

# The Changing Gender Gap(s) in Voting: An Occupational Realignment

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## *Abstract*

In a dramatic reversal from five decades ago, in most Western democracies today, women support left-leaning parties at higher rates than men. We explain this change on the left by focusing on men's vote. We contend that occupational vulnerability to immigration led manual workers, most of whom are men, to abandon the mainstream left and support the radical right at disproportionately high rates. Furthermore, this effect is contingent on economic positions of parties both on the left and the radical right. Drawing on public opinion data from 18 countries over a 46-year period, labor data on skills required in different sectors, and party positions, we conduct both aggregate and individual-level analyses. We find that realignment of the vote along occupational lines in a gender-segregated labor market is at the heart of the change in the gender gap in voting.

**Keywords:** gender gap, voter behavior, left, radical right, occupational vulnerability.

**Word count:** 11,907

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## 1. Introduction

In recent years, women have become a well-defined constituency in advanced industrialized democracies. In Europe, women support left-leaning and progressive parties at higher rates than men (e.g., Iversen and Rosenbluth 2006), and similarly, in the US, women's positions on issues are more progressive and their partisanship is more heavily Democratic than that of men (e.g., Edlund and Pande 2002). This tendency is so broadly evident that it is often reified. Yet up until the 1990s, the opposite was the case: these were men who tended to support the left at higher rates (see, e.g., Giger 2009). And while ample evidence suggests that women drifted to the left overtime (e.g., Box-Steffensmeier et al. 2004), studies also suggest that social democratic parties have suffered decline in mass support (e.g., Benedetto et al. 2020).

We investigate this change in the gender gap in support for the left in the context of European multi-party systems. In particular, we reconcile the tension between the two trends by analyzing this regularity with special focus on change in men's vote. While we analyze the change in the gender gap in voting for all party families, most pertinent to our study is the radical right (hereafter RR) which enjoyed dramatic increase in electoral fortunes in recent decades. Jointly analyzing the gender gap for the left and voting patterns for the radical right – two phenomena extensively studied on their own – allows us to reach new insights.

We contend that occupational vulnerability to immigration and trade is a driving force to this change, and that the livelihood of those working in jobs that require manual rather than communication skill dexterity – most of whom are men – is particularly in peril. These workers shift their support from the mainstream left to the RR that presents itself as a guardian to dislocated interests of manual workers. Additionally, we hold that these effects are contingent on the economic positions endorsed by the left and the RR. Where the left

holds on to its traditional values, greater male domination of the manual labor market will be associated with greater support for the left by men. This is not the case, however, where the left and the RR each gravitate toward the center. Our puzzle of the realignment of the vote along gender lines is therefore answered by an occupational realignment that takes place in a gender-segregated labor market.

We utilize public opinion data in 18 democracies over a 46-year period (the Eurobarometer and European Social Survey between 1970-2002 and 2002-2016, respectively), along with labor data about skills relevant for different jobs, and party placement data (the Chapel Hill Expert Survey). To the best of our knowledge, this analysis of the electoral gender gap is the most extensive in scope undertaken to date. Our analysis is three pronged. We first establish a bird's eye view of aggregate trends of the gender gaps and their relationships, highlighting voting trends of manual workers. We next conduct individual-level analysis, focusing on the effect of skills. Lastly, we revisit the gender gap and focus on the combined effect of gender-segregation of the labor market and party placements. Our results support our hypotheses.

The paper proceeds as follows. The next section reviews accounts of the gender gap on the left and on the RR. The following section develops our hypotheses. The empirical analysis is presented in Section 4. The final section concludes.

## **2. The gender gap(s): Accounts and questions left**

### **2.1 Change over time**

Students of both gender and electoral politics have long established two stylized facts with respect to the gender gap in political attitudes as well as in voting. First, compared with men, women in Western democracies support progressive policies and vote for left-leaning

parties at higher rates ('the modern gender gap', e.g., Dassonneville 2021; Iversen and Rosenbluth 2006; Shorrocks 2018). Second, about five decades ago, in the 1970s, the gender gap in voting was in the opposite direction. Men were the ones to support left-leaning parties at higher rates, while women tended to support conservative parties ('the traditional gender gap'). A secular trend in the gender gap led to the narrowing of the traditional gap and in most countries to its reversal (e.g., Giger 2009, Inglehart and Norris 2000).

Studies of the electoral gender gap ascribe the drift of women to the left to one of two (related) sets of factors. The first is structural and holds that women's interests have changed along with the rise in female participation in the labor force (e.g., Manza and Brooks 1998), their employment in the public sector (e.g., Box-Steffensmeier et al. 2004), and changes in the family structure due to the possibility of divorce (e.g., Iversen and Rosenbluth 2006). The second examines how changes in values and political culture bring about change in political behavior (see, e.g., Inglehart and Norris's (2000) theory of a rise in post-material values, and Greenberg (2001) on the effect of secularization).

While scholars are in agreement that women secularly drifted to the left overtime, it is not the case that the left has been secularly gaining support overtime. In fact, alternation of power between left-leaning and right-leaning parties and even decline in support for the left overtime have been a commonplace (see, e.g., Benedetto et al. 2020, Rennwald and Pontusson 2021). It is possible, therefore, that alongside the shift of women to the left there has been a shift of men away from the left. To the best of our knowledge, however, few studies analyzing the gender gap focus on men's voting behavior, and those that do, study it in the context of the US two-party system (see Norrander 1999 for analysis of men's vote in the South and Kaufmann and Petrocik 1999 for analysis of salience men and women assign to different considerations).

## 2.2 The gender gap in support for the radical right

Perhaps the most dramatic phenomenon in mass behavior in Europe in the past several decades has been the rise of the RR. Taking different ideological forms (e.g., neo-fascist, populist) and focusing on both domestic policy of immigration and foreign policy vis-a-vis the European Union, RR parties have acquired high levels of support and have gradually infiltrated mainstream politics.

Analyses of support for the RR have found that it enjoys support of men more than that of women (Akkerman and Hagelund 2007, Givens 2005, Harteveld and Ivarsflaten 2018, Van der Brug and Fennema 2007). Studies offer different accounts for this regularity. According to some, the hierarchical and usually male-dominated structure of RR parties tends to attract more male supporters than female ones (Kitschelt and McGann 1997). An additional explanation focuses on the antifeminist agenda promoted by many RR parties (Campbell and Erzeel 2018). Yet another explanation highlights the fact that often women do not differ from men in relevant policy positions (e.g., immigration) but they possess a stronger need to control prejudice which in turn hinders their tendency to support the RR (Harteveld and Ivarsflaten 2018). Relatedly, Harteveld et al. (2019) show that women are less likely than men to vote for small, extreme or socially stigmatized parties. Lastly, the ethics of caring, including sympathy for the disadvantaged catalyzed by feminist consciousness (Conover 1988) may pull women away from RR parties.

A general analysis of the rise in support for the RR which draws both on voters defecting from other parties and mobilization of otherwise alienated abstainers is not within the scope of our analysis. Importantly, our goal is not to adjudicate between key explanations for the general rise in support for the RR, most notably culturalist theories and interest based/structuralist ones. In fact, our empirical analysis below incorporates elements from

both these approaches. The discussion that follows focuses on explanations that are directly relevant to analyzing *the gender gap* in support for the RR, and as we will show, assist in understanding the change in the *gender gap* in support for the left.

The culturalist approach focuses on symbols, values, and identity as predictors of support for the RR in general and anti-immigrant sentiments in particular. In a comparative study of European democracies, Sides and Citrin (2007) find that individuals' attitudes toward immigration are affected by national identity and in particular preference for cultural homogeneity. More generally, in their analytic review, Hainmueller and Hopkins (2014) contend that attitudes on immigration can be systematically explained by cultural sentiments rather than economic interests. Another strand of this literature argues that supporters of RR parties often feel that traditional values have been abandoned in current post-materialist cosmopolitan culture (Inglehart and Norris 2017).

The interest-based approach emphasizes the economic interests of native workers in shaping attitudes. In the US, low-skilled workers were found to support restrictions on immigration more than their high-skill counterparts (Scheve and Slaughter 2001, though see Hainmueller et al. 2015 for different results). This relationship, they show, holds regardless of immigration to the community. In the European context, studies show that individuals employed in shrinking sectors are more likely to oppose immigration than those employed in growing sectors (Dancygier and Donnelly 2013), and relatedly, occupations with few exit options and low skill transferability are more sensitive to potential competition with migrants (Pardos-Prado and Xena 2019). Ortega and Polavieja (2012) find that the degree of manual skill dexterity required in a native worker's occupation is positively correlated with anti-immigrant sentiments, and holding a job that requires high human capital is positively correlated with pro-immigrant attitudes (see also Polavieja 2016). According to some within this strand of research, anti-immigrant sentiments promoted by RR parties are framed to

appeal to those who have lost out due to globalization, usually blue-collar male workers whose jobs have been put at risk by the influx of manual immigrant workers (Givens 2005, Jackman and Volpert 1996).

### **3. Putting the two together: the electoral gender gap(s) in a changing party system**

The observed reversal of the gender gap on the left, along with the rise in support for the RR which is disproportionately championed by male voters calls for an examination of the two gender gaps as potentially linked. How does the change in voting behavior of men contribute to the change in the gender gap on the left?

#### **3.1. Occupational vulnerability**

Students of political economy have highlighted the importance of identifying the advantaged and disadvantaged in the labor market. Depending on focus, studies differ in both aspects of one's disadvantage they identify and their operationalization. One such example is Rueda's (2005) conceptualization, which focuses on materialized hardship in individuals' current labor market status and defines outsiders as those who are either unemployed or hold low salary jobs. Another is Häusermann and Schwander's (2011), which conceptualize outsiders as belonging to an occupational group that has above-average rates of unemployment.

Inspired by this framework and adapting it to the question at hand, we focus on occupational vulnerability of workers to immigration and trade in particular. Individuals working in sectors that require manual rather than communication skills are vulnerable to both competition with immigrant workers who possess manual skills and offshoring of their jobs due to trade. Language and communication skills, on the other hand, often serve as a

security fence for native workers and present a labor-market barrier for immigrants.<sup>1</sup> We can thus think of manual vs. communication skills as indicators of occupational uncertainty at times of rapid globalization, trade and immigration, whereby the more (less) manual (communication) skill dexterity one's job requires, the more occupationally vulnerable one is.<sup>2</sup>

We classify workers by the skill dexterity required in the sector they work in and hence, we contend, the potential threat to their livelihood posed by immigration or trade. Manual workers might look for ways to offset that risk by supporting a party that explicitly promotes anti-immigrant rhetoric, opposes trade and presents itself as a fighter against these “external” threats. This approach allows us to capture a worker's vulnerability in the face of current *and* potential future shocks to the labor market. This logic resonates with recent work on the importance of economic risk in shaping policy preferences and political behavior (Rehm 2016). In particular, we hypothesize that:

**H1a.** Individuals working in sectors that require high manual skill dexterity are more likely to support the RR compared to their counterparts working in sectors that do not require a high level of manual skills.

**H1b.** Individuals working in sectors that require high communication skill dexterity are less likely to support the RR compared to their counterparts working in sectors that do not require a high level of communication skills.

While our first set of hypotheses focuses on the individual-level and links occupational vulnerability and vote choice, we now turn to contextualize it. Our next step

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<sup>1</sup> This is consistent with Peri and Sparber's (2011) finding of limited substitutability between highly educated immigrants and native workers.

<sup>2</sup> Note that while the two strongly correlate ( $r=0.79$ ,  $p<.0001$ ), manual skills are different from routine skills, a predictor of job vulnerability vis-a-vis automation (e.g., Kurer 2020, Thewissen and Rueda 2019).



specifies how positions of parties on the left and the RR interact with labor market characteristics to affect the gender gap.

### **3.2 Political context: The gender gap, parties and labor markets**

We contend that, under certain conditions, manual workers will be more likely to abandon the left, and given that more men than women work in manual jobs, this will in turn affect the gender gap on the left. We focus on two factors: the degree to which the manual labor market is gender segregated, and the economic position of the mainstream left and the RR.

Although a coherent party family, some social democratic parties persistently promote traditional social democratic macro-economic policies, while others have pursued centrist policies and third-way solutions or have shifted their efforts to other domains such as identity. The policy supported by the mainstream left, we propose, is relevant for vote shifting of manual workers. Where the mainstream left takes decidedly leftist positions, a greater number of men in position of occupational vulnerability will be associated with a greater number of men supporting the left, and thus the gender gap will be larger. Conversely, where mainstream left parties take centrist policy positions, greater male domination of the manual labor market will be associated with a smaller gender gap – i.e., with fewer men than women who support the left. This relationship will be observed where the RR has secured at least a single seat in parliament in the elections preceding the survey and is thus arguably a viable alternative for voters, but not otherwise. Under the latter, neither the economic position of the mainstream left nor the gender segregation of the manual labor market will be associated with a particular change of the gender gap in support for the left. Therefore, where the RR is a viable alternative:

**H2.** where mainstream left parties pursue leftist (centrist) economic positions, greater male

domination of manual sectors will be associated with a larger (smaller) gender gap on the left.

In conjunction with changes in policies pursued by the mainstream left that may serve as push factors for some of its constituencies, RR parties might play a role in pulling voters in their direction. While most RR parties pursue anti-immigrant rhetoric and claim to guard workers' dislocated interests, some endorse decidedly laissez faire economic policies while others support state intervention in the economy (Mudde 2007). Indeed, in a study of ten RR European parties, Hartevelde (2016) finds that those endorsing redistribution tend to win the support of pro-welfare nativists, a group of voters often embedded in working class roots. Additionally, upper middle-class voters (measured in subjective terms) tend to support RR parties that hold pro-market economic positions. We therefore expect *the combination* of positions of the two parties to play a role in encouraging or discouraging voters to shift their support. When both the left and the RR take distinctly different positions, it is harder for voters to shift their support. When their respective positions are closer to the center, however, the combination of push and pull factors might make it easier for occupationally vulnerable (male) voters to shift their support. Combined with gender-segregation of manual sectors, we thus hypothesize that:

**H3.** where the mainstream left and the RR pursue relatively similar (different) economic positions, greater male domination of manual sectors will be associated with a smaller (greater) gender gap.

In the next section we empirically examine these hypotheses.

#### **4. Empirical strategy: The gender gap on the left and on the radical right**

Our starting point (which we establish empirically below) is that the gender gap on the left in Europe has secularly changed from a traditional gap to a modern gap such that to

date, women support left leaning parties at higher rates than men (Giger 2009). The study of large overtime drifts in voter behavior in a multiparty system poses challenges not present in the two-party context. Many potential drifts may take place simultaneously, making it difficult to empirically isolate the realignment of a particular group. While due to data limitations we are unable to trace individual votes and follow them over decades ‘wherever they went’, in the below three-pronged empirical analysis, we show that as a group, men holding manual jobs realigned compared to the general population.

We begin with a broad-brush analysis of a 46-year aggregate trends in a cross-section of countries. We focus on the gender gap on the left and the RR – the party families most pertinent to our argument – as well as the rate of support for the two among male and female manual workers (Sections 5.1-5.2). Informed by these analyses, in the second part we shift to an individual-level analysis of support for the RR drawing on ESS data (2002-2016), highlighting the effect of gender and skill (Section 5.3). Thirdly, we contextualize our findings in the first two sections, analyzing the contingency of the gender gap on the gender segregation of the manual labor market and the economic positions of mainstream left and RR parties (Section 5.4). We further complement these analyses by examining other party families (Section 5.5).

#### **4.1. Data and measurement**

**Public opinion and vote choice.** To conduct our analysis, we draw on several sources of data. For public opinion data, we utilize Eurobarometer (hereafter EB) data between 1970-2002 as well as eight waves of the European Social Survey (hereafter ESS) between 2002-2016, providing us public opinion data from forty-six years altogether. The former includes five countries from 1970 and quickly turns into nine in 1973, and then gradually grows in scope as more countries join the EU, reaching respondents from sixteen countries in the 2002

wave and a total of 339 country/year samples, while the latter includes eighteen countries in all waves with a total of 119 country/year samples (for details regarding the countries sampled in each wave see Appendix A).<sup>3</sup>

To evaluate the gender gap, we first sorted parties that obtained at least a single parliamentary seat in the elections immediately following the survey into party families. To do so, we pooled four classifications of party families: (i) Armingeon et al. (2009), (ii) Laver et al.(2011), (iii) Norris (2005) (the latter classifies RR parties only), and (iv) the ParlGov data set (Döring and Manow 2016). While the first three sources usually cover the period of 1970-2002, the classifications by ParlGov and Laver et al. cover most of our data between 2002-2016 (for further details on party classification and for the RR and left parties included in the analyses see Appendix B).

Having sorted parties to families, we proceeded to focus on two party families: the left and the RR. The left includes socialist, social democratic, and left-socialist parties. The RR includes RR, populist, protest, far right, and neo-fascist parties. We then coded each respondent's vote choice employing dummy variables that correspond with these two families (with a total of 223,858 positive scores for the left and 18,218 positive scores for the RR). We calculated vote-shares of the two party families for each country/year. Finally, and consistent with previous studies, we defined the gender gap for every party family as the proportion of men supporting a particular party family minus the proportion of women supporting that same party family.<sup>4</sup>

**Skills.** For our analysis of occupational vulnerability of native workers in the face of competition with immigrant workers, we utilize information about the degree to which

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<sup>3</sup> Note that vote choice is not asked in the Eurobarometer as of 2002.

<sup>4</sup> Throughout our analysis, we screen for self-reported turnout in the last elections.

different occupations require manual or communication skills. To do so, we classify each sector (first digit of ISCO code in our ESS data) by the degree to which it relies on manual or communication skills. This is done by utilizing and adapting D'Amuri and Peri (2014) categorization of O\*NET characterization of occupations. We also adapt EB occupational categorization and match it with the appropriate ESS category (see Appendix C for detailed description). Thus, sectors requiring tasks such as oral comprehension, oral expression, speech clarity, written comprehension and written expression score high on communication skills while those requiring wrist-finger speed and trunk strength score high on manual skills.

**Economic positions of parties.** To measure economic positions of left and RR parties, we utilize the Chapel Hill Expert Survey (CHES) data (2002, 2006, 2010 and 2014). The economic left-right item runs from 0 to 10, where parties on the lower end of the scale 'want government to play an active role in the economy' and those on the upper end 'emphasize reduced economic role for government: privatization, lower taxes, less regulation, less government spending, and a leaner welfare state' (Bakker et al. 2014). The 2010 wave was cross-validated with alternative sources of party positioning information by Bakker and his colleagues, who conclude that 'party experts in Europe view the left/right economic dimension of party competition in largely the same way across countries' (2014: 1100). Scores range from 1.5 to 5 on the left and 4 to just above 8 for the RR.

**Gender segregation of the manual labor market.** To measure gender segregation of manual sectors we subtracted the number of women working in the three most manual sectors from the number of men in them and divided the difference by the total number of manual workers (ESS 2002-2016). Theoretically, it varies from -1 (perfect female domination) to +1 (perfect male domination), with 0 representing a perfectly even distribution. Empirically, all manual sectors in our data were found to be male dominated (Portugal 2012 and 2016 are exceptions with scores of -0.14 and -0.08, respectively), with Sweden (2008) scoring the

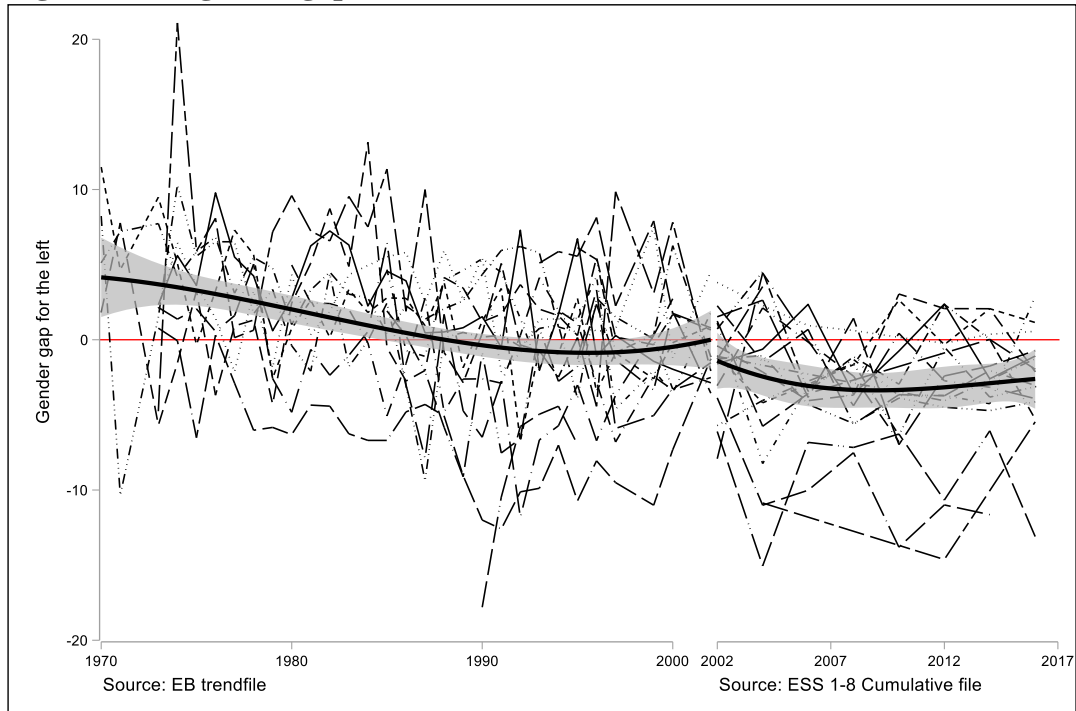
highest (0.62), indicating that four in five employees in manual sectors are men.

## **5 Empirical analysis**

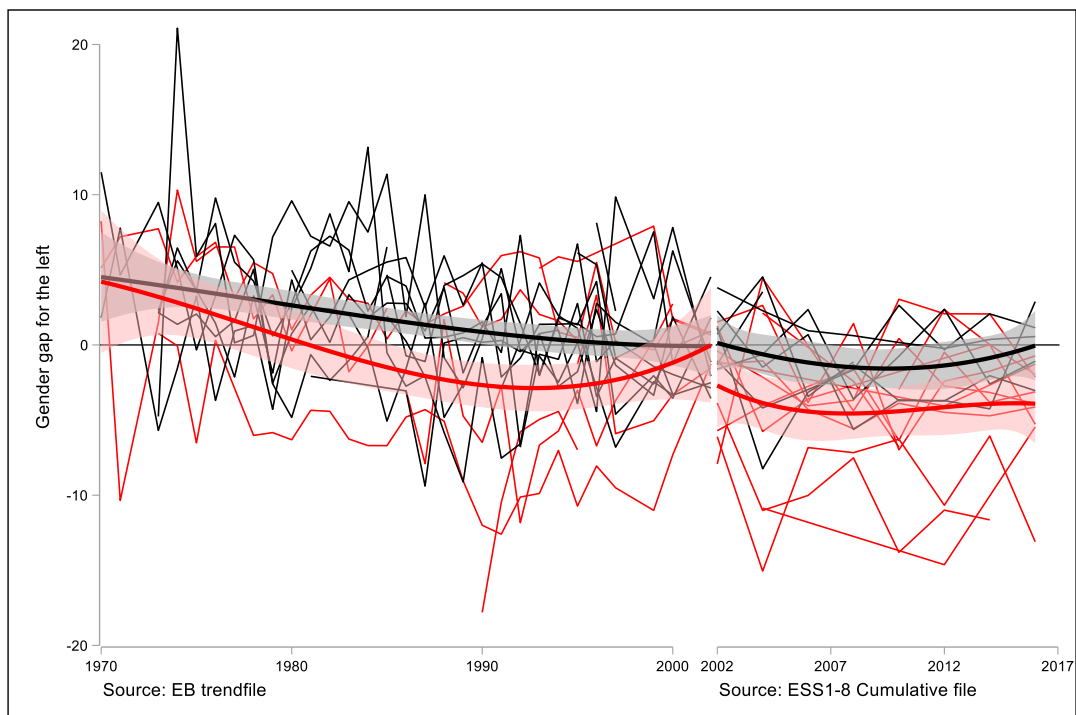
### **5.1 Gender gaps: aggregate trends**

We begin our empirical investigation with an examination of the gender gap overtime. Figure 1a presents the trend of the gender gap for the left over time. The combination of the EB survey (twice/thrice per year and collapsed to an annual dataset, 1970-2002) and ESS (biennially, 2002-2016) allows for a forty-six year trend with five to sixteen and eighteen Western European countries surveyed at any single point, respectively. The figure presents the gender gap for the left party family on the vertical axis such that a positive gap indicates that men support the left at a higher rate than women do (traditional gap). The aggregate trend depicted in the figure shows a secular trend from a traditional gap to a modern one whereby women support left-leaning parties at higher rates than men do. Cross-country variation in pace of change notwithstanding, with the exception of Spain, all countries exhibit a trend in the same direction (see Giger 2009 for similar findings) and by the mid 1990's an overwhelming majority of countries exhibit a modern gender gap. Having established this trend, we shift now to examining the gender gap for the RR.

**Figure 1. The gender gap on the left: 1970-2016**



(a)



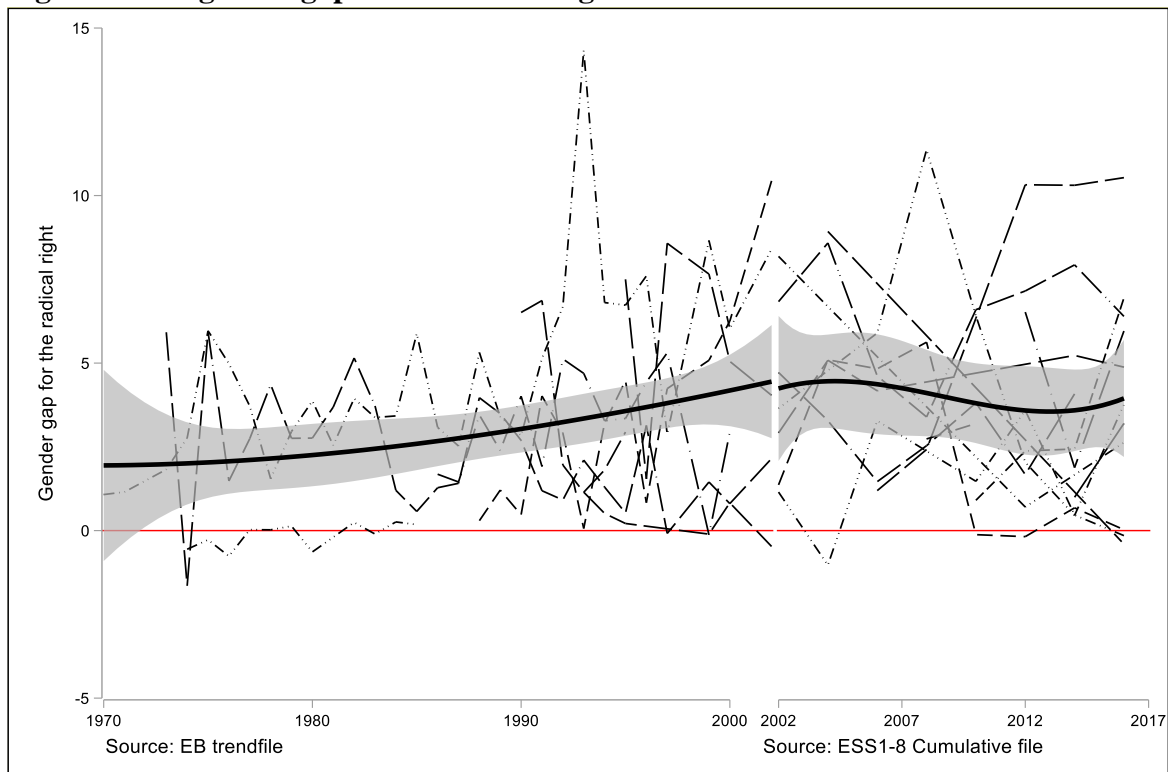
(b)

*Note.* Parties included in the left party family are: socialist, social democratic, left-socialist.

See Appendix B for more information about party classifications. Trendline is a polynomial regression of the gender gap on year, weighted by country. In panel (b), country-years in red are those where radical right parties attained at least a single parliamentary seat.

Figure 2 presents the gender gap for the RR across countries and over time (1970-2016). On the vertical axis is the gap for the RR party family. Here, too, a positive gap implies that men support the RR at a higher rate than women do. The aggregate trend reflected in the data indicates a clear pattern whereby men are consistently more likely to support RR parties than women.

**Figure 2. The gender gap on the radical right: 1970-2012**



*Note.* Parties included in the radical right party family are: radical right, ultra-right, populist, protest, far right, and neo-fascist parties. See Appendix B for more information about party classifications.



A first step toward analyzing the link between the two gender gaps is comparing the gender gap for the left at the presence and absence of RR. Our expectation is that the gender gap on the left will be smaller (“more modern”) in contexts in which RR parties gained presence in parliament.

In Figure 1b we return to the gender gap on the left presented in Figure 1a but split the data into two sets of country-years: those in which the RR did not acquire a seat in parliament (in black, aggregate and country-specific trendlines) and those in which it acquired at least a single seat (in red). This admittedly crude dichotomization presents a clear descriptive difference in voting behavior on the left between the two sets of cases. In contexts where RR parties are strong enough to gain a parliamentary seat, the gender gap on the left is smaller (“more modern”) and it flips signs (from traditional to modern) more than a decade earlier. In other words, in the former fewer men (or more women) support the left compared to the latter.

The analysis so far exhibits two broad-brush findings. First, the gender gap on the left changes overtime, and where the RR is present it is more ‘modern’, and second, there is a gender gap in the opposite direction in support for the RR. These merely descriptive empirical pieces, along with theories of support for RR and anti-immigrant sentiments suggest that there is possibly a link between the gender gap on the left and support for the RR.

## **5.2. Manual workers: aggregate trends**

Recall that our argument holds that (a) occupational vulnerability due to immigration and trade in particular leads voters to rally around the RR, and that (b) given the segregation of the labor market, men tend to hold jobs that are more vulnerable to these factors compared to women. In the next step, we focus aggregately on women and men holding manual jobs

between 1970-2016.

To do so, we first identify manual workers. We append the data for each respondent with the degree to which their job requires manual and communication skill dexterity. The two are measured in terms of percentiles: the score indicates the percentile of the sector in the economy in terms of use of the relevant skill such that high number indicates that workers in the sector use the skill with greater intensity compared to others (see Appendix C for sources and construction of these variables). Not surprisingly, the two are strongly and negatively correlated: the more a sector requires communication skills the less it requires manual skills ( $r = -0.98$ ).

Table 1 presents the ten sectors classified by ISCO along with examples of occupations and their percentiles on manual and communication skills. Sectors are organized in ascending order of manual skill dexterity with senior officials and managers (Sector 1) scoring the highest on communication skill and the lowest on reliance on manual skills. At the bottom end of the list are the three most manual sectors: elementary occupations, immediately followed by craft workers and plant and machine operators and assemblers. In the analysis below we refer to workers in these three sectors (9, 7, and 8) as manual workers (the next sector in terms of use of manual skills is services which substantially differs from these three).<sup>5</sup> The fraction of manual workers per country/year is 26% on average and varies from 13.3% (Switzerland 2012) to Portugal 2006 (52.4%)

The last column of Table 1 presents the share of male workers in each sector. Note the gender segregation of the manual sectors, with craft and plant and machine operators sectors being heavily dominated by men (seventy-nine and eighty-six percent, respectively).

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<sup>5</sup> Skill intensity scores are not available for skilled agricultural and fishery workers (3.82% of respondents) and armed forces (0.35%).

Elementary occupations, however, have more women than men due to occupations such as domestic helpers that are included in this category. Overall, while in many aspects of labor market segregation it is women who are disadvantaged compared to men (see, e.g., Sector 1), our argument about skill-based occupational vulnerability due to immigration and trade applies to men more than women.

**Table 1. Classification of sectors by skill dexterity**

	Example Occupations	Manual skill percentile	Com. skill percentile	% men in sector
1. Legislators, senior officials and managers	Corp. managers, managers in restaurants and hotels	21.75	85.45	69
4. Clerks	Accounting and bookkeeping, secretaries	29.2	70.18	29
3. Technicians and associate professionals	Estate agents, medical assistants	37.83	67.42	47
2. Professionals	Computing professionals, lawyers, Advertising and marketing professionals, Teaching professionals	38.14	69.46	47
5. Service, shop and market sales workers	Cooks, police officers, waiters	38.61	64.46	29
9. Elementary occupations	Street vendors, domestic helpers, garbage collectors	71.19	29.86	37
7. Craft and related trades workers	Roofers, plumbers, sheet metal workers	75.32	18.1	86
8. Plant and machine operators and assemblers	Plant operators, textile, fur and leather plant operators	78.23	21.11	80
6. Skilled agricultural and fishery workers	Dairy and livestock producers, crop growers			

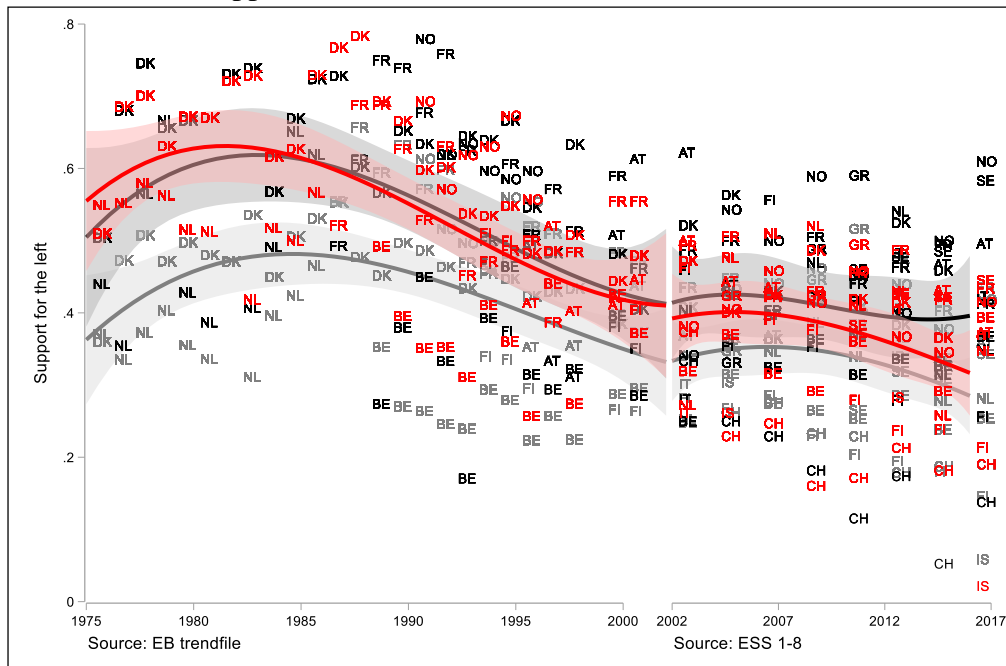
*Note.* Percentiles describe manual and communication skill intensity (Source: D'Amuri and Peri, 2014)

We begin by examination of the proclivity of women and men working in manual jobs to support the left overtime. For comparability with the analysis below, data in the figure are limited to country-years in which the RR attained presence (at least a single seat) in parliament. As a reference point, the figure presents the vote-share for the left among the general population (in gray). Figure 3a shows that support for the left among both women and men holding manual jobs declines overtime, as is that of the general population, but the decline among men is steeper. Note that the trendlines for the two groups are calculated among the broader group of male and female manual workers and are therefore not about the relative size of each group in these sectors.

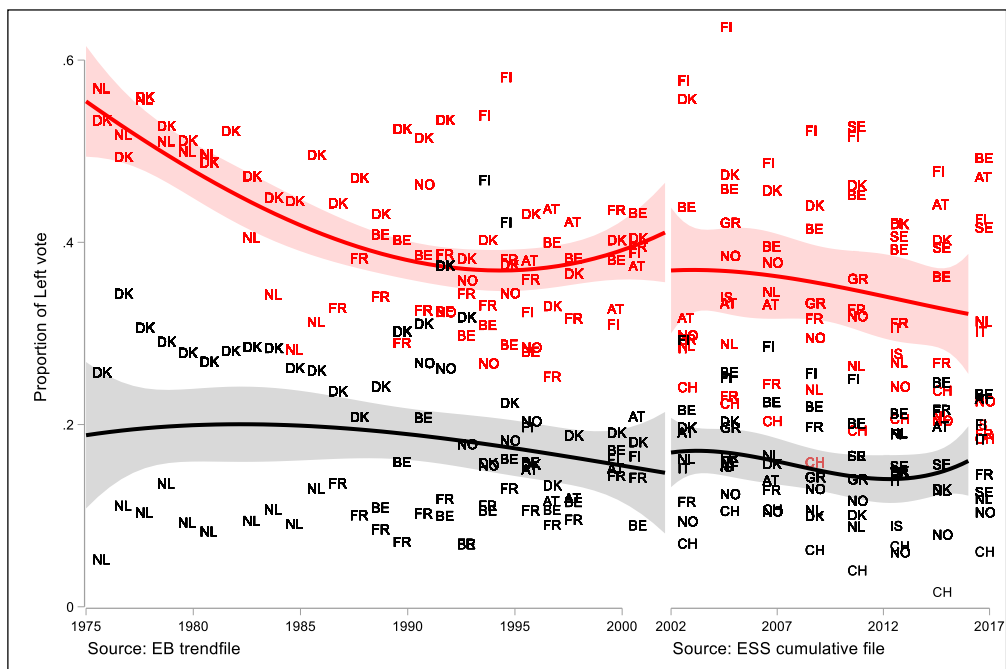
To complement the picture, Panel (b) presents the *composition* of the left overtime and in particular the proportion of men holding a manual job (in red) and that of women holding similar jobs (in black) among left supporters. Consistent with the fact that more men are occupied in manual jobs compared to women (37% compared to 25% in the EB, and 35% compared to 16% in the ESS data), the figure shows that the former are a larger sub-constituency among supporters of the left. Additionally, both men and women holding manual jobs become less of a central constituency of left parties: their share among party supporters declines overtime, and that of men declines more steeply. And although it is the case that the share of manual workers in the general population in advanced industrialized democracies declines overtime due to technological changes and global economic forces, the analogous analysis of the RR presented next suggests that this trend is not simply a product of the decline of this segment of the population. Rather, it suggests an occurrence of an occupational and gender-based realignment of vote choice.

**Figure 3. Support for the left: manual male workers and others**

(a) Rate of support



(b) Composition

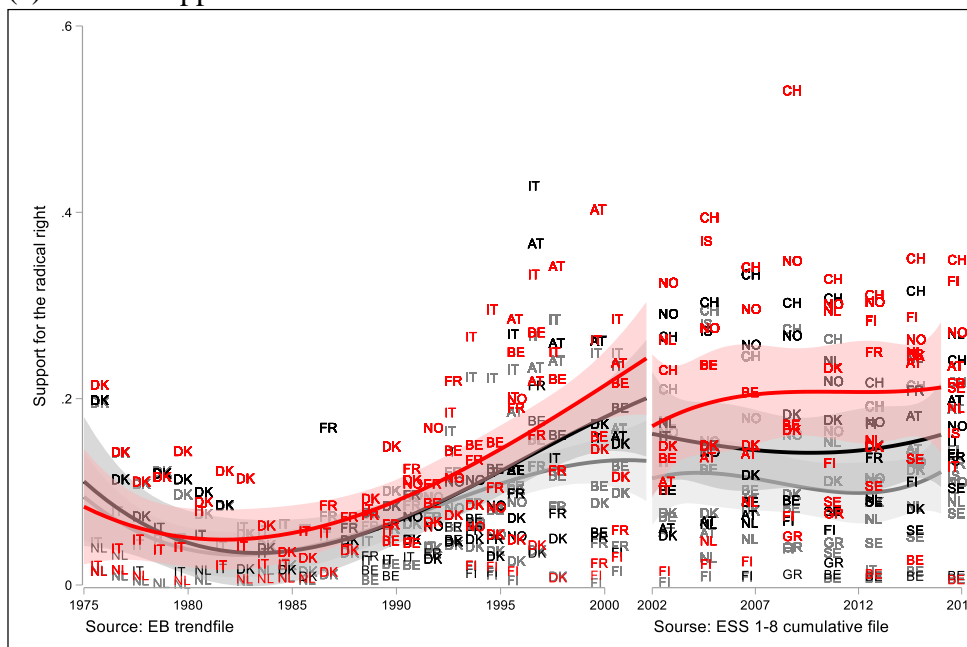


*Note.* (a) rate of support for left parties among men holding manual jobs (red), women holding manual jobs (black), as well as the general population (grey). (b) Male (red) and female (black) manual workers' share among supporters of the left. Manual workers are those who work in sectors 7, 8, and 9. Italy is excluded from the lefthand panel as the largest leftwing party is classified as radical left.

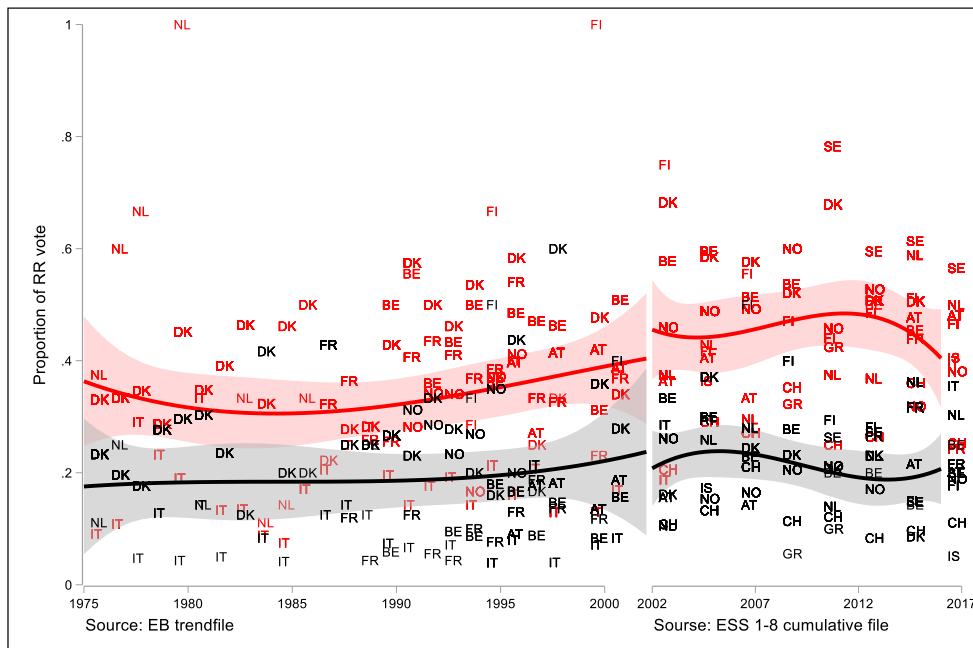
Figure 4 displays analogous analysis for the RR. Consistent with common knowledge, Panel (a) demonstrates an increase in the vote-share of the RR. This is also the trend among women and men (in black and red, respectively) holding manual jobs, at rates slightly higher than those of the general population. Panel (b) shows a clear pattern by which overtime men holding manual jobs become a key constituency of the RR relative to women. This pattern is particularly important in light of the decline in the share of men working in manual jobs on the left observed in Figure 3b.

**Figure 4. Support for the radical right: manual male workers and others**

(a) Rate of support



(b) Composition



*Note.* (a) rate of support for radical right parties among men holding manual jobs (red), women holding manual jobs (black), as well as the general population (grey). (b) Male (red) and female (black) manual workers’ share among supporters of the radical right. Manual workers are those who work in sectors 7, 8, and 9.

The analysis above further links between the gender gap on the left and that on the RR. It shows that manual workers abandoned left-wing parties as well as that they support the RR at a rate greater than that of the general population. We turn next to examine the gender gap in support for the RR and in particular the effect of occupational vulnerability on the vote and its relation to gender.

**5.3. The gender gap in support for the radical right: Individual-level analysis**

To investigate the effect of occupational vulnerability on the vote, we conduct an individual-level analysis of vote choice utilizing eight ESS waves (2002-2016). Our dependent variable is dichotomized, such that 1 indicates support for the RR and 0 otherwise.

Recall that our first hypothesis linked the type of skill required in one’s job (as a

proxy for occupational vulnerability) to their vote choice. We thus include in the regression gender and skill dexterity (communication or manual). Our predictions, therefore, refer to the coefficients of the job market variables: we expect communication skills to have a negative effect on support for the RR and manual skills to have a positive one. Gender in itself may still be a factor predicting support for the RR due to some (or all) of the explanations mentioned above -- it is not our specific prediction that the gender coefficient will be zero, nor is it our goal to nullify it.

**Cultural factors.** As mentioned above, we do not argue against cultural explanations for support of the RR. In fact, we include in our analysis three items available from the ESS that measure anti-immigrant attitudes based on cultural/identity-based sentiments: (i) agreement/disagreement that immigrants undermine country's cultural life, (ii) support for allowing immigrants of a race different from the country's majority, (iii) agreement/disagreement that immigrants make the country a worse place to live. We also include education (in years), as well as the size/type of community in which one lives (a farm home in the countryside to a big city), which is a likely indicator of opportunities for contact with and exposure to immigrants as well as cosmopolitanism (Haubert and Fussell 2006).

Additionally, we include two items that measure interest-based immigration sentiments: (iv) support for allowing immigrants from poorer countries outside Europe, and (v) agreement/disagreement that immigrants are bad for the country's economy. Both these items and the three cultural items are coded such that high values indicate higher levels of anti-immigrant sentiment. Given the focus of our argument on occupational vulnerability, we also control for unemployment (specifically, has the respondent ever been unemployed for a period greater than three months), as well as union membership. Lastly, we control for age,



religiosity, and whether one is native or foreign born.<sup>6</sup> Appendix D reports question wording of all items used and Appendix E reports descriptive statistics.

One might wonder why the number of immigrants per sector in any given country-year is not included on the right-hand side. The reason is twofold. Theoretically, according to our argument, the penetration of immigrants to the sector is post-treatment to skill: it is affected by the degree to which communication vs. manual skills are required in the sector and thus should not be controlled for in the analysis. Empirically, studies show that the number of immigrants in one's surroundings does not necessarily predict anti-immigrant attitudes (e.g., Scheve and Slaughter 2001).

Table 2 presents the results drawing on all eight waves, including country and year fixed effects (results are similar across years, see Appendix F, Tables 1a-1h). As a reference, our first model includes only gender and control variables. The next three models include communication skill dexterity and control variables. We run our analysis both with and without anti-immigrant sentiments: while Model 2 omits anti-immigrant sentiments on the right-hand side, Model 3 includes them. The results of both models support our hypotheses. Requirement of communication skills in one's sector reduces the tendency to support the RR in both models. Note that while gender alone has an effect on supporting the RR in Model 1 (as expected, men support it at a higher rate than women do), this result is somewhat weakened in most following models.

Models 5 and 6 repeat this exercise with manual rather than communication skills. Here, too, we find support for our thesis in both specifications. The more manual skill dexterity is required in one's job, the more likely she is to support the RR. Across models, the

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<sup>6</sup> We omit from the analysis Finland 2002, 2004, and 2006 in which the number of respondents reporting support for the RR was smaller than 1 percent and did not allow for a meaningful multivariate estimation.

coefficients on our control variables are as expected. Education, union membership, religiosity, and having born outside one's country reduce the likelihood of supporting the RR while being unemployed in the past increases it. Additionally, in most models, residing in an urban area reduces the likelihood of supporting the RR. Lastly, where included, all anti-immigrant attitude items are positively correlated with support for the RR.

As a complementary examination of our argument, we test a differential effect of skill and anti-immigrant attitudes on the vote for women and men. We first interact gender with skill. While a gender-differential effect of skill in supporting the RR does not flatly contradict our theory, our argument leads us to think that the effect is driven by skill and gender segregation of the labor market rather than by a differential response of men and women to skill-related vulnerability. The *pooled* results of this analysis (Models 4 and 7) suggest that there is indeed an interactive effect, namely, that the effect of skill is stronger among men than it is among women. However, this result dissipates almost entirely when each of the eight rounds of the ESS is examined separately (see Appendix F). This result is consistent with our argument: while skill (and thus occupational vulnerability) *is* correlated with gender, men do not inherently differ from women in the magnitude of the effect of skill on vote choice.

We next combine the three cultural anti-immigrant items and the two economic ones to two scaled items.<sup>7</sup> Our analysis shows statistically significant though substantively insignificant (in fact, miniscule) difference in anti-immigrant attitudes between the sexes. We also interact each of the two scales with gender and find that there is no gender differentiated effect of culturally based anti-immigrant attitudes on support for the RR (Appendix F). Combined with the findings above on the effect of education and residing in rural vs. urban

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<sup>7</sup> Both the three cultural anti-immigrant items and the two economic ones are strongly correlated ( $\alpha$ 's =0.80, and 0.64 respectively).

areas, we infer that while cultural considerations have an effect, this effect is not necessarily gender-specific.

**Table 2. Support for the radical right (Probit Models, ESS 1-8)**

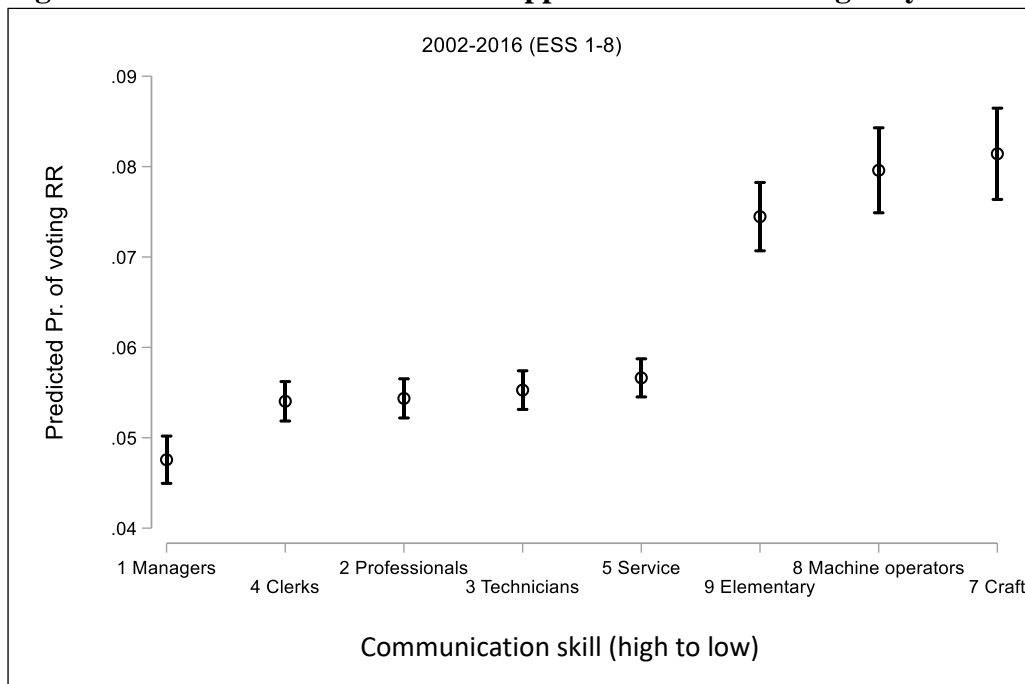
	Communication				Manual		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Male	0.22*** (0.01)	0.17*** (0.01)	0.18*** (0.02)	0.30*** (0.05)	0.17*** (0.01)	0.18*** (0.02)	0.04 (0.04)
Communication		-0.64*** (0.03)	-0.41*** (0.04)	-0.25*** (0.07)			
Male x communication				-0.21** (0.08)			
Manual					0.70*** (0.04)	0.43*** (0.04)	0.21** (0.07)
Male x manual							0.32*** (0.09)
Education (yrs.)	-0.06*** (0.00)	-0.05*** (0.00)	-0.03*** (0.00)	-0.03*** (0.00)	-0.05*** (0.00)	-0.03*** (0.00)	-0.03*** (0.00)
Population density	-0.04*** (0.01)	-0.04*** (0.01)	-0.01* (0.01)	-0.01* (0.01)	-0.04*** (0.01)	-0.01* (0.01)	-0.01* (0.01)
Age	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
Age squared	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
Religiosity	-0.01*** (0.00)	-0.01*** (0.00)	-0.01*** (0.00)	-0.01*** (0.00)	-0.01*** (0.00)	-0.01*** (0.00)	-0.01*** (0.00)
Unemployed for > 3 months	0.14*** (0.02)	0.12*** (0.02)	0.12*** (0.02)	0.12*** (0.02)	0.12*** (0.02)	0.12*** (0.02)	0.12*** (0.02)
Foreign born	-0.18*** (0.03)	-0.20*** (0.04)	-0.12** (0.04)	-0.12** (0.04)	-0.20*** (0.04)	-0.12** (0.04)	-0.12** (0.04)
Immigrants undermine country's cultural life			0.07*** (0.00)	0.08*** (0.00)		0.08*** (0.00)	0.08*** (0.00)
Do not allow immig. of a different race			0.13*** (0.02)	0.13*** (0.02)		0.13*** (0.02)	0.13*** (0.02)
Immig. make country a worse place to live			0.07*** (0.01)	0.07*** (0.01)		0.07*** (0.01)	0.07*** (0.01)
Do not allow immig. from poorer countries outside Europe			0.13*** (0.01)	0.13*** (0.01)		0.13*** (0.01)	0.13*** (0.01)
Immig. are bad for the economy			0.05*** (0.00)	0.05*** (0.00)		0.05*** (0.00)	0.05*** (0.00)
Constant	-0.20** (0.07)	0.10 (0.08)	-2.24*** (0.09)	-2.34*** (0.10)	-0.54*** (0.08)	-2.65*** (0.09)	-2.56*** (0.10)
Observations	72,464	66,673	66,673	66,673	66,673	66,673	66,673

Standard errors in parentheses; \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ . Country and year FEs are

included.

We now turn to substantively evaluate the effect of one’s position in the labor market on their choice to support the RR. Figure 5 shows the predicted probability of supporting the RR for each of the sectors. Sectors are ordered by descending order of communication skill dexterity such that those sectors that rely least on communication and most on manual dexterity are on the right end of the figure. The probabilities are calculated off the results reported in Model 3 such that all other variables are held constant at their mean value. The figure shows that those working in a sector that requires a high level of communication skills (e.g., clerks, professionals) are less likely to support the RR while those working in the three sectors that rely most on manual skills (least on communication skills) – elementary jobs, machine operators, and crafts – are those with the highest likelihood of supporting RR parties. The results are therefore consistent with our first hypothesis.

**Figure 5. Predicted Probabilities of support for the radical right by sector**

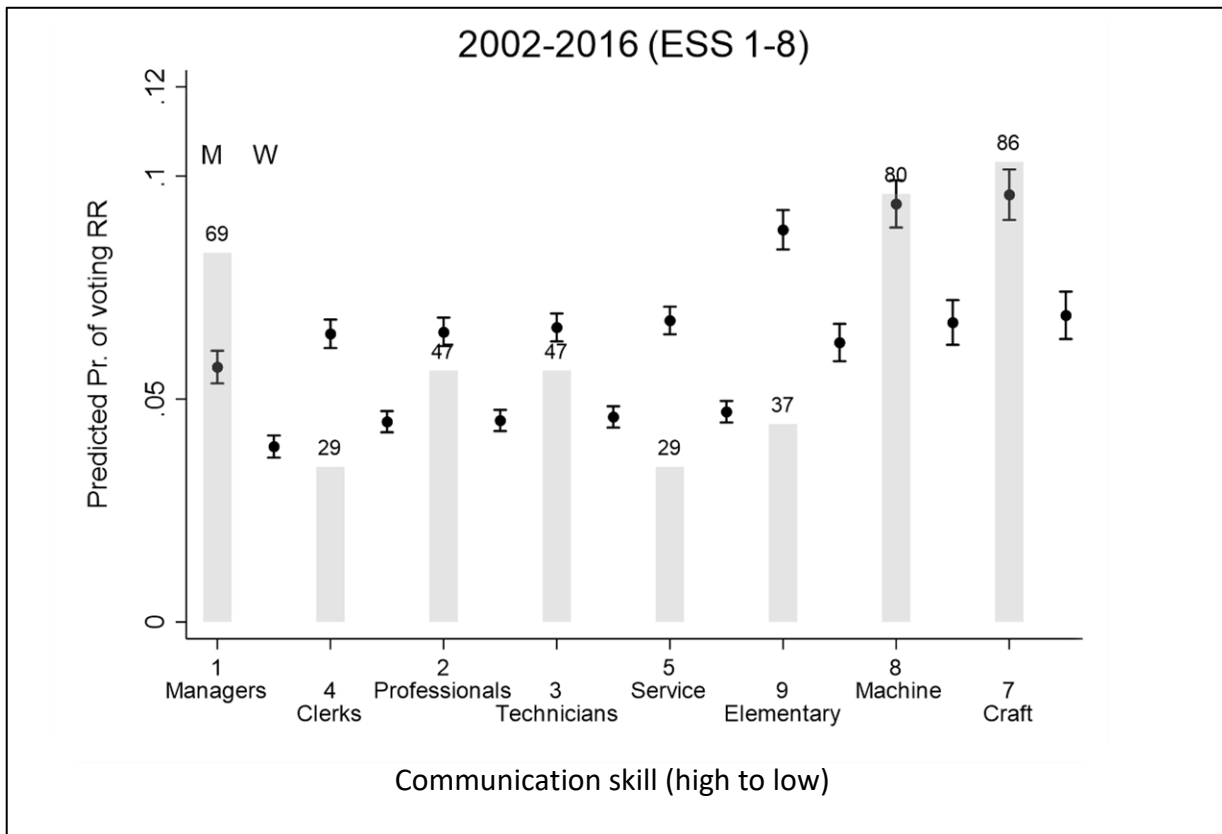


*Note.* Predicted probabilities with robust 95% confidence intervals based on probit regression of voting for radical right parties. The analysis draws on Model 3 in Table 2. Sectors are organized in descending order of communication skill dexterity.

Figure 6 displays the predicted probability of support for the RR separately for men and women within each sector based on the same model. It shows that within each sector men are somewhat more likely than women to support the RR. This effect of gender irrespective of labor-market circumstances is consistent with explanations mentioned above such as the nature of extreme right parties, or their anti-feminist values.

Importantly, the figure also presents the gender segregation of the labor market within each sector. This is reflected in the bars that mark the fraction of men among workers in the sector. The figure shows three general areas that exhibit major segregation by gender. First is senior officials and managers (Sector 1) -- this communication intensive sector is heavily dominated by men. Second is Sectors 4 and 5: clerks and service workers. These sectors, too, rely on communication skills but are heavily dominated by women. Lastly, the three most manual sectors: crafts, machine and plant operators, and elementary (7, 8, and 9). The former two are distinctly male dominated while in the latter (mostly due to domestic helpers) women are the majority. Overall, though, the three sectors combined are male dominated: drawing on ESS data (2002-2016), 69% of those working in manual sectors are men. Thus, the greater tendency to support the RR among manual workers observed at the micro level, combined with the fact that more men than women occupy manual jobs come together to higher rate of support for the RR among men compared to women.

**Figure 6. Predicted Probabilities of support for the radical right by sector and gender**



*Note.* The analysis draws on Model 3 in Table 2. Sectors are organized in descending order of communication skill dexterity. Bars, and numbers on top of them, show the percentage of male workers in each sector.

Our interpretation of the results is that working in a sector that requires communication skills serves as a shield of protection for workers against either losing one's job for an immigrant worker or having one's wage decline due to immigration or trade and thus reduces their support for RR parties. Having a manual-skill job has the opposite effect.

#### **5.4. Revisiting the gender gap: The political context**

Having examined aggregate trends and individual-level behavior, the present section revisits the original gender gap in support for the left and analyzes it in the context of the party system and the gender-segregation of the manual labor market. Recall that our second hypothesis linked the gender gap to economic positions of the left. In particular, it stated that

where the mainstream left takes centrist policy positions, greater gender segregation (i.e., male domination) of manual sectors will be associated with a smaller (more “modern”) gender gap. Put differently, the more jobs in immigration-vulnerable sectors are occupied by men, *fewer men compared to women* will support the left, contingent on the economic position of the left.

To test this hypothesis, we draw on the ESS (2002-2016) and the Chapel Hill expert survey. Specifically, we estimate the gender gap on the left as a function of gender segregation of manual sectors and economic position of the mainstream left party in the elections preceding the survey as well as their interaction, both measured as described in Section 4.1. We also control for the position of both the mainstream left and the RR on the second dimension (Kitschelt 1994)<sup>8</sup> as well as the economic position of the RR and include country and year fixed effects. We split our cases to two -- those in which the RR secured at least a single parliamentary seat in parliament in the elections preceding the survey and therefore was arguably a viable option for voters, and those where it did not.

Results of this estimation (reported in Model 2 in Table 3) present a clear picture. Where the RR secured at least a single parliamentary seat in the previous elections, the constitutive term of male domination of manual sectors is positively associated with the gender gap, yet its interaction with the economic position of the left is negative (note that results hold in the baseline Model 1 as well). Based on these results, Figure 7a presents the marginal effect of male domination of the manual sectors on the gender gap in support for the left (on the vertical axis), modified by the economic position of the largest left-wing party in the election preceding the survey (on the horizontal axis). All other variables are held constant at their respective mean. Where the mainstream left takes a traditional social

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<sup>8</sup> We use the CHES 0–10 GAL-TAN question that focuses on questions of rights, freedoms and morality.

democratic position (on the left side of the picture), greater male domination of the manual labor market translates to a larger gender gap in support for the left. This positive correlation implies that where more men compared to women work in manual jobs, more men compared to women support the left. As we move to the right on the horizontal axis and social democratic parties take more centrist economic positions, this relationship fades away -- greater occupational vulnerability among men does not translate to greater support for the left among men compared to women. Thus, in the presence of the RR that presents itself as an alternative to dislocated interests, mainstream left parties that support centrist policy positions enjoy lower levels of support among male voters relative to female voters compared with their counterparts that pursue leftist policies. The magnitude of the effects is substantial. Given high male domination of manual sectors (one standard deviation above the mean), a shift in the economic position of the left toward the center (from one standard deviation below the mean to one standard deviation above it) is associated with a decline of 13.9 percentage points in the gender gap.

Note that where the RR is not a viable alternative for voters (Model 3), neither ideological placement of the mainstream left nor gender segregation of the manual labor market are correlated with the gender gap on the vote. This is also evident in analysis of substantive effects which we conducted (not reported here). Overall, then, our second hypothesis finds support in the data.

We turn to our third hypothesis, which focuses on the ideological distance between the left and the RR. Our hypothesis stated that where the economic positions of the two are relatively similar, the more jobs in immigration-vulnerable sectors are occupied by men, *fewer men compared to women* will support the left. When the two are farther apart from each other, however, voters are less likely to shift their support. In other words, we expect a negative relationship between male domination of manual sectors and the gender gap where



parties are clustered together but a positive one where their positions are distinct.

To test this hypothesis, we repeat the exercise above with the gender gap on the left as a dependent variable and focus on labor market segregation as modified by the economic distance between the left and the RR. Model 4 in Table 3 reports the result of this estimation, and based on the raw results presented in the table, Figure 7b presents substantive effects. The results in the table show a negative albeit statistically insignificant coefficient of male domination in manual sectors and a positive interaction term between male domination and economic distance. The figure shows the contingency of the relationship. On the horizontal axis is the economic distance between the two parties, and on the vertical one the marginal effect of labor market segregation. The effect is as predicted, though statistical significance is weaker than above. Let us begin with the right-hand side of the figure. Where the distance between left and the RR is substantial, a large number of men compared to women working in manual sectors is associated with a large number of men compared to women supporting the left. As we move leftward and the distance between the two declines, greater male domination of manual sectors is not associated with greater support for the left by men compared to women. Put differently, where the left and the RR present each their version of relatively centrist economic policies, greater occupational vulnerability of men does not translate to greater support for the left by men.

Finally, to complete the picture, we examined the pull factor alone. Analogous to Model 3, Model 5 examines the effect of male domination in the manual labor market as modified by the economic position of the RR. As above, the analysis controls for second dimension and country and year fixed effects. Neither the constitutive terms nor the interaction are statistically significant.

In sum, our first contextual hypothesis finds support in the data while our second one

finds partial support. Where more men compared to women work in manual jobs and are thus occupationally vulnerable vis-s-vis immigration, more men than women support the left if the left holds on to its traditional positions and if the left and the RR hold distinct economic positions. Importantly, while this finding enhances our ability to analyze the gender gap as linked to changes in the labor market and the party system, we do not make a causal claim about the rise of the radical right per se., e.g., that shift to the center in the position of the left is the cause of the rise of the radical right, or that the rise of the radical right led to the shift in positions of the left.

This finding attests to the importance of push factors as well as the combination of push and pull. Where both the left and the RR moderate their economic positions such that they shift toward the center, the RR successfully presents itself as a substitute for the left in guarding dislocated interests of occupationally vulnerable manual workers. And while our analysis in the previous section shows that the RR is successful in presenting itself as a substitute guardian of workers' interests, our contextual analysis suggests that in combination with the position of the left, the economic position it takes can modify the relationship between the gender segregation of the manual labor market and the gender gap in vote choice on the left. Put differently, the position of the RR alone might not draw men working in manual jobs to abandon the left, but combined with a centrist left it can do so.

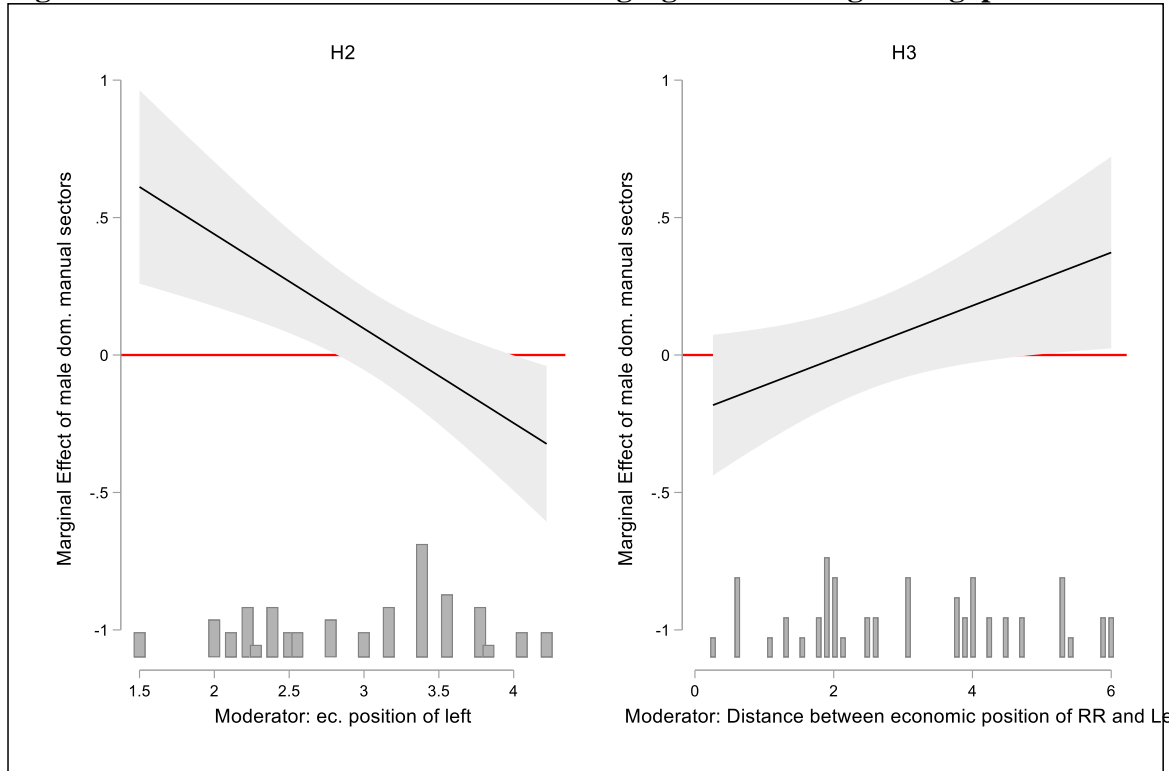
**Table 3. Gender gap in support for the left**

Gender gap for the left					
	H2			H3	
	RR present		RR not present (3)	RR present	
	(1)	(2)		(4)	(5)
Male domination of manual sectors	0.64* (0.26)	1.13*** (0.30)	-0.02 (0.34)	-0.21 (0.14)	-0.12 (0.32)
Economic position of left	0.04 (0.02)	0.07** (0.03)	0.01 (0.03)		-0.02 (0.01)
Ec. position of left * male dom. of manual sectors	-0.20** (0.07)	-0.34*** (0.09)	-0.04 (0.07)		
Cultural position of left		-0.03* (0.01)	0.02 (0.01)	-0.02+ (0.01)	-0.01 (0.01)
Economic position of RR		-0.01 (0.01)			-0.01 (0.02)
Cultural position of RR		-0.01+ (0.01)		-0.01 (0.01)	-0.01 (0.01)
Distance in ec.position b/w RR and Left				-0.02 (0.01)	
Distance in ec. position * male dom. of manual sectors				0.10* (0.05)	
Ec. position of RR * male dom. of manual sectors					0.02 (0.05)
Country and year Fes	√	√	√	√	√
Constant	-0.12 (0.09)	0.01 (0.12)	-0.05 (0.10)	0.21+ (0.12)	0.24 (0.17)
Observations	55	50	44	51	52
R-squared	0.72	0.79	0.47	0.69	0.67

Standard errors in parentheses; \*\*\* p<0.001, \*\* p<0.01, \* p<0.05, + p<0.1.

*Note.* Models 1-3 test H2. Models 4-5 test H3. All models include country and year fixed effects.

**Figure 7. Estimated effect of labor market segregation on the gender gap**



*Note.* Marginal effect of male domination in manual sectors on the gender gap for the left (vertical axis) across levels of economic positions of the left (left-hand panel) and distance between economic position of the radical right and the left (right-hand panel). 95% confidence intervals are marked. Results are based on estimation reported in Table 3, Models 2 (H2) and 5 (H3).

## 5.5 Movement from the left to other party families?

Although our focus is on the electoral links between the left and the RR, given the plethora of parties in the systems we study, one might wonder whether there are similar (or different) changes in the gender gap for other party families in a way that sheds light on our argument.

We begin our analysis with the party family that offers a different solution to dislocated interests: the radical left.<sup>9</sup> We observe a modest and rather stable gap: men support radical left parties at a slightly higher rate than women. The gap modestly declines from around 4 to 1 percent between the early 1970s and 2016, ruling out the possibility that men abandoned the left for the radical left. We also examined whether there are changes in rates of support of men (and women) holding manual jobs for the radical left compared to those of the general population and found no systematic change overtime (see this and the analyses below in Appendix F).

We next examined both trends for the Conservatives and the Christian Democrats, the two key mainstream right party families. The gender gap for both parties has changed overtime in the expected direction: while in the 1970s distinctly more women than men supported these party families, the gender gap for both has shifted toward zero over time. Our analysis of support rates among manual workers suggests no secular trend different from the general population among female or male manual workers (albeit lower levels of support). Lastly, the gender gap for the Liberal party is constant around zero overtime. Support rates among manual workers, however, exhibit a somewhat unclear picture, being lower and higher than those of the general population at different times.

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<sup>9</sup> The radical left party family includes all parties classified as communist and socialist-communist.

Taken together, the aggregate and the individual-level analyses present a picture of occupational realignment in a multi-party system. The results suggest that men whose occupational position is particularly vulnerable to competition with immigrants or trade abandoned the left. Also, such voters turned out in high numbers for RR parties. No similar shift in the vote of manual workers has been found for other party families.

## **5.6 Robustness analysis**

We reconducted our analysis varying some of our empirical specifications. In a nutshell, our results hold across almost all variations (all robustness analyses are presented in Appendix F).

**Separate waves.** We repeated our analysis utilizing ESS data from each of Waves 1 through 8 (2002-2016) separately. The results closely follow the results reported above.

**Green parties.** We included Green and ecological parties in the family of left parties (consistent with that used by Giger 2009) and reconducted our aggregate analysis. The results of this categorization are nearly identical to those presented in our aggregate analyses, both in Figure 1 and in Figures 3 and 4.

We also rerun our individual-level analysis employing alternative specifications and utilizing multiple datasets:

**Skill.** As noted above, the import of skill rating percentiles from the US draws on relative sector sizes in the US economy and assumes that on average the economies included in the analysis are similar to the US economy in their relative sector sizes. To relax this admittedly stringent assumption, we rank-order the sectors on both communication and manual skill, eliminating percentiles. Results of this analysis are similar to, and in fact slightly stronger than, the results reported in our main analysis), assuaging concerns over differences in labor

market structure.

**Retirees.** We identified retirees (who are included in the analysis above based on their reported past occupation) by a dummy variable in models identical to Models 3 and 6 in Table 2. We also excluded them from the analysis altogether. The results are fully consistent with the original ones.

**Spouses and partners.** We included in the analysis partner's education as well as their skill. Our results show that a partner's education is negatively correlated with the likelihood of supporting the RR, and their skill is correlated with it in the same direction as one's own skill (see also Abou-Chadi and Kurer 2021). In both cases, however, our main result regarding the effect of one's own skill holds.

**Income.** We examine the income distribution in the three most manual sectors against that in other sectors. Our analysis shows that although on average income of communication-based sectors is higher than that in manual ones, the distributions overlap considerably. Most importantly, once income is included in the model, our results hold.

**Balanced sample.** We reproduced Figures 1 and 2 for a balanced sample containing only the original six member states of the EU. We also reconducted the individual-level analysis in Table 2 for a balanced sample of countries. Our results hold.

## 6. Conclusion

What explains the secular trend in gender realignment of the vote over the past five decades? Past research documents various explanations for the gradual drift of women to the left. This study focuses on men and shows that voting behavior of men, and particularly men who hold manual jobs, contributes to the extensively documented change in the gender gap on the left.

The premises of our analysis are that (i) there are potentially several gender gaps in voting, (ii) these gaps may change due to changes in voting behavior of *both* women and men, and (iii) these changes take place within a dynamic party system. These premises allow us to link two well documented regularities analyzed separately to date -- the gender gap on the left and the rise of the RR -- and thereby reach new insights regarding the gender gap in multi-party systems. We demonstrate that occupational vulnerability in the face of competition with immigrants and trade plays a role in this change, and identify those whose jobs require high manual (low communication) skill dexterity as particularly vulnerable. Manual workers – most of whom are men – abandon the left and support the RR.

Our study opens the door to exciting new research avenues. We find two extensions of our analysis to be particularly interesting to follow in future research. The first extension has to do with occupational vulnerability. In our analysis, we point at communication skills as a key barrier to integration of immigrants and assume that occupations that require communication skill dexterity are harder for immigrants to find jobs in. Although a good proxy for integration potential of immigrants, the degree to which a particular language serves as a barrier for immigrants may vary depending on the dyad of language at the host country and language in the country of origin. Due to historical or cultural ties and colonial history, some relevant host languages are widely spoken in some countries of origin, while others are not. Additionally, linguistic similarity varies across languages making some easier to get command of than others, depending on one's language of origin. Thus, a possible extension of our analysis might entail a more nuanced classification of languages required and those spoken by groups of immigrants in different countries.

The second extension has to do with party positions. In our analysis, we contextualized the realignment of the vote along gender and occupational lines using a well-established, albeit quite general indicator of party economic position. We show that the



position of the mainstream left, as well as a combination of it and that of the extreme right, affect the sensitivity of the gender gap to occupational vulnerability. And while the left-right economic scale offers a helpful heuristic for party positions, one might seek to refine the analysis of party socio-economic policy position, as recent research goes beyond the unidimensional scale of more or less public spending. Parties differ in their emphasis: some focus on income while others on human capital (Beramendi et al. 2015), some on benefits directed at insiders while others at outsiders, some on redistribution while others on social insurance (Häusermann 2018). A more nuanced analysis would take into consideration the different aspects of socio-economic policies pursued by different parties, and examine how they affect occupationally vulnerable workers.

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