variable exerts a positive (negative) effect on the electoral support for right (center-liberal) parties at high levels of 'inactiveness', this effect appears to be reversed and statistically insignificant at low levels of 'inactiveness'. In particular, 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 proportion of economically inactive women takes a value of about 50%, and the magnitude of this change becomes very large when the variable reaches values as high as 90%. For instance, when we evaluate the suffrage effects at the maximum value of 'inactiveness' (94%), a one-standard deviation increase in the proportion of women in the electorate leads to an increase in the vote share of right parties by 3.8 percentage points and a decrease in the vote share of center-liberal parties by 4.1 percentage points.

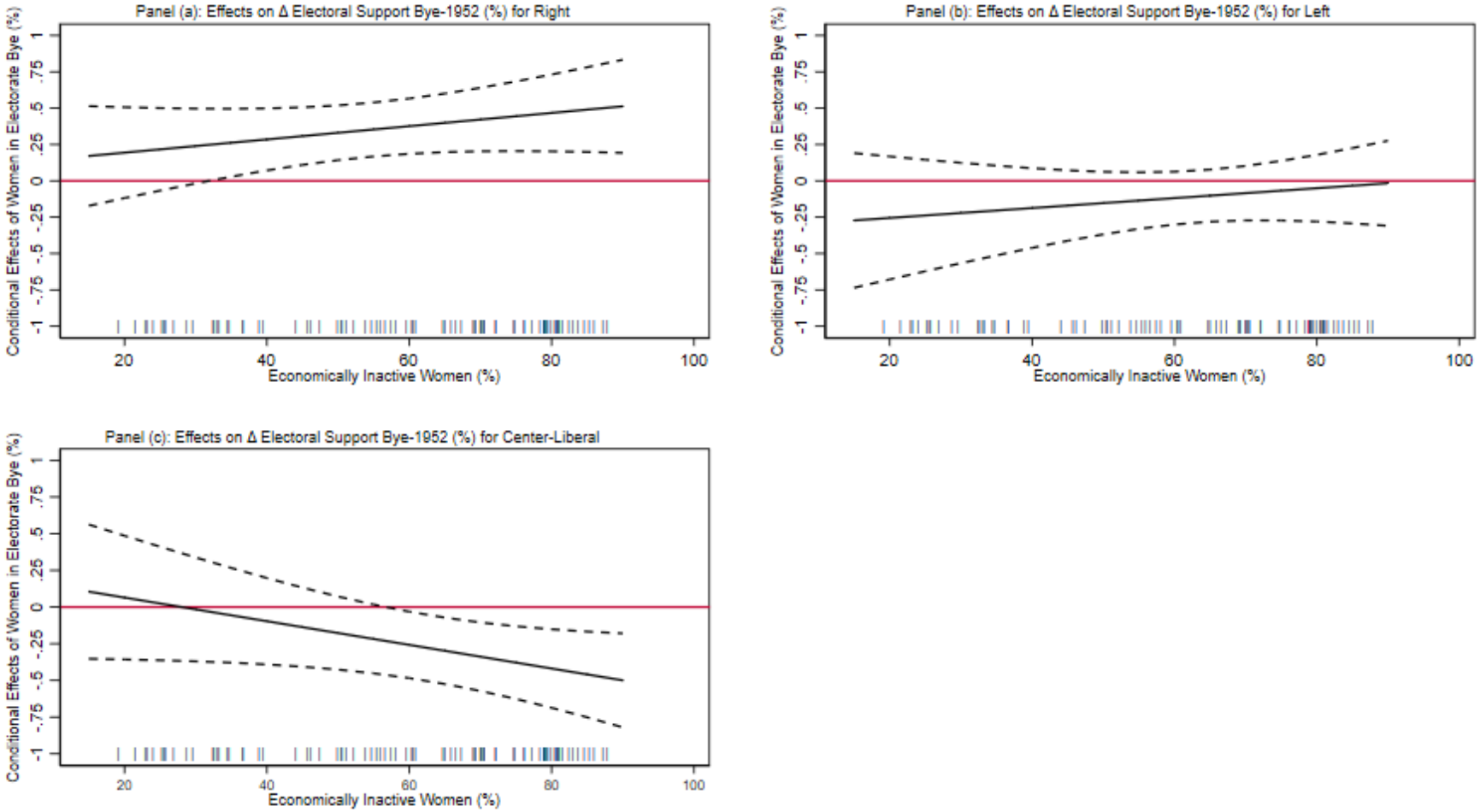
**Figure 2: Conditional effects of women in electorate for All Prefectures**




**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 economically inactive women in All Prefectures; The conditional effects are calculated based on the specifications (4), (8) and (12) of Table 8; All other covariates are held constant at their means; Dashed lines signify 90% confidence intervals; Rug plot at horizontal axis illustrates distribution of economically inactive women in All Prefectures; Red horizontal line marks marginal effect of 0.

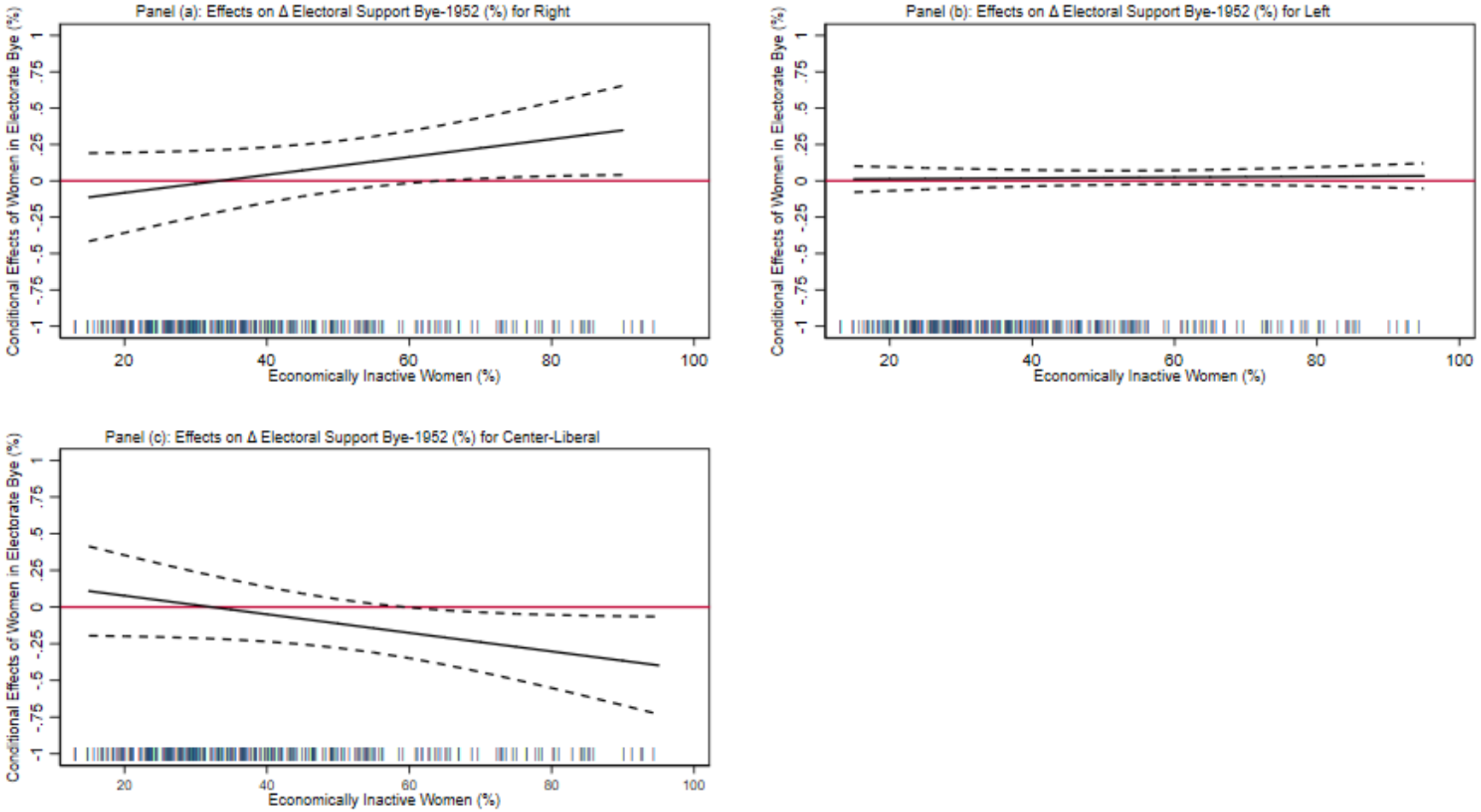
As noted in Section 3.1, the communities in Rest Prefectures were characterized by a much lower, on average, proportion of economically inactive women than those in Thessaloniki. When this structural difference and the findings of the previous two paragraphs are viewed together, a new question emerges: is the absence of a gender voting gap in Rest Prefectures driven by relatively low levels of economic inactiveness among women? To answer this question, we test whether the effects reported in Table 6 for Thessaloniki and Rest Prefectures prevail regardless of what level of labour market participation is imposed on the female population. To this end, we calculate and plot the conditional effects of Figure 2 separately for Thessaloniki and Rest Prefectures (see Figures 3 and 4). Two regularities stand out. First, the proportion of economically inactive women influences the size and statistical significance of the gender voting gap in both community groups. The main difference is that, in Thessaloniki, the suffrage effect on party vote shares becomes statistically insignificant at very low levels of 'inactiveness', while in Rest Prefectures, it reaches statistical significance only at very high levels of 'inactiveness'. Second, the distribution of economically inactive women in Thessaloniki is highly skewed to the left with the mean value of 64% corresponding to statistically significant effects, whereas the distribution of economically inactive women in Rest Prefectures is highly skewed to the right with the mean value of 42% corresponding to statistically insignificant effects. Based on these regularities, we can safely conclude that the pro-right shift caused by the suffrage was not only a phenomenon of communities in Thessaloniki; it could also be identified in other communities as long as they had a sufficiently high level of economically inactive women.

**Figure 3: 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 economically inactive women in Thessaloniki; The conditional effects are calculated based on the specifications (4), (8) and (12) of Table 8; All other covariates are held constant at their means; Dashed lines signify 90% confidence intervals; Rug plot at horizontal axis illustrates distribution of economically inactive women in Thessaloniki; Red horizontal line marks marginal effect of 0.

**Figure 4: 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 economically inactive women in Rest Prefectures; The conditional effects are calculated based on the specifications (4), (8) and (12) of Table 8; All other covariates are held constant at their means; Dashed lines signify 90% confidence intervals; Rug plot at horizontal axis illustrates distribution of economically inactive women in Rest Prefectures; Red horizontal line marks marginal effect of 0.

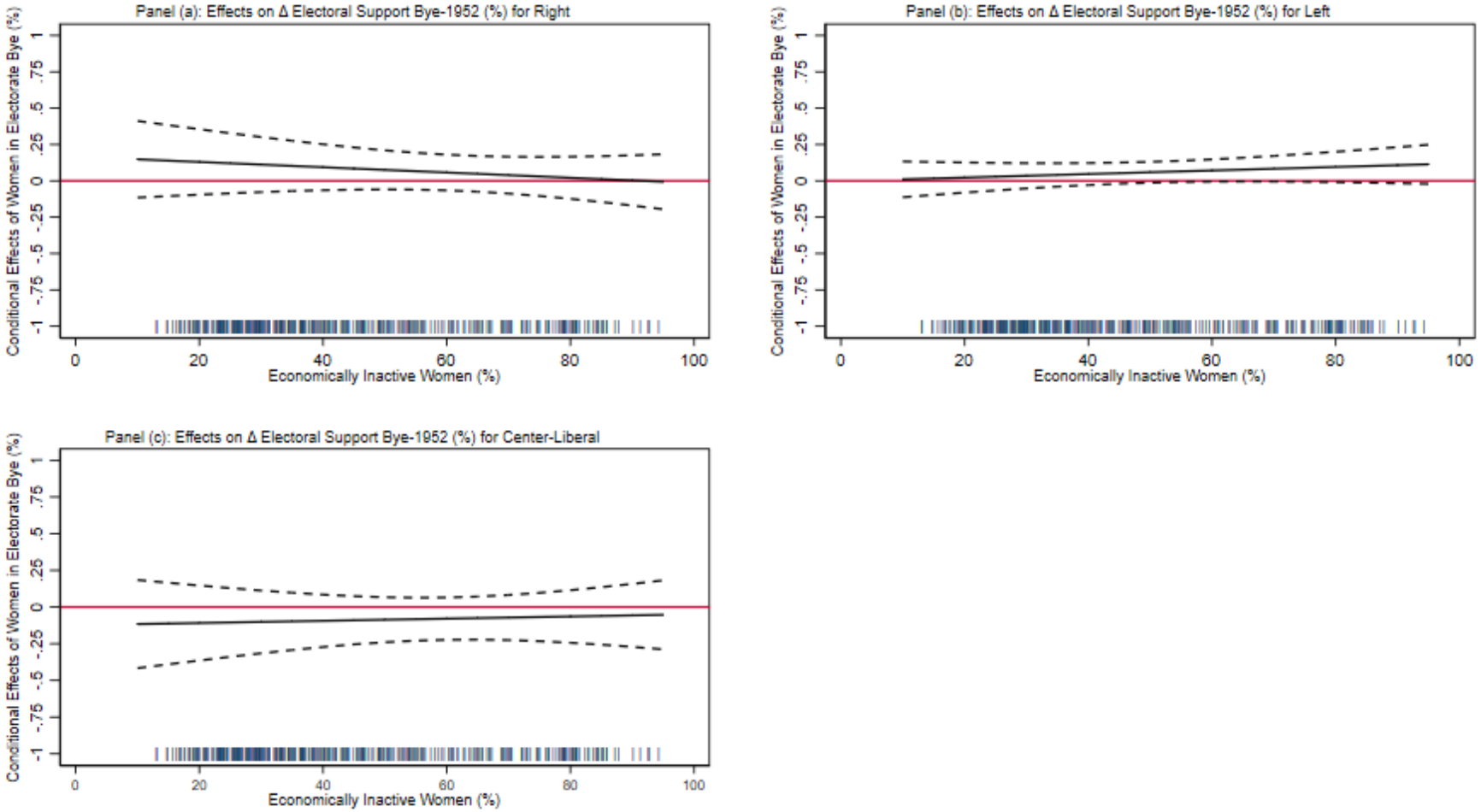
As before, we perform placebo tests to ensure that the results of this section are not influenced by pre-existing trends. More precisely, we replace the dependent variable with its lagged value ($\Delta\ Electoral\ Support_{i1952-1951}$) and run the same regression set-up as in Table 8, and then use the estimates (from the specifications with the full list of controls) to calculate the conditional effects. The results are shown in Table 9 and Figure 5. Once again, we reject the violation of the parallel trend assumption: all effects are small and far from conventional levels of statistical significance.

**Table 9: Placebo regressions for the interactive relationship with economically inactive women (full sample)**

| **Dependent Variable (DV)** | **Δ Electoral Support 1952-1951 (%)** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **Right** | | | **Left** | | | **Center-Liberal** | | |
| | **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** | **(7)** | **(8)** | **(9)** |
| **All Constituencies** | | | | | | | | | |
| Women in Electorate Bye (%) | 0.11 | 0.19 | 0.17 | -0.00 | -0.03 | -0.00 | -0.12 | -0.16 | -0.12 |
| | (0.61) | (1.06) | (0.90) | (0.01) | (0.37) | (0.02) | (0.59) | (0.80) | (0.59) |
| Economically Inactive Women (%) | -0.02 | 0.09 | 0.10 | -0.05 | -0.10 | -0.09 | 0.04 | -0.01 | 0.02 |
| | (0.12) | (0.69) | (0.76) | (0.72) | (1.32) | (1.24) | (0.23) | (0.06) | (0.13) |
| Interaction Term | -0.00 | -0.00 | -0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | (0.02) | (0.64) | (0.67) | (0.44) | (0.91) | (0.80) | (0.16) | (0.39) | (0.23) |
| Obs. | 361 | 361 | 361 | 361 | 361 | 361 | 361 | 361 | 361 |
| R2 | 0.18 | 0.19 | 0.20 | 0.08 | 0.08 | 0.09 | 0.37 | 0.37 | 0.39 |
| **Controls** | | | | | | | | | |
| Constituency FEs | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Vector $\mathbf{X}_i$ | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ |
| Δ Electoral Support ICs Bye-1952 (%) | | | ✓ | | | ✓ | | | ✓ |
| Δ Total Turnout Bye-1952 (%) | | | ✓ | | | ✓ | | | ✓ |

**Notes:** 'Interaction Term' is the product of the variables 'Women in Electorate Bye (%)' and 'Economically Inactive Women (%)'; Vector $\mathbf{X}_i$ includes the variables: Population (log), Altitude, and Distance from Largest City; Regressions are estimated using robust standard errors and include a constant; *t*-statistics in parentheses; ***,**,* Statistically significant at the 1%, 5% and 10% confidence level respectively.

**Figure 5: 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 economically inactive women in All Prefectures; The conditional effects are calculated based on the specifications (3), (6) and (9) of Table 9; All other covariates are held constant at their means; Dashed lines signify 90% confidence intervals; Rug plot at horizontal axis illustrates distribution of economically inactive women in All Prefectures; Red horizontal line marks marginal effect of 0.

## 4.4 Robustness tests

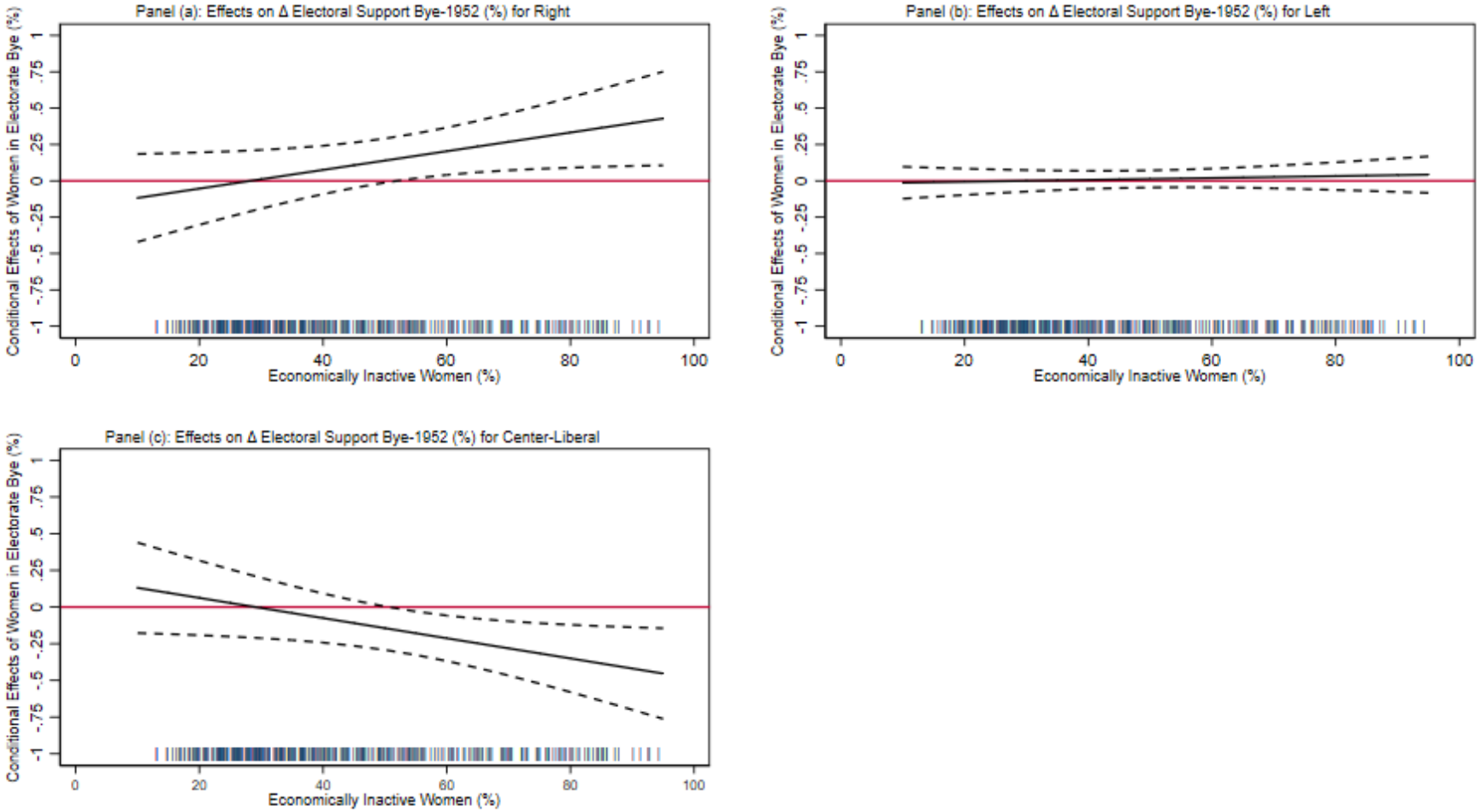
One important concern is that the different results for Thessaloniki and Rest Prefectures, as well as the conditionality of the gender voting gap upon the proportion of economically inactive women, are driven by differences in the level of economic development across communities. To address this concern, we exclude all communities defined as 'urban' in the censuses (32 in Thessaloniki and 4 in Rest Prefectures) and re-estimate the unconditional and conditional effects of Table 6 and Figure 2. Overall, we find evidence that validates the findings of the previous sections: the estimates retain their sign and statistical significance, even though they are somewhat smaller in magnitude due to exclusion of a large number of communities in Thessaloniki (see Table 10 and Figure 6). To provide further support that the level of economic inactiveness among women is what determines the size and significance of the gender voting gap – even in the more rural communities – we replace the variable $Economically\ Inactive\ Women_i$ in Eq. (2) with a proxy for economic development based on the 1961 census; namely, the proportion of households in community *i* with access to electricity ($Electricity\ Access_i$). Excluding the urban communities as in Figure 6, but now calculating the margins of the treatment variable over the respective values of the 'electricity access' variable (instead of the 'inactiveness' variable) renders insignificant results (see Figure 7).

**Table 10: Robustness tests for results in Table 6 -- without urban communities**

| **Dependent Variable (DV):** | **Δ Electoral Support Bye-1952 (%)** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Right** | | | | **Left** | | | | **Center-Liberal** | | | |
| | **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** | **(7)** | **(8)** | **(9)** | **(10)** | **(11)** | **(12)** |
| **PANEL I** | | | | | | | | | | | | |
| **Thessaloniki Bye2** | | | | | | | | | | | | |
| Women in Electorate Bye (%) | 0.25* | 0.36*** | 0.30** | 0.31** | -0.07 | -0.08 | -0.15 | -0.19 | -0.16 | -0.26* | -0.12 | -0.12 |
| | (1.76) | (2.89) | (2.47) | (2.40) | (0.57) | (0.59) | (1.20) | (1.35) | (1.08) | (1.85) | (0.90) | (0.75) |
| Obs. | 79 | 76 | 76 | 76 | 79 | 76 | 76 | 76 | 79 | 76 | 76 | 76 |
| R2 | 0.04 | 0.14 | 0.29 | 0.51 | 0.00 | 0.02 | 0.28 | 0.29 | 0.01 | 0.10 | 0.30 | 0.31 |
| **PANEL II** | | | | | | | | | | | | |
| **Rest Constituencies** | | | | | | | | | | | | |
| Women in Electorate Bye (%) | 0.02 | 0.06 | 0.05 | 0.08 | -0.00 | 0.01 | 0.01 | 0.02 | 0.01 | -0.03 | -0.03 | -0.08 |
| | (0.20) | (0.56) | (0.54) | (0.69) | (0.06) | (0.39) | (0.33) | (0.49) | (0.12) | (0.32) | (0.27) | (0.79) |
| Obs. | 270 | 249 | 249 | 249 | 270 | 249 | 249 | 249 | 270 | 249 | 249 | 249 |
| R2 | 0.52 | 0.56 | 0.56 | 0.57 | 0.22 | 0.28 | 0.29 | 0.29 | 0.56 | 0.61 | 0.61 | 0.64 |
| **Controls** | | | | | | | | | | | | |
| Constituency Fes | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Lagged DV 1952-1951 (%) | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |
| Vector $\mathbf{X}_i$ | | | ✓ | ✓ | | | ✓ | ✓ | | | ✓ | ✓ |
| Δ Electoral Support ICs Bye-1952 (%) | | | | ✓ | | | | ✓ | | | | ✓ |
| Δ Total Turnout Bye-1952 (%) | | | | ✓ | | | | ✓ | | | | ✓ |

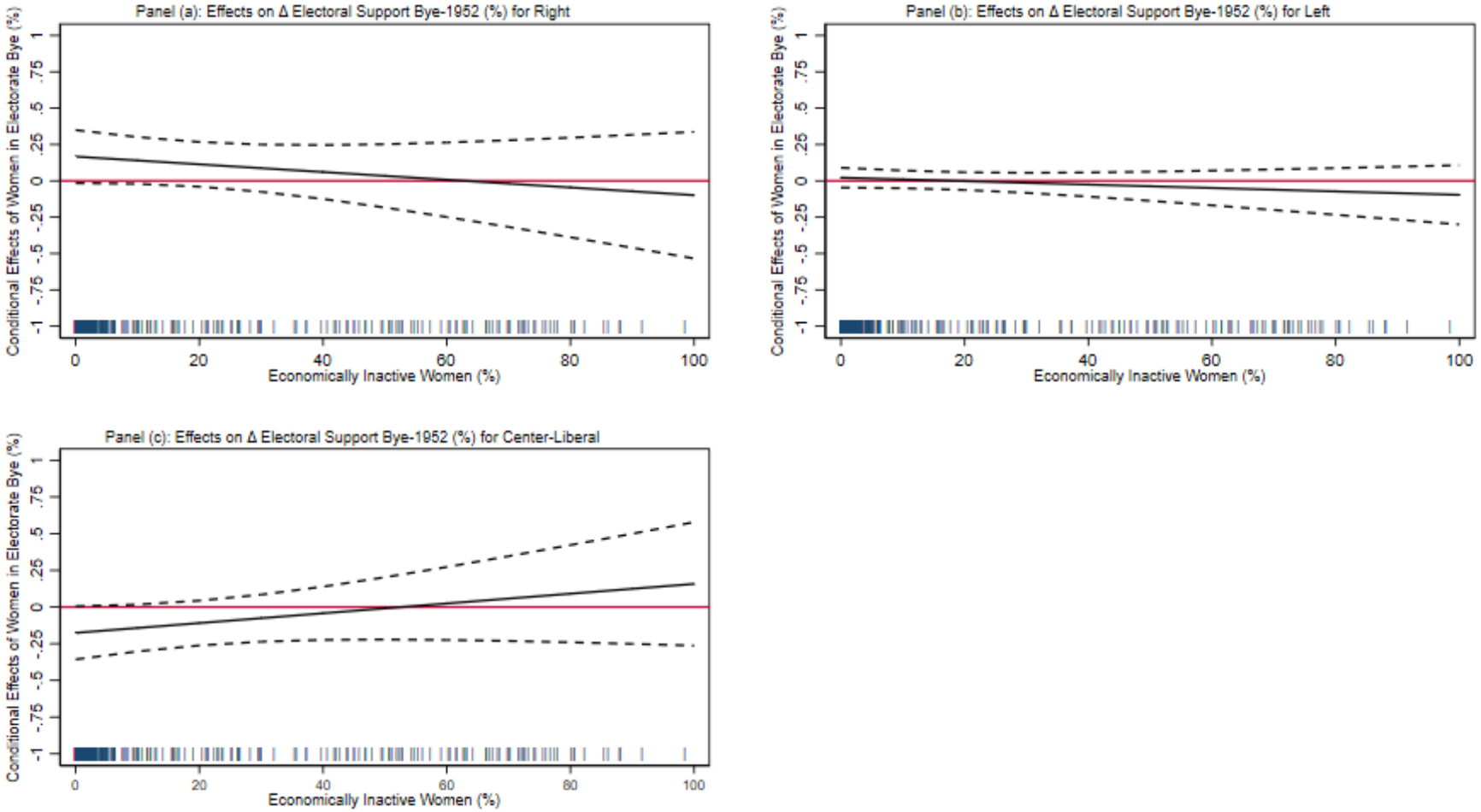
**Notes:** Vector $\mathbf{X}_i$ includes the variables: Population (log), Altitude, and Distance from Largest City; Regressions are estimated using robust standard errors and include a constant; *t*-statistics in parentheses; Regressions exclude all communities defined as 'urban' in the censuses (36 in total); ***,**,* Statistically significant at the 1%, 5% and 10% confidence level respectively.

**Figure 6: Robustness tests for results in Figure 2 - without urban communities**




**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 economically inactive women in All Prefectures; The conditional effects are calculated based on the specifications (4), (8) and (12) of Table 8; Regressions exclude all communities defined as 'urban' in the censuses (36 in total); All other covariates are held constant at their means; Dashed lines signify 90% confidence intervals; Rug plot at horizontal axis illustrates distribution of economically inactive women in All Prefectures; Red horizontal line marks marginal effect of 0.

**Figure 7: Robustness tests for results in Figure 2 – without urban communities; 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 calculated based on the specifications (4), (8) and (12) of Table 8; Regressions exclude all communities defined as 'urban' in the censuses (36 in total); 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.

In Appendix 3, Tables B4-B6 and Figures B2-B7, we present additional robustness checks. First, we check whether our results hold when we introduce fixed effects at a finer administrative level (province). Second, we test whether our results persist when we use the vote shares of the largest party/parties of each political ideology to construct our dependent variable. Third, we exclude the two prefectures (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. This allows us to eliminate any remaining endogeneity concerns stemming from politicians being able to influence the timing of elections. Fourth, to address the possibility of measurement errors and biases arising from the fact that the 'inactiveness' variable is based on information from the 1961 census, we exclude communities with large population changes between 1951 and 1961. Fifth, to make sure that our results are not influenced by other characteristics of the female population, we add to the regressions two additional 1961 variables; namely, the proportion of non-married women and the proportion of illiterate women in each community. Finally, to overcome concerns that the direction of effects is determined by the level of 'inactiveness' of the total population rather than that of women, we re-define the 'inactiveness' variable as the gap between the proportion of economically inactive women and the proportion of economically inactive men. Additional discussions of these tests are provided in Appendix 2. All in all, the estimates obtained from these tests support the key findings of the paper: a suffrage-induced shift in the support for right parties in Thessaloniki (combined with withdrawal of support for center-liberal parties) and a strong dependence of the gender voting gap on the proportion of economically inactive women.

## 5. Conclusions

The paper at hand seeks to identify the causal relationship between women's enfranchisement and party vote shares in Greece in the early 1950s. The case of Greece is interesting – both from a theoretical and an empirical point of view – for a number of reasons. First, women's enfranchisement took place in Greece during a period that the economy was still agrarian especially in the countryside. This allows us to investigate the existence of early "gender voting gap" during the first phases of economic development (i.e., as an economy moves away from agriculture) and moreover to detect potential differences in the patterns of voting behaviour between the women of the urban centres – where an infant industry had started to be developed – and those who were living in rural areas where agriculture was still the dominant activity.

Second, in Greece, women enfranchisement came as a result of pressures from the United Nations, and it was never supported rigorously by any of the major domestic political actors. This is because in the early 1950s the Greek civil war (1946-1949) had just finished and all of the major Greek political parties were afraid that such a radical reform – that would lead to the doubling of the registered voters – might have unintended consequences concerning the empowerment of the communist party. Obviously, this stylized fact (i.e. that enfranchisement came as a result of international pressures) is an important characteristic that mitigates potential reverse causality concerns arising from the possibility of *strategic enfranchisement* by the elected leaders. In addition, in Greece, women went to the polls for the first time 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 deputy or the cancellation of the 1952 election result by the electoral court. This characteristic also to

alleviate concerns regarding potential endogenous effects arising from knowing or being able to influence the timing of elections.

Empirical analysis builds upon a *unique community-level dataset* of 385 communities located in seven prefectures in which by-elections were held in 1953 and 1954. Our identification strategy exploits the uneven and exogenous spatial variation in the concentration of eligible (registered) women voters as a measure of the received "dosage" of the franchise reform in different communities, in a difference-in-differences design that holds unobserved local characteristics fixed. Obtained empirical findings provides evidence of a "traditional gender voting gap" in the urban area of Thessaloniki, while it fails to establish gender voting gap in the other six, predominantly rural, prefectures of our sample. Furthermore, our analysis suggests that the size and significance of a gender voting gap is driven by differences in the ratio of female labor force inactivity. Interestingly, the pro-right shift caused by the suffrage can also be observed in communities outside Thessaloniki as long as they had a sufficiently high level of economically inactive women. Relying on the economic bargaining models of the family, we interpret our empirical findings along the following lines. 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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# Appendix 1: 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).[37]

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).[38]

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

[37] 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.

[38] 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 - 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.

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 (1935) and Ioannis Metaxas (1936-1941) and in turn the German Occupation (1941-1944) and the Greek civil war (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 (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.[39] 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).

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%). 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.[40] 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

[39] 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% in that parliament debate.

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

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 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 30 May 1952, the Bill enacted as law and voting rights in parliamentary elections were extended 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. 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 deputy or the cancellation of the 1952 election result by the electoral court. However, they participated in the whole Greek territory in the next parliamentary elections that were held on 19 February 1956 (see Samiou, 2013).

## Appendix 2: Robustness tests

In this appendix, we present the additional analyses discussed in the last paragraph of Section 4.4, aiming at providing further support to the main findings of this paper.

First, we use fixed effects at a finer administrative level. The baseline models in the main text include prefecture fixed effects capturing prefecture-specific shocks. As a robustness check, we experiment by replacing the prefecture fixed effects with province fixed effects – with each prefecture having, on average, three provinces. Our results are not influenced by this exercise (see Table B4 and Figure B2).

Second, we use a different party classification to construct our dependent variable. So far, we have classified all parties in Greece into right, left or center-liberal. However, taking into account only the largest party/parties of each political colour (Greek Rally as 'right', National Progressive Center Union and Liberal Party as 'center-liberal' and United Democratic Left as 'left') produces remarkably consistent results (see Table B5 and Figure B3).

Third, we restrict our sample only to cases that by-elections took place as a result of death of an elected MP. The reason for holding the 1953/54 by-elections in the seven studied prefectures was either the death of an elected MP or the cancellation of the 1952 election result by the electoral court. Arguably, the timing of the elections in the latter case is not as exogenous as in the former case. We thus explore whether our results persist when we

exclude the two prefectures (Grevena and Rethymno) with 'cancellation' as the reason for the by-elections. As shown in Table B6 and Figure B4, the unconditional and conditional effects are very similar with those reported in Table 6 and Figure 2.

Fourth, we check the sensitivity of our conditional effects to dropping communities. Our variable for economically inactive women is based on information from the 1961 census. To address the possibility of measurement errors and biases arising from using a census that was carried out a few years later than the 1953/54 by-elections, we check robustness to excluding communities with large population changes between the years 1951 and 1961; that is, those with a population growth rate between the two years of less than -25% or more than 25% (66 in total). The resulting estimates do not change the inferences drawn from earlier findings (see Figure B5).

Fifth, we test whether our conditional effects are sensitive to the inclusion of extra controls. To do so, we augment our model with two variables capturing other characteristics of the female population which may be correlated with the outcome of interest or the treatment variable; namely, the proportion of non-married women and the proportion of illiterate women in each community. The conditionality upon the proportion of economically inactive women persists when we control for these two variables (see Figure B6).

Finally, we check whether our conditional effects are driven by the level of 'inactiveness' of the total population in each community rather than that of women. To this end, we re-define the 'inactiveness' variable as the difference between the proportion of economically inactive women and the proportion of economically inactive men, as captured by the term $Economically\ Inactive\ Gap_i$ . Our estimates based on this alternative definition produce very similar patterns as in Figure 2 and leave our conclusions unchanged (see Figure B7).

# Appendix 3

**Table B1a: Descriptive statistics**

| | Thessaloniki | | | | |
|---|---|---|---|---|---|
| | **Obs** | **Mean** | **SD** | **Min** | **Max** |
| **PANEL I** | | | | | |
| **Variables in levels** | | | | | |
| Women in Electorate Bye (%) | 111 | 46.2 | 6.6 | 24.8 | 59.2 |
| Men's Turnout Bye (%) | 49 | 71.6 | 5.7 | 60.2 | 82.1 |
| Women's Electoral Support Right Bye (%) | 49 | 36.8 | 10.7 | 7.3 | 57.1 |
| Women's Electoral Support Left Bye (%) | 49 | 29.9 | 11.9 | 6.6 | 52.4 |
| Women's Electoral Support Center-Liberal Bye (%) | 49 | 17.4 | 6.7 | 1.4 | 26.6 |
| Women's Turnout Bye (%) | 49 | 67.2 | 17.5 | 26.6 | 86.0 |
| **PANEL II** | | | | | |
| **Variables in changes** | | | | | |
| Δ Men's Turnout Bye-1952 (%) | 49 | -10.2 | 4.1 | -23.5 | 2.0 |
| Δ Men's Registration Bye-1952 | 49 | -20.9 | 145.7 | -756.0 | 243.0 |

**Notes:** The table reports additional regression variables (not reported in Table 2) based on the first by-election of Thessaloniki, or the difference between the first by-election and the 1952 election.

## Table B1b: Descriptive statistics

| | All Prefectures | | | | | Thessaloniki | | | | | Rest Prefectures | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Obs** | **Mean** | **SD** | **Min** | **Max** | **Obs** | **Mean** | **SD** | **Min** | **Max** | **Obs** | **Mean** | **SD** | **Min** | **Max** |
| **PANEL I** | | | | | | | | | | | | | | | |
| **Variables in levels** | | | | | | | | | | | | | | | |
| Unmarried Women (%) | 385 | 44.8 | 5.0 | 24.8 | 59.9 | 111 | 46.1 | 4.8 | 24.8 | 51.7 | 274 | 44.3 | 5.1 | 29.9 | 59.9 |
| Illiterate Women (%) | 385 | 31.8 | 9.9 | 12.5 | 63.9 | 111 | 23.2 | 7.4 | 12.5 | 38.4 | 274 | 35.3 | 8.5 | 14.6 | 63.9 |
| Economically Inactive Gap (%) | 385 | 30.3 | 18.3 | -7.4 | 88.9 | 111 | 42.4 | 16.1 | 5.3 | 68.6 | 274 | 25.4 | 16.8 | -7.4 | 88.9 |
| **PANEL II** | | | | | | | | | | | | | | | |
| **Variables in changes** | | | | | | | | | | | | | | | |
| Δ Electoral Support Right Bye-1952 (%) (main party) | 385 | 5.2 | 15.9 | -32.0 | 52.5 | 111 | -0.1 | 8.5 | -21.1 | 22.9 | 274 | 7.3 | 17.6 | -32.0 | 52.5 |
| Δ Electoral Support Left Bye-1952 (%) (main party) | 385 | 2.0 | 6.8 | -25.5 | 38.8 | 111 | 7.6 | 8.1 | -25.5 | 38.8 | 274 | -0.3 | 4.6 | -20.9 | 23.6 |
| Δ Electoral Support Center-Liberal Bye-1952 (%)(main party) | 385 | -2.0 | 19.6 | -51.7 | 87.3 | 111 | -9.9 | 8.0 | -41.8 | 18.1 | 274 | 1.3 | 21.9 | -51.7 | 87.3 |
| Δ Electoral Support Right 1952-1951 (%) (main party) | 361 | 15.6 | 12.6 | -22.1 | 90.7 | 108 | 14.9 | 8.4 | -11.9 | 41.6 | 253 | 16.0 | 14.0 | -22.1 | 90.7 |
| Δ Electoral Support Left 1952-1951 (%) (main party) | 361 | 0.2 | 6.0 | -44.3 | 30.5 | 108 | -0.6 | 7.7 | -44.3 | 19.4 | 253 | 0.5 | 5.1 | -27.2 | 30.5 |
| Δ Electoral Support Center-Liberal 1952-1951 (%)(main party) | 361 | -10.8 | 19.2 | -97.5 | 28.6 | 108 | -3.9 | 8.4 | -26.4 | 26.2 | 253 | -13.7 | 21.7 | -97.5 | 28.6 |
| Δ Electoral Support ICs Bye-1952 (%) (main party) | 385 | -5.1 | 18.7 | -99.7 | 26.7 | 111 | 2.4 | 3.1 | -0.2 | 25.7 | 274 | -8.2 | 21.3 | -99.7 | 26.7 |
| Population growth 1961-1951 (%) | 385 | 4.5 | 25.4 | -54.2 | 213.1 | 111 | 10.8 | 32.1 | -54.2 | 213.1 | 274 | 1.9 | 21.6 | -39.4 | 184.2 |

**Notes:** The table reports the additional regression variables employed in the robustness checks of Appendix 2.

**Table B2: Women in electorate and their share of turnout (restricted sample)**

| **Dependent Variable (DV):** | **Women's Share of Turnout Bye (%)** | | | |
|---|---|---|---|---|
| | **Thessaloniki Bye2** | | **Rest Constituencies** | |
| | (1) | (2) | (3) | (4) |
| Women in Electorate Bye (%) | 0.19 | 0.42*** | 0.50*** | 0.48*** |
| | (1.31) | (2.72) | (3.27) | (2.50) |
| Obs. | 44 | 44 | 34 | 34 |
| R2 | 0.04 | 0.48 | 0.14 | 0.22 |
| **Communities** | NM | NM | NM | NM |
| **Controls** | | | | |
| Vector $\mathbf{X}_i$ | | ✓ | | ✓ |

**Notes:** 'NM' (no mixed-gender) excludes communities with at least one mixed-gender polling station; Vector $\mathbf{X}_i$ includes the variables: Population (log), Altitude, and Distance from Largest City; Regressions are estimated using robust standard errors and include a constant; *t*-statistics in parentheses; ***,**,* Statistically significant at the 1%, 5% and 10% confidence level respectively.

**Table B3: The effect of women's suffrage and the municipality of Thessaloniki (restricted sample)**

| **Dependent Variable (DV):** | **Δ Electoral Support Bye-1952 (%)** | | | | | |
|---|---|---|---|---|---|---|
| | **Right** | | **Left** | | **Center-Liberal** | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Women in Electorate Bye (%) | 0.18 | 0.53*** | -0.35 | -0.59 | 0.17 | 0.09 |
| | (0.68) | (3.16) | (0.85) | (1.49) | (0.70) | (0.28) |
| Municipality of Thessaloniki | -16.58 | 1.45 | -23.42 | -31.37 | 38.20*** | 27.79 |
| | (1.22) | (0.16) | (1.19) | (1.64) | (2.71) | (1.56) |
| Interaction term | 0.27 | -0.01 | 0.58 | 0.64 | -0.85*** | -0.60 |
| | (0.93) | (0.07) | (1.38) | (1.58) | (2.85) | (1.57) |
| Obs. | 44 | 43 | 44 | 43 | 44 | 43 |
| R2 | 0.50 | 0.77 | 0.16 | 0.48 | 0.23 | 0.47 |
| **Communities** | NM | NM | NM | NM | NM | NM |
| **Controls** | | | | | | |
| Lagged DV 1952-1951 (%) | | ✓ | | ✓ | | ✓ |
| Δ Men's Registration Bye-1952 | | ✓ | | ✓ | | ✓ |
| Vector $\mathbf{X}_i$ | | ✓ | | ✓ | | ✓ |
| Δ Electoral Support ICs Bye-1952 (%) | | ✓ | | ✓ | | ✓ |
| Δ Total Turnout Bye-1952 (%) | | ✓ | | ✓ | | ✓ |

**Notes:** 'Interaction Term' is the product of the variables 'Women in Electorate Bye (%)' and 'Municipality of Thessaloniki'; 'NM' (no mixed-gender) excludes communities with at least one mixed-gender polling station; Vector Xi includes the variables: Population (log), Altitude, and Distance from Largest City; Regressions are estimated using robust standard errors and include a constant; t-statistics in parentheses; ***,**,* Statistically significant at the 1%, 5% and 10% confidence level respectively.

**Table B4: Robustness tests for results in Table 6 -- controlling for province FEs**

| **Dependent Variable (DV):** | **Δ Electoral Support Bye-1952 (%)** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Right** | | | | **Left** | | | | **Center-Liberal** | | | |
| | **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** | **(7)** | **(8)** | **(9)** | **(10)** | **(11)** | **(12)** |
| **PANEL I** | | | | | | | | | | | | |
| **Thessaloniki Bye2** | | | | | | | | | | | | |
| Women in Electorate Bye (%) | 0.48*** | 0.58*** | 0.41*** | 0.39*** | -0.15 | -0.15 | -0.07 | -0.11 | -0.27** | -0.37*** | -0.28** | -0.28** |
| | (3.94) | (4.92) | (3.41) | (3.36) | (1.61) | (1.27) | (0.64) | (1.07) | (2.47) | (2.95) | (2.48) | (2.09) |
| Obs. | 111 | 108 | 108 | 108 | 111 | 108 | 108 | 108 | 111 | 108 | 108 | 108 |
| R2 | 0.26 | 0.32 | 0.50 | 0.62 | 0.12 | 0.14 | 0.33 | 0.35 | 0.08 | 0.14 | 0.29 | 0.29 |
| **PANEL II** | | | | | | | | | | | | |
| **Rest Constituencies** | | | | | | | | | | | | |
| Women in Electorate Bye (%) | -0.00 | 0.03 | 0.00 | 0.03 | 0.01 | 0.03 | 0.02 | 0.02 | 0.01 | -0.04 | -0.00 | -0.05 |
| | (0.01) | (0.33) | (0.01) | (0.28) | (0.32) | (0.83) | (0.54) | (0.75) | (0.15) | (0.48) | (0.03) | (0.46) |
| Obs. | 274 | 253 | 253 | 253 | 274 | 253 | 253 | 253 | 274 | 253 | 253 | 253 |
| R2 | 0.58 | 0.61 | 0.62 | 0.62 | 0.31 | 0.37 | 0.38 | 0.38 | 0.59 | 0.64 | 0.65 | 0.67 |
| **Controls** | | | | | | | | | | | | |
| Province FEs | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Lagged DV 1952-1951 (%) | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |
| Vector $\mathbf{X}_i$ | | | ✓ | ✓ | | | ✓ | ✓ | | | ✓ | ✓ |
| Δ Electoral Support ICs Bye-1952 (%) | | | | ✓ | | | | ✓ | | | | ✓ |
| Δ Total Turnout Bye-1952 (%) | | | | ✓ | | | | ✓ | | | | ✓ |

**Notes:** Vector $\mathbf{X}_i$ includes the variables: Population (log), Altitude, and Distance from Largest City; Regressions are estimated using robust standard errors and include a constant; *t*-statistics in parentheses; ***,**,* Statistically significant at the 1%, 5% and 10% confidence level respectively.

**Table B5: Robustness tests for results in Table 6 – using the main parties**

| **Dependent Variable (DV):** | **Δ Electoral Support Bye-1952 (%)** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Right** | | | | **Left** | | | | **Center-Liberal** | | | |
| | **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** | **(7)** | **(8)** | **(9)** | **(10)** | **(11)** | **(12)** |
| **PANEL I** | | | | | | | | | | | | |
| **Thessaloniki Bye2** | | | | | | | | | | | | |
| Women in Electorate Bye (%) | 0.53*** | 0.64*** | 0.39*** | 0.39*** | -0.22** | -0.23** | -0.07 | -0.12 | -0.26** | -0.34*** | -0.26** | -0.25* |
| | (4.18) | (4.98) | (3.78) | (3.43) | (2.17) | (2.09) | (0.70) | (1.04) | (2.61) | (3.12) | (2.26) | (1.83) |
| Obs. | 111 | 108 | 108 | 108 | 111 | 108 | 108 | 108 | 111 | 108 | 108 | 108 |
| R2 | 0.18 | 0.28 | 0.53 | 0.61 | 0.04 | 0.06 | 0.32 | 0.34 | 0.05 | 0.11 | 0.26 | 0.27 |
| **PANEL II** | | | | | | | | | | | | |
| **Rest Constituencies** | | | | | | | | | | | | |
| Women in Electorate Bye (%) | 0.04 | 0.04 | 0.02 | 0.05 | -0.00 | 0.01 | 0.01 | 0.01 | 0.05 | 0.01 | 0.04 | -0.03 |
| | (0.40) | (0.44) | (0.26) | (0.47) | (0.12) | (0.35) | (0.31) | (0.47) | (0.39) | (0.07) | (0.31) | (0.25) |
| Obs. | 274 | 253 | 253 | 253 | 274 | 253 | 253 | 253 | 274 | 253 | 253 | 253 |
| R2 | 0.52 | 0.58 | 0.59 | 0.60 | 0.23 | 0.29 | 0.30 | 0.30 | 0.41 | 0.55 | 0.55 | 0.57 |
| **Controls** | | | | | | | | | | | | |
| Constituency FEs | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Lagged DV 1952-1951 (%) | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |
| Vector $\mathbf{X}_i$ | | | ✓ | ✓ | | | ✓ | ✓ | | | ✓ | ✓ |
| Δ Electoral Support ICs Bye-1952 (%) | | | | ✓ | | | | ✓ | | | | ✓ |
| Δ Total Turnout Bye-1952 (%) | | | | ✓ | | | | ✓ | | | | ✓ |

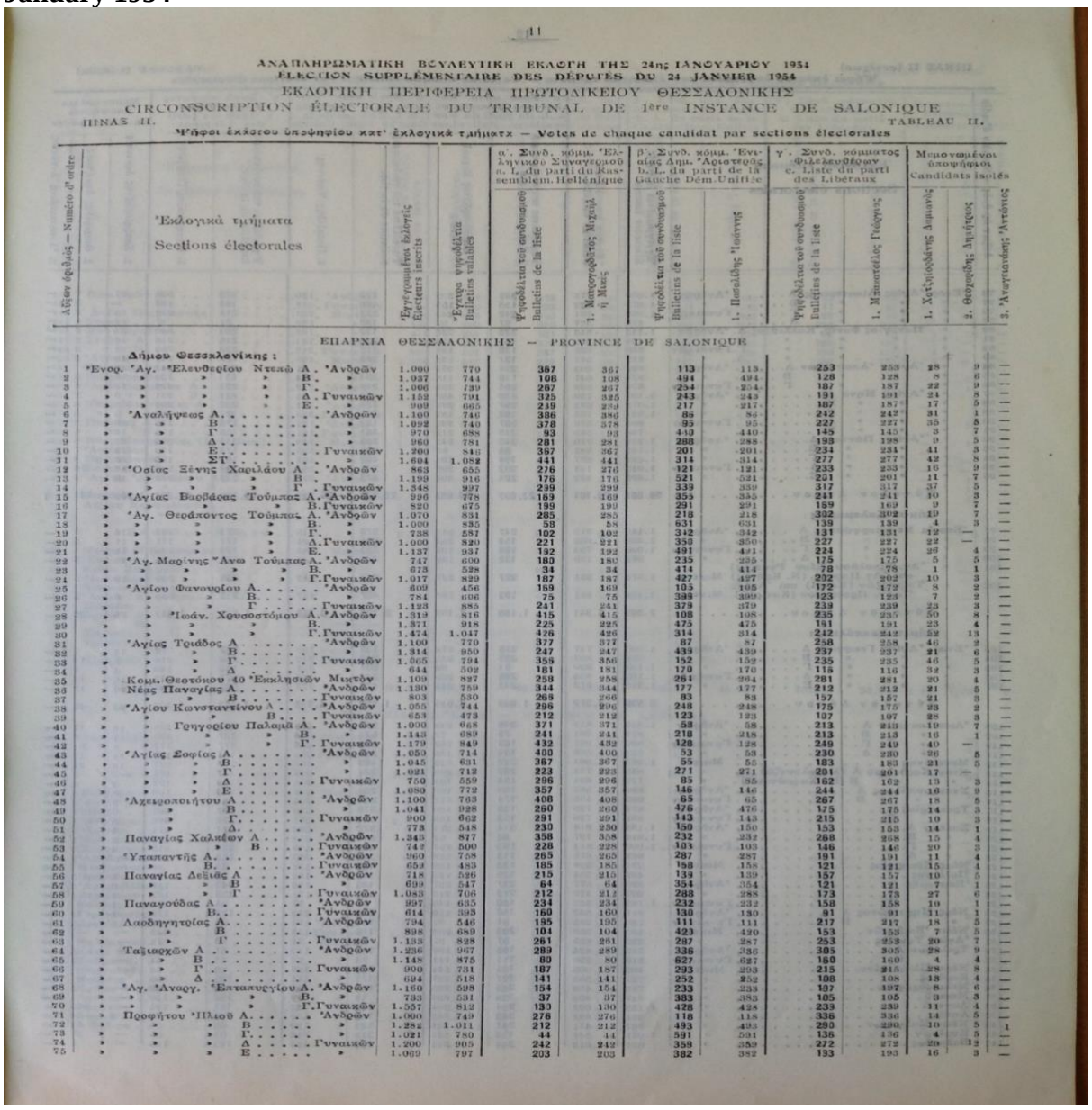
**Notes:** Vector $\mathbf{X}_i$ includes the variables: Population (log), Altitude, and Distance from Largest City; Regressions are estimated using robust standard errors and include a constant; *t*-statistics in parentheses; The dependent variables are constructed using the vote shares of the largest party/parties of each political ideology; ***,**,* Statistically significant at the 1%, 5% and 10% confidence level respectively.

**Table B6: Robustness tests for results in Table 6 – excluding constituencies with cancellation as the reason for the by-elections**

| **Dependent Variable (DV):** | **Δ Electoral Support Bye-1952 (%)** | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Right** | | | | **Left** | | | | **Center-Liberal** | | | |
| | **(1)** | **(2)** | **(3)** | **(4)** | **(5)** | **(6)** | **(7)** | **(8)** | **(9)** | **(10)** | **(11)** | **(12)** |
| **PANEL I** | | | | | | | | | | | | |
| **Thessaloniki Bye2** | | | | | | | | | | | | |
| Women in Electorate Bye (%) | 0.53*** | 0.62*** | 0.39*** | 0.38*** | -0.22** | -0.23** | -0.07 | -0.12 | -0.26** | -0.38*** | -0.27** | -0.26* |
| | (4.18) | (4.91) | (3.79) | (3.35) | (2.17) | (2.00) | (0.68) | (1.01) | (2.61) | (3.07) | (2.39) | (1.87) |
| Obs. | 111 | 108 | 108 | 108 | 111 | 108 | 108 | 108 | 111 | 108 | 108 | 108 |
| R2 | 0.18 | 0.25 | 0.47 | 0.61 | 0.04 | 0.06 | 0.32 | 0.34 | 0.05 | 0.12 | 0.27 | 0.28 |
| **PANEL II** | | | | | | | | | | | | |
| **Rest Constituencies** | | | | | | | | | | | | |
| Women in Electorate Bye (%) | -0.05 | 0.02 | -0.00 | 0.05 | -0.04 | -0.02 | -0.02 | 0.00 | 0.08 | -0.02 | 0.01 | -0.05 |
| | (0.47) | (0.13) | (0.04) | (0.41) | (1.44) | (0.74) | (0.61) | (0.04) | (0.74) | (0.12) | (0.08) | (0.38) |
| Obs. | 206 | 189 | 189 | 189 | 206 | 189 | 189 | 189 | 206 | 189 | 189 | 189 |
| R2 | 0.30 | 0.35 | 0.36 | 0.37 | 0.23 | 0.26 | 0.27 | 0.28 | 0.53 | 0.59 | 0.60 | 0.64 |
| **Controls** | | | | | | | | | | | | |
| Constituency FEs | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Lagged DV 1952-1951 (%) | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |
| Vector $\mathbf{X}_i$ | | | ✓ | ✓ | | | ✓ | ✓ | | | ✓ | ✓ |
| Δ Electoral Support ICs Bye-1952 (%) | | | | ✓ | | | | ✓ | | | | ✓ |
| Δ Total Turnout Bye-1952 (%) | | | | ✓ | | | | ✓ | | | | ✓ |

**Notes:** Vector $\mathbf{X}_i$ includes the variables: Population (log), Altitude, and Distance from Largest City; Regressions are estimated using robust standard errors and include a constant; *t*-statistics in parentheses; Regressions exclude communities in the constituencies of Grevena and Rethymno; ***,**,* Statistically significant at the 1%, 5% and 10% confidence level respectively.

**Figure B1: Electoral results for the second by-election held in Thessaloniki on 24 January 1954**



11

ΑΝΑΠΛΗΡΩΜΑΤΙΚΗ ΒΟΥΛΕΥΤΙΚΗ ΕΚΛΟΓΗ ΤΗΣ 24ης ΙΑΝΟΥΑΡΙΟΥ 1954
ÉLECTION SUPPLÉMENTAIRE DES DÉPUTÉS DU 24 JANVIER 1954
ΕΚΛΟΓΙΚΗ ΠΕΡΙΦΕΡΕΙΑ ΠΡΩΤΟΔΙΚΕΙΟΥ ΘΕΣΣΑΛΟΝΙΚΗΣ
CIRCONSCRIPTION ÉLECTORALE DU TRIBUNAL DE 1ère INSTANCE DE SALONIQUE

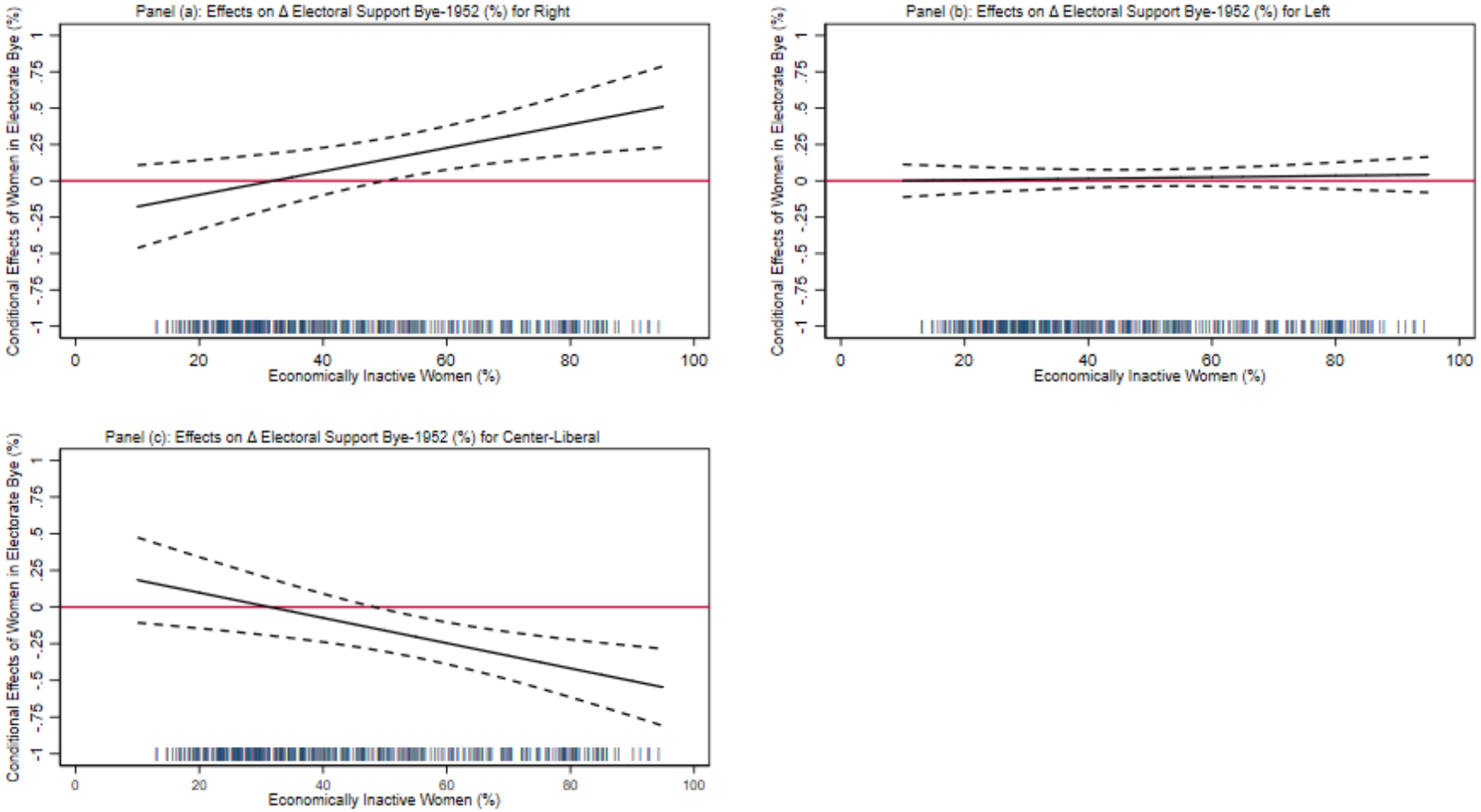
ΠΙΝΑΞ II. TABLEAU II.

Ψῆφοι ἑκάστου ὑποψηφίου κατ' ἐκλογικά τμήματα — Votes de chaque candidat par sections électorales

| Λύξων ἀριθμός — Numéro d'ordre | Ἐκλογικά τμήματα Sections électorales | Ἐγγεγραμμένοι ἐκλογεῖς Électeurs inscrits | Ἔγκυρα ψηφοδέλτια Bulletins valables | α'. Συνδ. κόμμ. Ἑλληνικοῦ Συναγερμοῦ a. L. du parti du Rassemblem. Hellénique: Ψηφοδέλτια τοῦ συνδυασμοῦ Bulletins de la liste | α'. Συνδ. κόμμ. Ἑλληνικοῦ Συναγερμοῦ a. L. du parti du Rassemblem. Hellénique: 1. Μαυρογορδάτος Μιχαὴλ ἡ Μίκης | β'. Συνδ. κόμμ. Ἐνιαίας Δημ. Ἀριστερᾶς b. L. du parti de la Gauche Dém. Unifiée: Ψηφοδέλτια τοῦ συνδυασμοῦ Bulletins de la liste | β'. Συνδ. κόμμ. Ἐνιαίας Δημ. Ἀριστερᾶς b. L. du parti de la Gauche Dém. Unifiée: 1. Παναλίδης Ἰωάννης | γ'. Συνδ. κόμματος Φιλελευθέρων c. Liste du parti des Libéraux: Ψηφοδέλτια τοῦ συνδυασμοῦ Bulletins de la liste | γ'. Συνδ. κόμματος Φιλελευθέρων c. Liste du parti des Libéraux: 1. Μπαναταέλος Γεώργιος | Μεμονωμένοι ὑποψήφιοι Candidats isolés: 1. Χατζηγιορδάνης Δημιανός | Μεμονωμένοι ὑποψήφιοι Candidats isolés: 2. Θεοχαρίδης Δημήτριος | Μεμονωμένοι ὑποψήφιοι Candidats isolés: 3. Ἀνωγειανάκης Ἀντώνιος |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | ΕΠΑΡΧΙΑ ΘΕΣΣΑΛΟΝΙΚΗΣ — PROVINCE DE SALONIQUE | | | | | | | | | | | |
| | Δήμου Θεσσαλονίκης : | | | | | | | | | | | |
| 1 | Ἐνορ. Ἁγ. Ἐλευθερίου Ντεπώ Α. Ἀνδρῶν | 1.000 | 770 | 367 | 367 | 113 | 113 | 253 | 253 | 28 | 9 | — |
| 2 | » » » » Β. » | 1.037 | 744 | 108 | 108 | 494 | 494 | 128 | 128 | 8 | 6 | — |
| 3 | » » » » Γ. » | 1.006 | 739 | 267 | 267 | 254 | 254 | 187 | 187 | 22 | 9 | — |
| 4 | » » » » Δ. Γυναικῶν | 1.152 | 791 | 325 | 325 | 243 | 243 | 191 | 191 | 24 | 8 | — |
| 5 | » » » » Ε. » | 909 | 665 | 239 | 239 | 217 | 217 | 187 | 187 | 17 | 5 | — |
| 6 | » Ἀναλήψεως Α. . . . . Ἀνδρῶν | 1.100 | 746 | 386 | 386 | 86 | 86 | 242 | 242 | 31 | 1 | — |
| 7 | » » Β . . . . . » | 1.092 | 740 | 378 | 378 | 95 | 95 | 227 | 227 | 35 | 5 | — |
| 8 | » » Γ . . . . . » | 970 | 688 | 93 | 93 | 440 | 440 | 145 | 145 | 3 | 7 | — |
| 9 | » » Δ . . . . . » | 960 | 781 | 281 | 281 | 288 | 288 | 198 | 198 | 9 | 5 | — |
| 10 | » » Ε . . . . . Γυναικῶν | 1.200 | 846 | 367 | 367 | 201 | 201 | 234 | 234 | 41 | 3 | — |
| 11 | » » ΣΤ . . . . . » | 1.604 | 1.082 | 441 | 441 | 314 | 314 | 277 | 277 | 42 | 8 | — |
| 12 | » Ὁσίας Ξένης Χαριλάου Α . Ἀνδρῶν | 863 | 655 | 276 | 276 | 121 | 121 | 233 | 233 | 16 | 9 | — |
| 13 | » » » » Β . » | 1.199 | 916 | 176 | 176 | 521 | 521 | 201 | 201 | 11 | 7 | — |
| 14 | » » » » Γ . Γυναικῶν | 1.348 | 997 | 299 | 299 | 339 | 339 | 317 | 317 | 37 | 5 | — |
| 15 | » Ἁγίας Βαρβάρας Τούμπας Α. Ἀνδρῶν | 996 | 778 | 169 | 169 | 355 | 355 | 241 | 241 | 10 | 3 | — |
| 16 | » » » » Β. Γυναικῶν | 820 | 675 | 199 | 199 | 291 | 291 | 169 | 169 | 9 | 7 | — |
| 17 | » Ἁγ. Θεράποντος Τούμπας Α. Ἀνδρῶν | 1.070 | 831 | 285 | 285 | 218 | 218 | 302 | 302 | 19 | 7 | — |
| 18 | » » » » Β. » | 1.000 | 835 | 58 | 58 | 631 | 631 | 139 | 139 | 4 | 3 | — |
| 19 | » » » » Γ. » | 738 | 587 | 102 | 102 | 342 | 342 | 131 | 131 | 12 | — | — |
| 20 | » » » » Δ. Γυναικῶν | 1.000 | 820 | 221 | 221 | 350 | 350 | 227 | 227 | 22 | — | — |
| 21 | » » » » Ε. » | 1.137 | 937 | 192 | 192 | 491 | 491 | 224 | 224 | 26 | 4 | — |
| 22 | » Ἁγ. Μαρίνης Ἄνω Τούμπας Α. Ἀνδρῶν | 747 | 600 | 180 | 180 | 235 | 235 | 175 | 175 | 5 | 5 | — |
| 23 | » » » » Β. » | 673 | 528 | 34 | 34 | 414 | 414 | 78 | 78 | 1 | 1 | — |
| 24 | » » » » Γ. Γυναικῶν | 1.017 | 829 | 187 | 187 | 427 | 427 | 202 | 202 | 10 | 3 | — |
| 25 | » Ἁγίου Φανουρίου Α. . . . . Ἀνδρῶν | 609 | 456 | 169 | 169 | 105 | 105 | 172 | 172 | 8 | 2 | — |
| 26 | » » » Β. . . . . » | 784 | 606 | 75 | 75 | 399 | 399 | 123 | 123 | 7 | 2 | — |
| 27 | » » » Γ . . . . . Γυναικῶν | 1.123 | 885 | 241 | 241 | 379 | 379 | 239 | 239 | 23 | 3 | — |
| 28 | » » Ἰωάν. Χρυσοστόμου Α. Ἀνδρῶν | 1.319 | 816 | 415 | 415 | 108 | 108 | 235 | 235 | 50 | 8 | — |
| 29 | » » » » Β. » | 1.371 | 918 | 225 | 225 | 475 | 475 | 191 | 191 | 23 | 4 | — |
| 30 | » » » » Γ. Γυναικῶν | 1.474 | 1.047 | 426 | 426 | 314 | 314 | 242 | 242 | 52 | 13 | — |
| 31 | » Ἁγίας Τριάδος Α . . . . . Ἀνδρῶν | 1.100 | 770 | 377 | 377 | 87 | 87 | 258 | 258 | 46 | 2 | — |
| 32 | » » » Β . . . . . » | 1.314 | 950 | 247 | 247 | 439 | 439 | 237 | 237 | 21 | 6 | — |
| 33 | » » » Γ . . . . . Γυναικῶν | 1.065 | 794 | 356 | 356 | 152 | 152 | 235 | 235 | 46 | 5 | — |
| 34 | » » » Δ . . . . . » | 644 | 502 | 181 | 181 | 170 | 170 | 116 | 116 | 32 | 3 | — |
| 35 | » Κομμ. Θεοτόκου 40 Ἐκκλησιῶν Μικτὸν | 1.109 | 827 | 258 | 258 | 261 | 264 | 281 | 281 | 20 | 4 | — |
| 36 | » Νέας Παναγίας Α . . . . . Ἀνδρῶν | 1.130 | 759 | 344 | 344 | 177 | 177 | 212 | 212 | 21 | 5 | — |
| 37 | » » » Β . . . . . Γυναικῶν | 803 | 530 | 266 | 266 | 83 | 83 | 157 | 157 | 21 | 3 | — |
| 38 | » Ἁγίου Κωνσταντίνου Α . . . . Ἀνδρῶν | 1.055 | 744 | 296 | 296 | 248 | 248 | 175 | 175 | 23 | 2 | — |
| 39 | » » » Β . . . . Γυναικῶν | 653 | 473 | 212 | 212 | 123 | 123 | 107 | 107 | 28 | 3 | — |
| 40 | » » Γρηγορίου Παλαμᾶ Α. Ἀνδρῶν | 1.000 | 668 | 371 | 371 | 58 | 58 | 213 | 213 | 19 | 7 | — |
| 41 | » » » » Β. » | 1.143 | 689 | 241 | 241 | 218 | 218 | 213 | 213 | 16 | 1 | — |
| 42 | » » » » Γ. Γυναικῶν | 1.179 | 849 | 432 | 432 | 128 | 128 | 249 | 249 | 40 | — | — |
| 43 | » Ἁγίας Σοφίας Α . . . . . Ἀνδρῶν | 1.050 | 714 | 400 | 400 | 53 | 53 | 230 | 230 | 26 | 5 | — |
| 44 | » » » Β . . . . . » | 1.045 | 631 | 367 | 367 | 55 | 55 | 183 | 183 | 21 | 5 | — |
| 45 | » » » Γ . . . . . » | 1.021 | 712 | 223 | 223 | 271 | 271 | 201 | 201 | 17 | — | — |
| 46 | » » » Δ . . . . . Γυναικῶν | 750 | 559 | 296 | 296 | 85 | 85 | 162 | 162 | 13 | 3 | — |
| 47 | » » » Ε . . . . . » | 1.080 | 772 | 357 | 357 | 146 | 146 | 244 | 244 | 16 | 9 | — |
| 48 | » Ἀχειροποιήτου Α . . . . . Ἀνδρῶν | 1.100 | 763 | 408 | 408 | 65 | 65 | 267 | 267 | 18 | 5 | — |
| 49 | » » Β . . . . . » | 1.041 | 928 | 260 | 260 | 476 | 476 | 175 | 175 | 14 | 3 | — |
| 50 | » » Γ . . . . . Γυναικῶν | 900 | 662 | 291 | 291 | 143 | 143 | 215 | 215 | 10 | 3 | — |
| 51 | » » Δ . . . . . » | 773 | 548 | 230 | 230 | 150 | 150 | 153 | 153 | 14 | 1 | — |
| 52 | » Παναγίας Χαλκέων Α . . . . . Ἀνδρῶν | 1.343 | 877 | 358 | 358 | 232 | 232 | 268 | 268 | 15 | 4 | — |
| 53 | » » » Β . . . . . Γυναικῶν | 742 | 500 | 228 | 228 | 103 | 103 | 146 | 146 | 20 | 3 | — |
| 54 | » Ὑπαπαντῆς Α . . . . . Ἀνδρῶν | 960 | 758 | 265 | 265 | 287 | 287 | 191 | 191 | 11 | 4 | — |
| 55 | » » Β . . . . . Γυναικῶν | 659 | 483 | 185 | 185 | 158 | 158 | 121 | 121 | 15 | 4 | — |
| 56 | » Παναγίας Δεξιᾶς Α . . . . . Ἀνδρῶν | 718 | 526 | 215 | 215 | 139 | 139 | 157 | 157 | 10 | 5 | — |
| 57 | » » » Β . . . . . » | 699 | 547 | 64 | 64 | 354 | 354 | 121 | 121 | 7 | 1 | — |
| 58 | » » » Γ . . . . . Γυναικῶν | 1.083 | 706 | 212 | 212 | 288 | 288 | 173 | 173 | 27 | 6 | — |
| 59 | » Παναγούδας Α . . . . . Ἀνδρῶν | 997 | 635 | 234 | 234 | 232 | 232 | 158 | 158 | 10 | 1 | — |
| 60 | » » Β . . . . . Γυναικῶν | 614 | 393 | 160 | 160 | 130 | 130 | 91 | 91 | 11 | 1 | — |
| 61 | » Λαοδηγητρίας Α . . . . . Ἀνδρῶν | 794 | 546 | 195 | 195 | 111 | 111 | 217 | 217 | 18 | 5 | — |
| 62 | » » Β . . . . . » | 898 | 689 | 104 | 104 | 420 | 420 | 153 | 153 | 7 | 5 | — |
| 63 | » » Γ . . . . . Γυναικῶν | 1.133 | 828 | 261 | 261 | 287 | 287 | 253 | 253 | 20 | 7 | — |
| 64 | » Ταξιαρχῶν Α . . . . . Ἀνδρῶν | 1.236 | 967 | 289 | 289 | 336 | 336 | 305 | 305 | 28 | 9 | — |
| 65 | » » Β . . . . . » | 1.148 | 875 | 80 | 80 | 627 | 627 | 160 | 160 | 4 | 4 | — |
| 66 | » » Γ . . . . . Γυναικῶν | 900 | 731 | 187 | 187 | 293 | 293 | 215 | 215 | 28 | 8 | — |
| 67 | » » Δ . . . . . » | 694 | 518 | 141 | 141 | 252 | 252 | 108 | 108 | 18 | 4 | — |
| 68 | » Ἁγ. Ἀναργ. Ἑπταπυργίου Α. Ἀνδρῶν | 1.160 | 598 | 154 | 154 | 233 | 233 | 197 | 197 | 8 | 6 | — |
| 69 | » » » » Β. » | 733 | 531 | 37 | 37 | 383 | 383 | 105 | 105 | 3 | 3 | — |
| 70 | » » » » Γ. Γυναικῶν | 1.557 | 812 | 130 | 130 | 428 | 428 | 239 | 239 | 11 | 4 | — |
| 71 | » Προφήτου Ἠλιοῦ Α . . . . . Ἀνδρῶν | 1.000 | 749 | 276 | 276 | 118 | 118 | 336 | 336 | 14 | 5 | — |
| 72 | » » » Β . . . . . » | 1.282 | 1.011 | 212 | 212 | 493 | 493 | 290 | 290 | 10 | 5 | 1 |
| 73 | » » » Γ . . . . . » | 1.021 | 780 | 44 | 44 | 591 | 591 | 136 | 136 | 4 | 5 | — |
| 74 | » » » Δ . . . . . Γυναικῶν | 1.200 | 905 | 242 | 242 | 359 | 359 | 272 | 272 | 20 | 12 | — |
| 75 | » » » Ε . . . . . » | 1.069 | 797 | 203 | 203 | 382 | 382 | 193 | 193 | 16 | 3 | — |

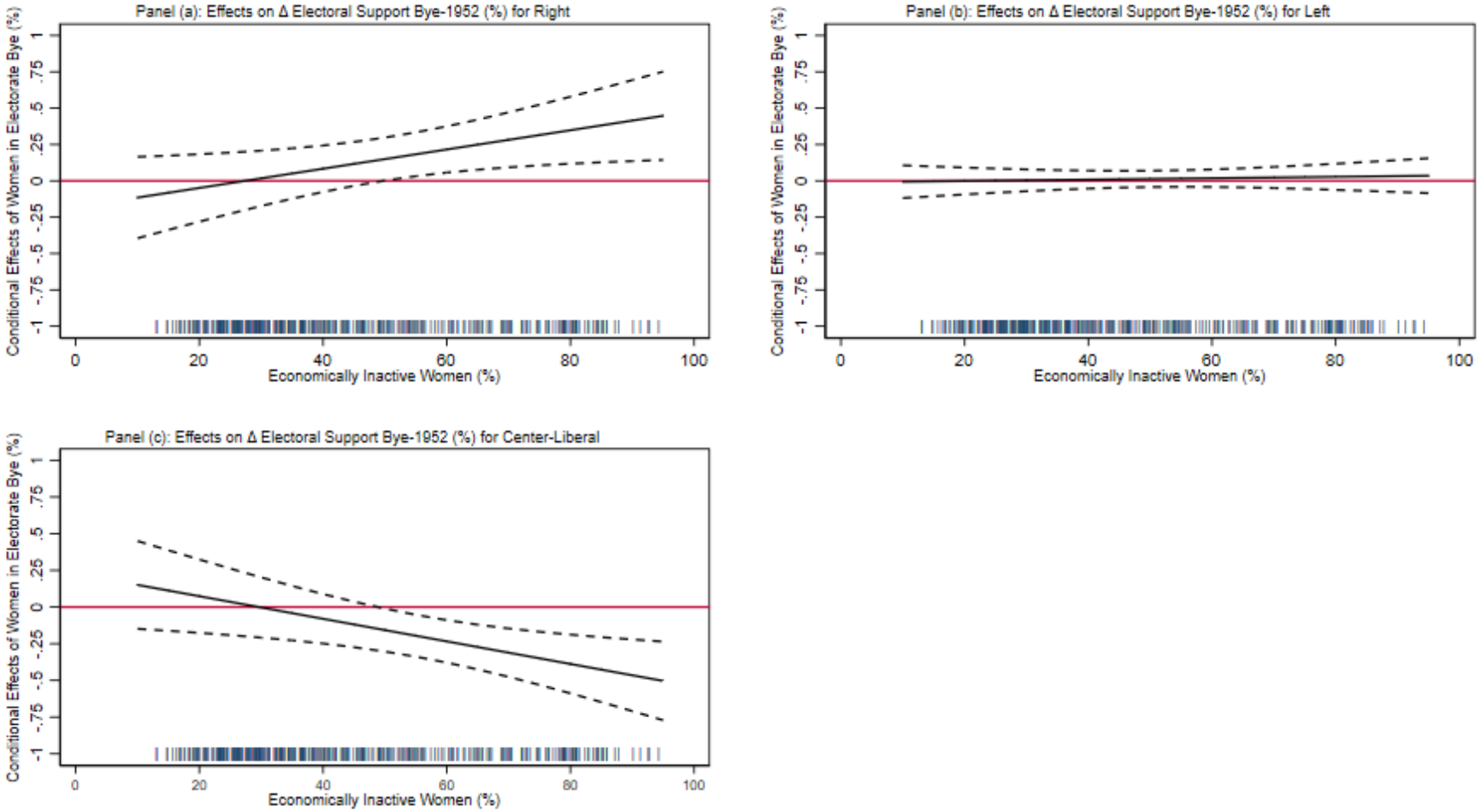
**Notes:** From the left to the right the Table reports the name of the polling station (i.e., Εκλογικά τμήματα), the number of registered voters (i.e., Εγγεγραμμένοι εκλογείς), the number of valid votes (i.e., Έγκυρα ψηφοδέλτια), and party votes (i.e., Ψηφοδέλτια του συνδυασμού). Source: Ministry of Interior.

**Figure B2: Robustness tests for results in Figure 2 - controlling for province FEs**



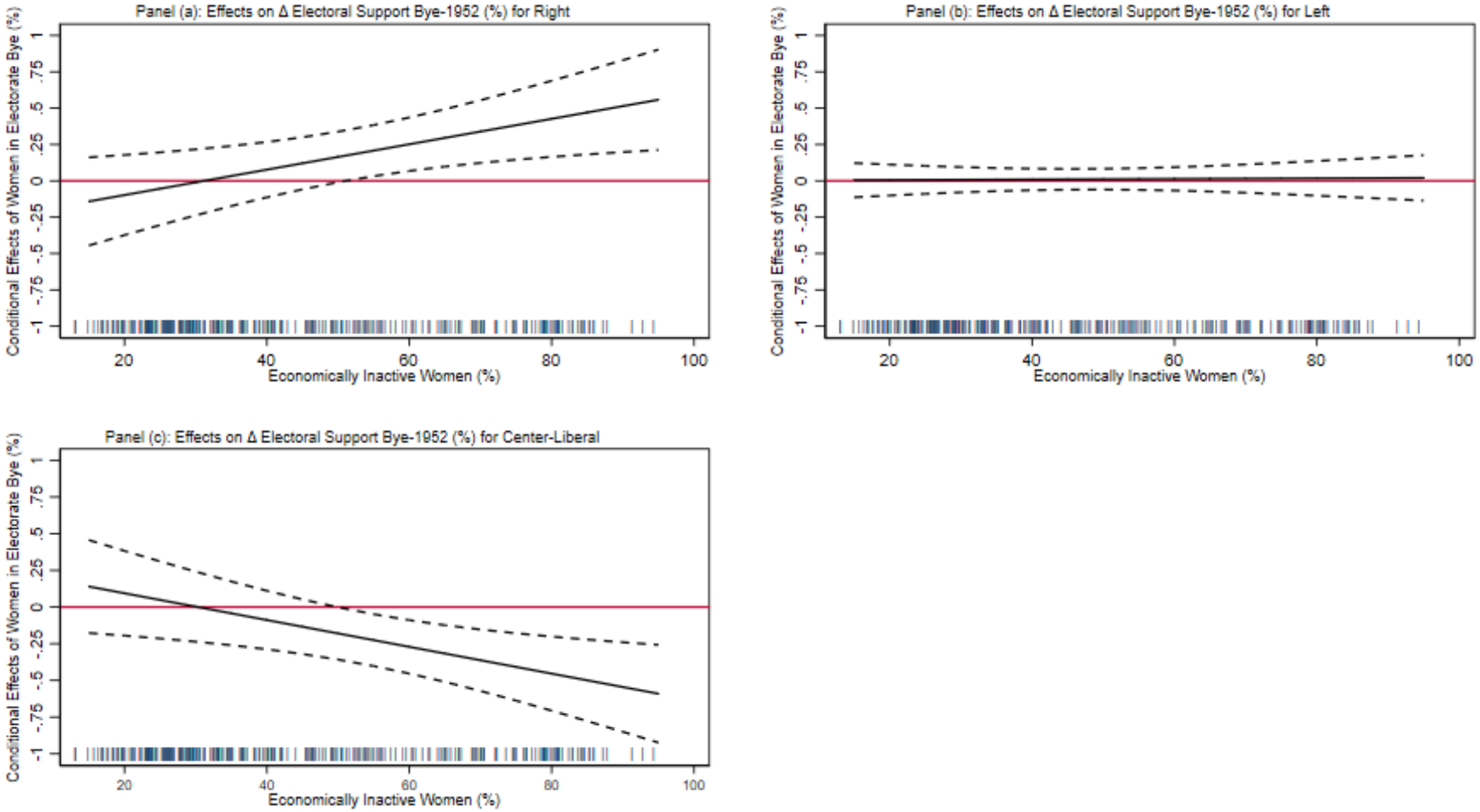

**Notes:** This graph shows the conditional effects of women's suffrage on the change in electoral support for right, left and center-liberal parties at different values of economically inactive women in All Prefectures; The conditional effects are calculated based on the specifications (4), (8) and (12) of Table 8; Regressions include province fixed effects, instead of prefecture fixed effects; All other covariates are held constant at their means; Dashed lines signify 90% confidence intervals; Rug plot at horizontal axis illustrates distribution of economically inactive women in All Prefectures; Red horizontal line marks marginal effect of 0.

**Figure B3: Robustness tests for results in Figure 2 - using the largest parties**



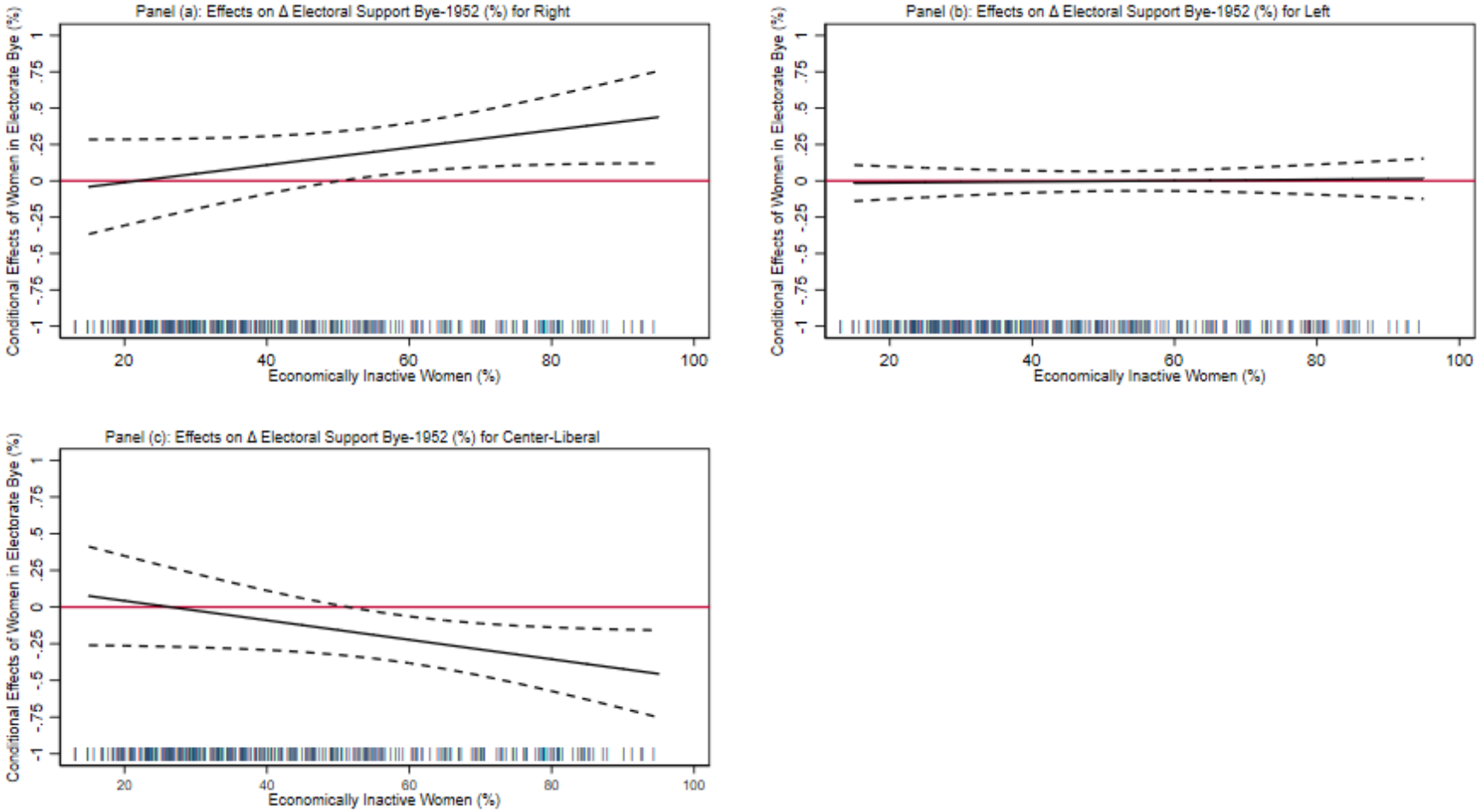

**Notes:** This graph shows the conditional effects of women's suffrage on the change in electoral support for right, left and center-liberal parties at different values of economically inactive women in All Prefectures; The conditional effects are calculated based on the specifications (4), (8) and (12) of Table 8; 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 economically inactive women in All Prefectures; Red horizontal line marks marginal effect of 0.

**Figure B4: Robustness tests for results in Figure 2 - excluding prefectures with cancellation as the reason for the by-elections**



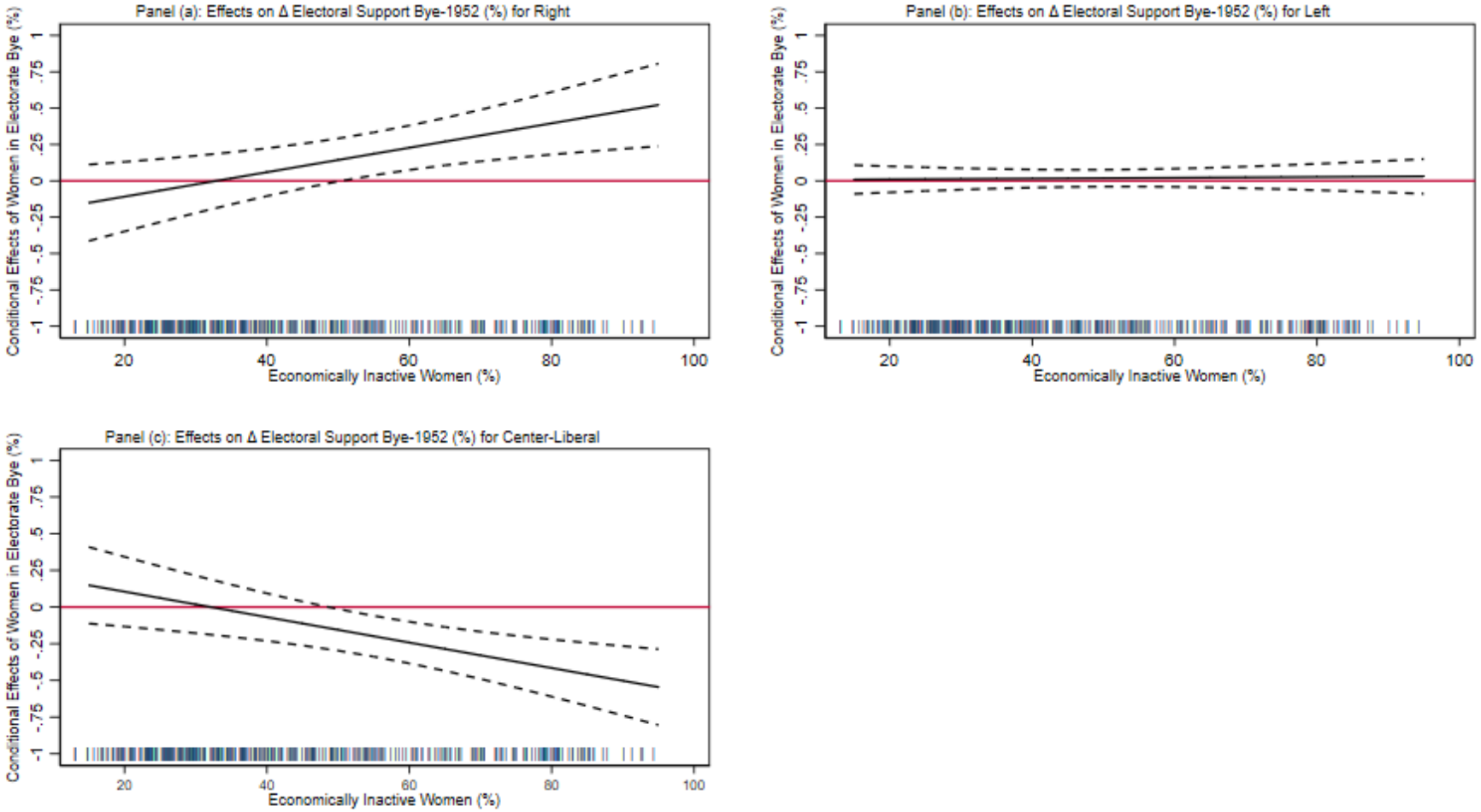

**Notes:** This graph shows the conditional effects of women's suffrage on the change in electoral support for right, left and center-liberal parties at different values of economically inactive women in All Prefectures; The conditional effects are calculated based on the specifications (4), (8) and (12) of Table 8; 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 economically inactive women in All Prefectures; Red horizontal line marks marginal effect of 0.

**Figure B5: Robustness tests for results in Figure 2 - excluding communities with large population changes between 1951 and 1961**



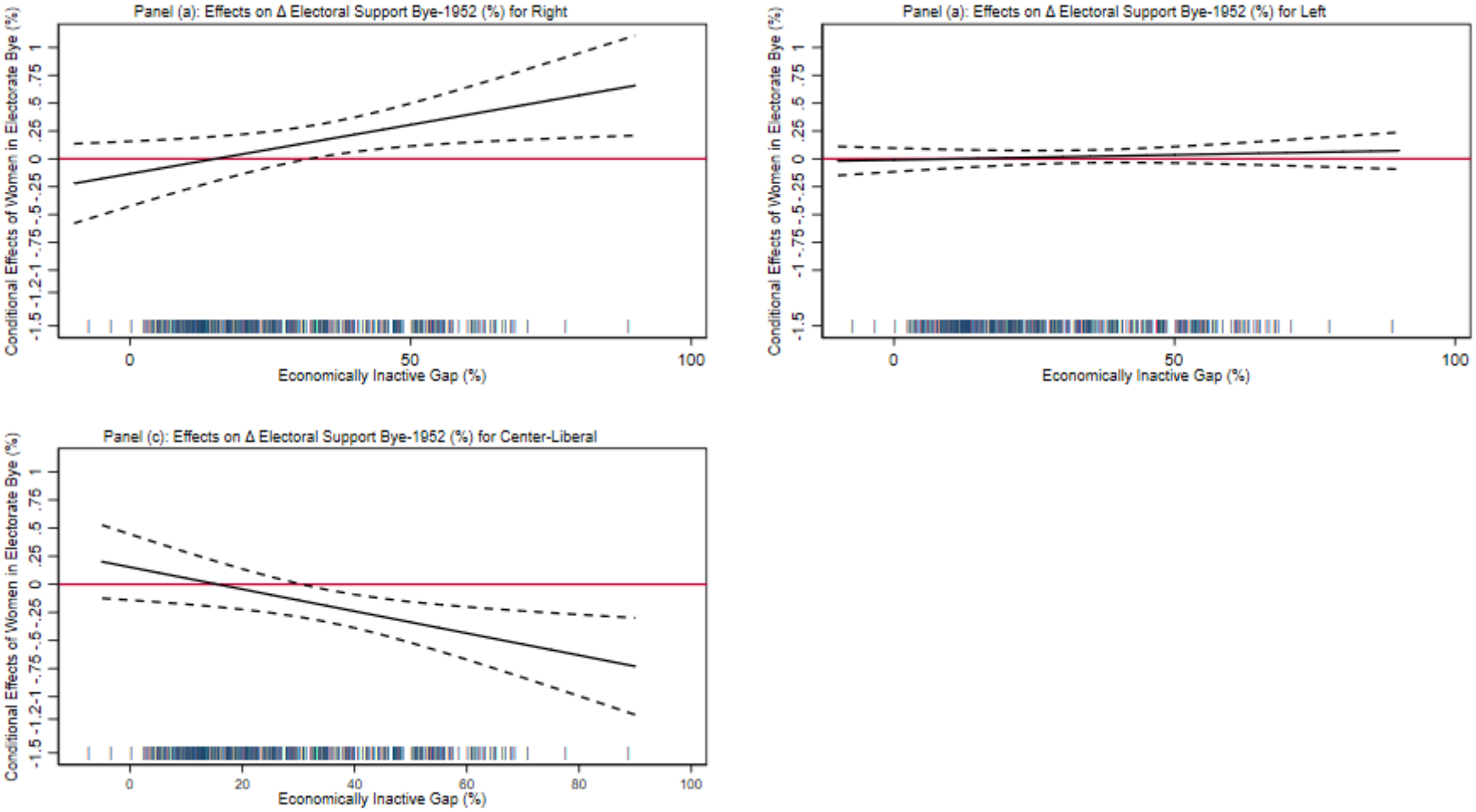

**Notes:** This graph shows the conditional effects of women's suffrage on the change in electoral support for right, left and center-liberal parties at different values of economically inactive women in All Prefectures; The conditional effects are calculated based on the specifications (4), (8) and (12) of Table 8; Regressions exclude communities with a population growth rate between 1951 and 1961 of less than -25% or more than 25%; All other covariates are held constant at their means; Dashed lines signify 90% confidence intervals; Rug plot at horizontal axis illustrates distribution of economically inactive women in All Prefectures; Red horizontal line marks marginal effect of 0.

**Figure B6: Robustness tests for results in Figure 2 - controlling for other characteristics of the female population**




**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 economically inactive women in All Prefectures; The conditional effects are calculated based on the specifications (4), (8) and (12) of Table 8; Regressions include two additional control variables: the proportion of unmarried women and the proportion of illiterate women; All other covariates are held constant at their means; Dashed lines signify 90% confidence intervals; Rug plot at horizontal axis illustrates distribution of economically inactive women in All Prefectures; Red horizontal line marks marginal effect of 0.

**Figure B7: Robustness tests for results in Figure 2 - interactive relationship with economically inactive gap**




**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 econ. inactive gap in All Prefectures; The conditional effects are calculated based on the specifications (4), (8) and (12) of Table 8; All other covariates are held constant at their means; Dashed lines signify 90% confidence intervals; Rug plot at horizontal axis illustrates distribution of economically inactive gap in All Prefectures; Red horizontal line marks marginal effect of 0.

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