

Welfare Works: Explaining Female Legislative Representation

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This study aims to advance our understanding of why women are underrepresented in legislatures around the world, and what accounts for the wide variation over time and across countries. Scholars generally agree on many of the favorable conditions for women to enter parliament, including, *inter alia*, proportional representation, leftism in government, and female employment. However, the mechanisms that link women's seat shares to the supposed explanatory factors are still poorly understood. In this study, we argue that the key link resides in welfare state policies that 1) free women to enter the paid workforce, 2) provide *public sector* jobs that disproportionately employ women, and 3) change the political interests of working women enough to create an ideological gender gap. The emergence of this gender gap, in turn, creates incentives for parties to compete for the female vote, and one way that they do so is to include more and more women in their parliamentary delegations.

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INTRODUCTION

The underrepresentation of women in the world's legislatures has become a core question in the study of elections and representative democracy.¹ Women hold fewer than half of seats everywhere, but there is wide variation over time and place. Even limiting the focus to advanced industrial democracies and the present day, the share of female legislators ranges from 7.1% in Japan to 45.3% (near parity) in Sweden. And whereas Iceland shot up from 1.9% in 1946 to 34.9% in 1999, France increased only from 5.6% to 10.9% over the same period. The female share of Belgium's members of parliament (MPs) increased from only 1.5% in 1946 to 12.0% by 1995, but then nearly doubled to 23.3% in the 1999 election, a much more sudden rise than in most countries.

A great volume of work focuses on this variation, and consensus seems to exist on some of the determining factors. Various scholars have shown that among the favorable conditions for women to enter parliament are proportional representation (PR) electoral rules, high district magnitude, high levels of female participation in the paid workforce, a high seat share for left-of-center political parties, and such cultural attributes as Protestantism, postmaterialist values, and, somewhat more problematically, a general societal egalitarianism.

Nonetheless, the mechanisms that link women's seat shares to the supposed explanatory factors are still poorly understood. While we have a better idea than 20 or 30 years ago as to what conditions *predict* women's entry into parliament, we are less sure as to explanations. Why exactly does PR help? There are competing theories. Are open lists or closed lists better for women? Why does female employment lead to political candidacy, and ultimately, incumbency? How can we discuss egalitarianism without succumbing to tautology or drowning in ambiguities of measurement and timing? More concretely, why do the Scandinavian parliaments (Sweden, Norway, Denmark, and Finland) appear to be high-end outliers even when apparently all systematic influences are accounted for? Naturally, scholars have offered theories and speculations to explicate the links between causes and effects, but to date, consensus on mechanisms has been harder to achieve than consensus on correlates.

1. While we do not expect equality of formal political representation to be an automatic cure for patriarchal values and behavior (see, for example, Klausen and Maier 2001 and Smith 2001), we take seriously the arguments in favor of "the politics of presence" (Phillips 1995); there is after all some evidence suggesting that female delegates tend to vote differently than male delegates from the same party (Norris and Lovenduski 1989).

In this study, we do not pretend to answer all of these questions, nor do we aim to refute the existing findings regarding institutional or cultural factors. Instead, we offer a theory to link determinants to outcomes, and provide an explanation of some of the hitherto unexplained variance in the shares of women in parliament, especially in Scandinavia. We argue that increases in female labor force participation create a group of female voters with distinct political interests, especially where private sector labor markets are inhospitable for women, and where the rapid expansion of jobs takes place in the *public sector*. Women with a distinctive set of policy preferences become an easily identifiable bloc of voters. Parties, not wanting to lose vote share on account of substantial shifts in voter preferences, increase nominations of female candidates in response. As a result, female representation increases as the size of the welfare state expands.

Here is a sketch of the logic: The costs to private sector employers of hiring women are higher in countries strong with union bargaining and wage compression² because career interruptions for child bearing and child rearing rob companies of their investment in human capital (Estevez-Abe 1999; Mincer 1958; Polachek 1981, 1985). In this labor market environment, *public* service jobs where wages are at least partly independent of labor productivity, including costs of career interruption, tend to attract disproportionately large numbers of women. Once in the labor market, women value the employment opportunities in the public sector, the socialization of family work that supports their income (i.e., the services that the expanding welfare state provides), and their greater freedom to balance work and career in typically “general skills” jobs (Iversen and Rosenbluth 2006). So working women, especially in the public sector, become ardent supporters of the welfare state, and a gender gap between male and female voters (especially among employed voters) emerges.

It is interesting to note that both social democratic and liberal parties are somewhat constrained by their core constituencies from issuing pure policy-based appeals to working women. The problem for social democratic parties is partial incompatibility with the interests of their core voters, the predominantly male union membership. Unions succeed for their members, in part, by creating barriers to entry into the labor force. Incumbent male workers might fear that the extension of union mem-

2. Wage compression refers to narrowing the gap between lowest and highest wage earners through wage agreements that raise the minimum wage and lower wages at the upper end.

bership and benefits to women, who require flexibility and compensation for time spent with children, might lead employers to respond by reducing the average male wage and benefit package. Center-right parties might wish to take advantage of this social democratic dilemma to woo working women to their side. But their core supporters, who typically prefer smaller government and lower public spending, would not be eager for policies that would mandate increased costs for employers or increased taxes to support an expanded public sector.

Although parties differ in their constituencies and in their electoral appeals, a liberal party might sometimes try to “trump” social democratic policies by ostentatiously sacrificing male politicians in order to nominate more women, forcing social democratic parties to respond in kind. Other times, it might be the social democratic parties that move first, with liberal parties responding. Our point is that female labor force participation, particularly in the public sector, creates a shift in voter preferences, and parties that wish to protect vote share must respond in some way. Increasing the number of female candidates seems a fruitful step for a party to take in order to exploit the gender gap created by a new set of preferences.³

EXISTING EXPLANATIONS FOR VARIATION IN FEMALE PARLIAMENTARY REPRESENTATION

So much interesting work exists on the question of women in parliament that we cannot hope to review it all (see, for example, Reynolds 1999 and Norris 2004 for excellent summaries of past findings). Here, we intend only to highlight a few points of consensus and a few areas where more work is needed. The first class of arguments concerns *electoral rules*. A number of scholars have noted that proportional representation systems seem to be more conducive to female representation than district-based systems with low district magnitude (Kenworthy and Malami 1999; Lovenduski 1997; Matland 1998; Norris 1987, 2004; Reynolds 1999; Rule 1987; Salmond 2006). Dividing electoral systems in this way does provide substantially different averages: 25.6% for PR and high district mag-

3. We do not mean to imply that it will be an immediate or universal step for parties. Nor do we ignore the agency of women's groups or other grassroots movements in pushing for such a step. Our argument here is that the existence of a welfare-state-induced gender gap makes the nomination of more female candidates more likely—it is a favorable condition, not a panacea.

nitude systems against 18.7% for single member districts.⁴ This generalization holds true within countries that use different systems for different types of elections and across the two tiers in mixed-member systems.

While PR-based systems outpace plurality-based systems on average, however, there remains substantial unexplained variation among countries within each regime type, as well as change over time. Moreover, while the correlation between PR and women in parliament seems robust, we know less about the underlying causal mechanism. The literature offers three explanations for the positive effect of PR. The first is that voters are more willing to elect women when the stakes are lower; that is, seeing women listed along with men on a list does not make the decision to vote for a female such a stark one, whereas nominating a woman (or a minority candidate) for a single seat in a winner-take-all system is risky because some percentage of the electorate is automatically alienated (Matland 1998; Norris 1987, 2004). This is plausible, but it cannot help us explain the variation we observe within each regime type (PR and plurality-based systems, respectively). More likely, the prospects for gender balancing and the lower thresholds for election created by the higher district magnitudes typical of PR systems (and the higher the better) *allow* for greater female representation, but do not guarantee it.

The second possible link between PR and female political representation focuses on the viability of numerous small parties in large district-magnitude (and hence low-threshold) systems. If one or more of those small parties make gender balance a political issue, and can credibly threaten to draw voters (especially female voters) away from larger parties, then those larger parties might be obliged to follow suit (Rule 1987). This is a variation on what Giovanni Sartori (1976, 122–23) terms the “blackmail potential” of small parties in multiparty systems.⁵

The third proposed link between PR and female representation is the greater likelihood of producing left-of-center governments under PR (Iversen and Soskice 2006), which in turn are more likely to favor the socialization of family work that many women care about. The desire of working women to be protected from the costs of career interruption is

4. These averages are calculated as of 2001 for the 23 advanced industrialized democracies we study here. Mixed systems were counted in the PR category.

5. On the other hand, Matland (1993) argues that if thresholds are too low and too many small parties emerge, this might reduce the share of female legislators. His logic is that this situation causes “big” parties to win fewer seats (lower “party magnitudes”), and since most or all parties are led by men, that would mean fewer slots for women overall. Women, according to Matland, win more seats in parliament when there are fewer, but larger, parties.

consistent with the Left's preference for a large public sector and for at least partially removing the costs of child care and elderly care from the family. Leftish governments, aware of the popularity of their platform with working women, might signal this by nominating more females as candidates. We might therefore expect female representation to correspond with left legislative strength. The pairwise correlation between PR and leftism in parliament in our data set is 0.38, with a p-value of zero, but we find many instances of left-leaning legislatures, particularly but not exclusively in low district-magnitude countries, where female representation remains low. Since 1985, there have been parliaments in Greece, France, Spain, Portugal, Italy, Belgium, Japan, and the UK where over 32% of the seats were held by leftists, but women held fewer than 10%. Clearly, there is something about PR systems beyond leftism that affects women's election to legislative office.

Electoral rules aside, a second set of arguments about female representation looks to the opportunities for women in the paid workforce, with the idea that higher levels of female labor force participation (FLFP) should lead naturally into higher numbers in parliament. Again, the underlying mechanism is underspecified, but one possibility might be that paid employment somehow prepares people for politics by fostering managerial skills and broader worldviews than are available in the household (Lovenduski and Norris 1993; Vianello and Moore 2000). This is not a gender-based effect per se, but it would follow that the more women there are who develop the requisite skills and attitudes, the greater the pool of potential female politicians.⁶ Figure 1 presents the broad electoral rules and the levels of female representation in the labor force and the legislature for 23 advanced democracies. A country such as the United States, with a relatively high percentage of women in managerial positions in the public sector, falls substantially behind Germany in female legislative participation despite the small number of German women in managerial positions (Anker 1998). So, again, while the supply-side argument about women in the workforce is plausible, it is only a partial explanation at best.⁷

A third class of arguments centers on the idea that cultural values vary across countries and within countries over time (Esping-Andersen 1999;

6. We can eliminate the possibility that high FLFP is merely an effect of PR systems because PR systems are no more likely to promote FLFP than are plurality systems ($\rho = -0.025$, p -value = 0.676).

7. And note that if the Scandinavian outliers in the top-right portion of this figure were removed, the upward trend would essentially disappear.

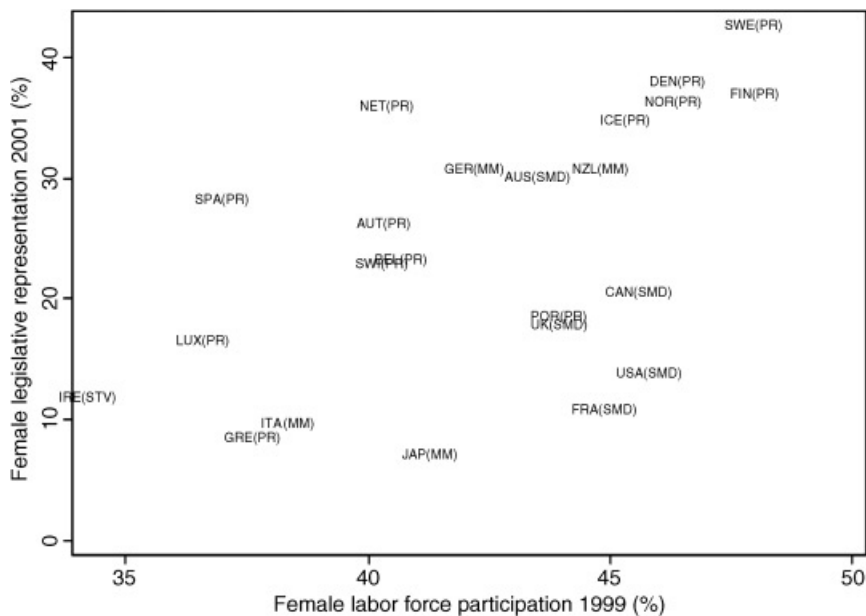


FIGURE 1. Labor force participation and legislative representation in 23 countries. PR = Proportional Representation; SMD = Single Member Districts; MM = Mixed Member; STV = Single Transferable Vote

Inglehart and Norris 2003), and that countries with more female MPs are those that are simply more egalitarian than countries with lower female political representation. In this formulation, a bigger female labor force would be another effect of egalitarianism, not an independent cause of electing more women to the legislature. Although we accept that social norms can shape voting behavior, we find it more useful to think about how values come to be accepted in the first place, and the conditions under which one set of values trumps another. Cultures are not static. While it is true, for example, that Scandinavian parliaments include more women than anywhere else in the world, female representation in the 30%–40% range is a relatively recent phenomenon—the increase began in the 1970s.⁸ So if culture is the key, we need to explain cultural change as well. Indeed, Jill Bystydzienski (1994, 60–61) tells us that after women’s groups in Norway took advantage of somewhat flexible party

8. Official attention to wage inequalities in Scandinavia also began then (O’Regan 2000, 60–64).

lists to get more women elected in the mid-1970s, party leaders responded immediately by making those lists less flexible, in an effort to forestall a recurrence (on this point, see also Caul 1999; Freidenvall 2003; Sainsbury 2004). This hardly seems an example of a cultural predisposition to gender equality. Even into the 1980s, scholars were much less impressed with the actual indicators of gender equality in the Nordic countries than with the rhetoric surrounding it (e.g., Skard and Haavio-Mannila 1984). If Nordic attitudes are in fact more gender-egalitarian, then this is something to be explained, not the answer.

Thus, the three main “macrolevel” explanatory variables in the literature focus on electoral rules, the “supply” of viable female candidates in the paid workforce, and cultural attitudes toward gender equality, respectively.⁹ While all three explanations ring true at least in part, the first two admit of anomalies (such as low-magnitude/high female representation in pre-1996 New Zealand, high female labor force/low female representation in the United States, and the still-higher-than-expected female representation in the Nordic countries), and the third—cultural—explanation suffers from severe measurement problems and the risk of tautology. How do we know a gender-egalitarian society other than by measuring outcomes such as women in parliament or women in the workforce, or attitudes toward such outcomes?

The next section of this study lays out our contribution to this research program. We focus on the implications for female representation of the nature and extent of the welfare state. We find that the variations in welfare state size and employment patterns affect women very differently than they affect men, and that this creates first a change in gender roles in the economy, then a gender gap in political attitudes, and finally, on average, a change in the representation of women in parliaments.

THE KEY TO SCANDINAVIAN EXCEPTIONALISM: THE WELFARE STATE AS PROVIDER AND EMPLOYER

We argue that the reason Scandinavian parliaments in particular include so many more women, and the key to explaining why other coun-

9. Again, these macrolevel arguments do not speak at all to the microlevel mechanism through which the favorable or unfavorable conditions they describe are exploited by political actors. To say that PR or high FLFP or cultural egalitarianism smooths the way is not to discount the agency of women’s groups to push for greater gender balance. It is merely to say that such agency is more likely to bear fruit under certain macrolevel conditions, other things being equal.

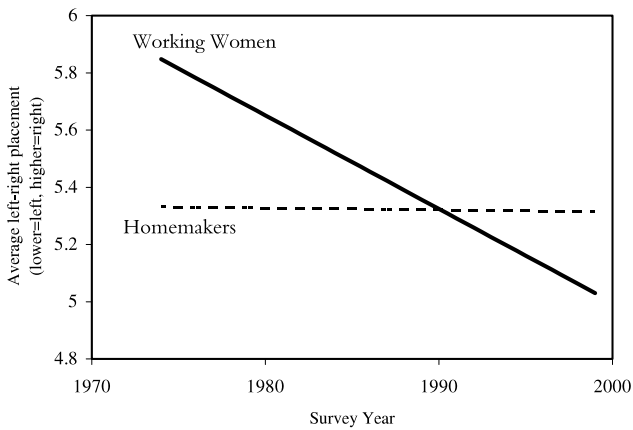


FIGURE 3. Leftward movement of women in Europe 1974–1999. (Source: Scholz and Schmitt 2001.)

the welfare state as an employer of women is an important part of its overall impact on representation. When female participation in the total labor force is low, the size of the welfare state has only a limited impact on representation, but female parliamentary representation is much more responsive to changes in the size of the public sector in societies with high female labor force participation. The statistical tests we introduce later lend further support to our argument about the importance of public sector employment on the gender gap, apart from the effects of public services or transfers. Governments may spend funds on a wide range of causes, and even high levels of spending may have little effect on female political preferences if they do not first enable women to achieve the labor force participation that gives them a set of economic interests separate from that of their husbands.

As Pippa Norris (1987) and others (Burgoon and Hiscox 2003; Inglehart and Norris 2000, 2003; Iversen and Rosenbluth 2006; Wolfers 2001) have shown, a gender voting gap has emerged in many democracies, with women moving steadily leftward over time. As recently as the 1960s, women were more likely than men to vote for the Right. The leftward shift in female voting tracks fairly closely the growth in FLFP. Thus, we argue that it is working women—particularly those in the public sector—who drive the gender gap. Once in the labor force, women value policies that make it easier to balance family and work. Figure 3 provides European survey data consistent with this proposition. Working women

have shifted dramatically leftward over time, while the political views of homemakers have barely changed at all.¹⁰

Exploring this variation cross-nationally turns up an interesting pattern and shows that the welfare state has some unexpected drawbacks for women. In weak welfare states such as the United States, the absence of wage protections has the effect of helping women get hired and promoted to managerial positions by spreading labor market mobility and career interruptions more evenly across the sexes. By making male workers more insecure, women have more opportunities to compete with men, resulting in relatively high female labor force participation and relatively low gender wage gaps. In stronger welfare states, by contrast, although wage compression reduces the gender wage gap by raising the wage floor on service sector jobs occupied disproportionately by women (Blau and Kahn 1996), wage compression and other forms of worker protection also reduce job opportunities for women. Employers who face legal obstacles to dismissing workers have an incentive to invest in the human capital of these workers. For employers who make the most productive use of labor, career interruptions mean more costly human capital investments. They compensate by avoiding the hiring of people expected to leave their jobs permanently or temporarily—more often women (Mincer 1958, 1985; Polachek 1981). The reason many women take low-paying service sector jobs is precisely because they have a harder time breaking into more remunerative careers. Job protections for unionized (mostly male) workers result in fewer women in the workforce, a greater gender wage gap, and more labor market segregation by sex (Estevez-Abe 1999, forthcoming; Estevez-Abe, Iversen, and Soskice 2001).

This is where Scandinavian exceptionalism comes in. Although Scandinavian countries also have the specific skills economies that increase the cost of career interruption, they have made up for this private sector bias against women by absorbing a large percentage of women into *public sector* jobs. Governments with an unstinting commitment to a large public sector are able to assuage the concerns of formerly male-dominated unions that accepting women into the union fold would dilute their benefits or security.¹¹ Scandinavian welfare benefits are comprehensive and universal, guaranteed as birthrights (Esping-Andersen 1990, 1999). With health, housing, and education no longer dependent upon income or

10. Unemployed women (in the workforce, but between jobs) are excluded here. Unsurprisingly, they tend to be the most left-leaning of all since they are most in need of government relief, and have also moved further leftward over time, but not as quickly as their at-work counterparts.

11. Note that we do *not* claim that the welfare state was designed *in order* to help working women.

Table 1. Female share of public sector employment and of overall employment

Country (Year)	Female Share of Public Employment (a)	Female Share of Total Employment (b)	Gap (a-b)	Percentage Gap ([a-b]/b)
Sweden (2000)	73.4%	47.3%	26.1%	55.2%
Denmark (1985)*	62.3%	44.8%	17.5%	39.1%
Canada (2000)	58.2%	44.4%	13.8%	31.2%
Finland (1985)*	58.9%	47.9%	11.0%	23.0%
Germany (2000)	53.5%	42.8%	10.6%	24.8%
France (1994)	53.1%	42.6%	10.5%	24.5%
Norway (1984)*	58.3%	47.9%	10.4%	21.7%
Italy (2000)	49.8%	39.5%	10.3%	26.2%
United States (2000)	53.7%	45.2%	8.6%	19.0%
Spain (1990)	36.6%	28.4%	8.3%	29.2%
Belgium (1992)	46.3%	38.9%	7.4%	19.1%
Netherlands (1999)	52.4%	46.0%	6.4%	14.1%
Austria (1997)	45.3%	40.6%	4.7%	11.6%
Ireland (1996)	44.2%	44.0%	0.2%	0.5%
Luxembourg (2000)	35.9%	37.0%	-1.1%	-3.0%

*From Alestalo, Matti, Sven Beislev, and Bengt Furåker 1991, "Welfare State Employment in Scandinavia," In *The Welfare State as Employer*, ed. Jon Eivind Kolberg (Armonk, NY: M. E. Sharpe, 51). All other data are from the Luxembourg Income Study (2000) and the Luxembourg Employment Study Database (2000).

even employment, workers are free to choose more leisure over more work, and to take extended leaves for family concerns.

Women have benefited even more than men from the "cradle-to-grave" support of the comprehensive welfare state, for two principal reasons. First, because the state has taken over many of the functions left to the family in more traditional liberal economies, women, as the traditional primary care providers for children and the elderly, are able to pursue employment in the formal sector. Second, and just as importantly, the welfare state, in order to provide these health, education, and welfare services, has become a major employer. Insofar as most of the new jobs are welfare state jobs, women tend to enter the workforce through the public sector. As Table 1 shows for a sampling of the countries of the Organization for Economic Cooperation and Development, the female share of the public sector is *significantly* higher than women's share of overall employment in all but two cases. And the difference is particularly striking for Sweden, where nearly three in four public sector

employees are women, compared to just under half of overall employment.¹²

Thus, not only does the comprehensive welfare state free women from household labor by “socializing” some formerly housewife-dominated services, it also creates jobs that are more likely to be filled by women. Jon Eivind Kolberg (1991, 140) shows that the net effect of Scandinavian public sector expansion in the 1970s and 1980s was not simply an increase in jobs for women, but also that this increase came partly at the expense of jobs for men: While female employment rose by 14%, 11%, 33%, and 21% in Denmark, Finland, Norway, and Sweden, respectively, the concomitant changes in male employment were -8%, -4%, -1%, and -5%, respectively.

Working women value the government subsidies of child care, elderly care, and school programs that free them from family responsibilities and that make their work in the marketplace possible. One result is the gender gap alluded to earlier. When a large number of those working women are employed by the welfare state, they also, of course, value those jobs. This deepens the gender gap, as the usual battle over how much the state should substitute for the market in the provision of services is leavened by the trade off between men’s jobs in the private sector and women’s jobs in the public sector. Table 2 provides further evidence that it is not just working women but *public sector* working women who drive the gender gap. Women in the public sector do indeed profess more leftist views than do women working in the private sector.

So working women come to support state spending and state employment, and become an interest group worth targeting. But how does this gender gap lead to an increase in female legislative representation? If the gender gap were seen to be irrevocable, and women could be treated as a “captured vote” by social democrats (unavailable for rightist parties), then one might think that there would be no incentive for parties to up the ante by nominating women to office. The story would end at the gender gap. However, when female labor force participation rates reach near half the workforce, and when there are several parties to compete for female voters, there is every reason for women to be offered not just policies but descriptive representation.

As we discussed in the second section, this is where we think the electoral system comes into play. Because PR allows small, geographically

12. Hagen (1991, 68) reports that in the early 1980s, women comprised 74%–80% of “welfare state employees” in Denmark, Norway, and Sweden.

Table 2. The political attitudes of female government employees versus female private sector employees

<i>Issue/Partisanship</i>	<i>Difference</i>	<i>p-value (2-tailed)</i>
Should the government . . .		
reduce inequality? (v16)	5.5	0.000
cut spending? (v19)	3.3	0.003
finance job creation? (v20)	2.0	0.022
spend more on pensions? (v30)	5.1	0.000
spend more on unemployment benefits? (v31)	1.5	0.224
provide a job for all who want one? (v36)	1.6	0.127
provide a decent standard of living for the old? (v39)	1.3	0.001
reduce income differences? (v42)	2.0	0.065
Party affiliation (223)	2.8	0.037
Vote choice (previous election)? (247)	3.0	0.077

Note: The numbers in the “difference” column represent the number of percentage points by which women working in the *public sector* were more likely to approve of these policies than were women in the *private sector*. Statistical significance was established using a standard difference of proportions test.

Source: Selected questions from International Social Survey Program (ISSP). INTERNATIONAL SOCIAL SURVEY PROGRAM: ROLE OF GOVERNMENT III, 1996 [Computer file]. Cologne, Germany: Zentralarchiv für Empirische Sozialforschung [producer], 1999. Cologne, Germany: Zentralarchiv für Empirische Sozialforschung/Ann Arbor, MI: Inter-university Consortium for Political and Social Research [distributors], 1999.

Participating countries in the 1996 survey include Australia, Bulgaria, Canada, Cyprus, the Czech Republic, France, Germany, Great Britain, Hungary, Ireland, Israel, Italy, Japan, Latvia, New Zealand, Norway, the Philippines, Poland, Russia, Slovenia, Spain, Sweden, and the United States.

dispersed parties to survive, and because large district magnitudes allow for the nomination of female candidates alongside male candidates (and not so starkly “in place of” male candidates), there is room both for women’s political organizations to play one party off against another and for parties to accommodate them through nomination.

So electoral rules should and do matter. But, as we have argued, a key prerequisite for women to be nominated, and eventually elected, is the demand for policies that comes from the move of women into the workforce. Where that move is through public sector jobs, the gender gap over issues is reinforced by a gendering of the traditional battle over big versus small government, and parties will be more likely to compete to show their allegiance to working women by offering them more and better places on the ballot. By contrast, where women’s welfare is linked first and foremost to their husbands’ income, or where women’s own income is not facilitated by state-provided jobs, the gender gap is smaller,

other things being equal, and working women have few special demands that are worth targeting to political parties.¹³

A STATISTICAL TEST

In this section, we provide an empirical test of the logic laid out earlier. We show that, on average, parliaments will include a higher percentage of women in countries with larger welfare states, measured either in terms of spending or in terms of public sector jobs. This controls for the other macrolevel variables that the literature has identified as important, namely, a permissive electoral rule (large-district PR), high female employment levels, and left-party strength. So over and above these control factors, the size of the welfare state matters. We also show that substituting a direct measure of the gender gap for the indirect proxy of welfare state size gives us similar results. We argue that larger welfare states lead to larger gender gaps, via the female-dominated public sector jobs they create and the female-liberating services that they provide. This gender gap, in turn, leads parties to put more women in parliament.

We note that our approach does not speak to the acts of individual or collective efficacy on the part of women struggling against the odds, and focuses instead on the variations in the structure of those odds. It cannot tell us the mechanisms by which the emergence of the gender gap is parlayed into party nominations of more women — whether the response by parties is top-down leadership, or instead a reaction to pressure from women's groups pushing for more representation. It cannot tell us anything about the tactics of such pressure groups, or whether local politics might matter at all. But abstracting away from these important micro-level details does not force us to assume a homogeneous pattern across all of our country cases. Put another way, our statistical analysis is about the supply side of the nomination process, about the conditions under which parties will be motivated to offer female candidates more and bet-

13. One anomaly is the United States, where the gender gap has been large since about 1980 (Seltzer, Newman, and Leighton 1997, 53), but has not induced parties to nominate more women for political office. We see at least two possible explanations. First, federalism might play a role. If the issues that women value more highly than men or that divide opinion by gender are those handled by local government, then it makes sense that we would see changes in local, not national, politics. We do know that female representation is higher in U.S. local politics than at the national level, but at this point the impact of federalism is purely a speculation. A second explanation might be America's two-party system, which lowers the incentives of either to nominate women in all but the safest partisan districts. The UK, Canada, and pre-1994 New Zealand (all plurality systems) have always had small third and fourth parties, but not the United States.

ter nominations. As for the demand side, all we can do is measure the gender gap (as a proxy for the size of the demand) and the conditions that produce that gap (welfare state jobs and spending).

The Dependent Variable

Our dependent variable is a nonlinear transformation of the percentage of seats in a country's lower house that are occupied by women. By using linear estimation methods, most previous research in this field has assumed (usually implicitly) that increases in female representation over time occur at a steady rate. Aside from the obvious objection to linear modeling of a percentage—namely, that linear predictions are not bounded at zero and 100—we believe that increases in female legislative representation really are nonlinear.

To justify the transformation detailed in the following, we draw on Richard Matland's (1993, 746–50) insights about the growth of female representation in Norway's Storting. Matland finds that the first steps away from a totally male dominated legislature were difficult and took place over a large number of years. He describes the first women in the Storting as “giants among men” who, against all forms of discrimination, won representation *despite* being women. He notes that this state of affairs later gave way to a “one is enough” policy at the regional level, where party lists were drawn up and then redrawn after some party official noticed “By Jove—we haven't got a woman!” (Matland 1993, 747). Token women were thus placed on the ballot partly because of their gender, but there was no guarantee that they would be given an electable position. Thereafter followed a steep rise in the level of representation, as parties endeavored to select and elect capable women to the Storting. Once representation reached levels of 30% and above, however, the pace of growth slowed, and the final steps toward parity were again painstaking.

Rob Salmond (2006) shows that similar patterns hold in Germany, Canada, and New Zealand, in which the first steps away from hegemony and the last steps to equality are much harder to take than the intermediate strides (see Figure 4). The slowing rate of growth during the 1990s in many of the high-representation countries, such as Finland and Denmark, adds further empirical weight to this idea that the growth of female representation is not linear, but S-shaped.

We therefore transform the dependent variable to model the growth of women's representation as S-curved, rather than linear over time. Specifically, we use the log odds of a given legislator being a woman, rather

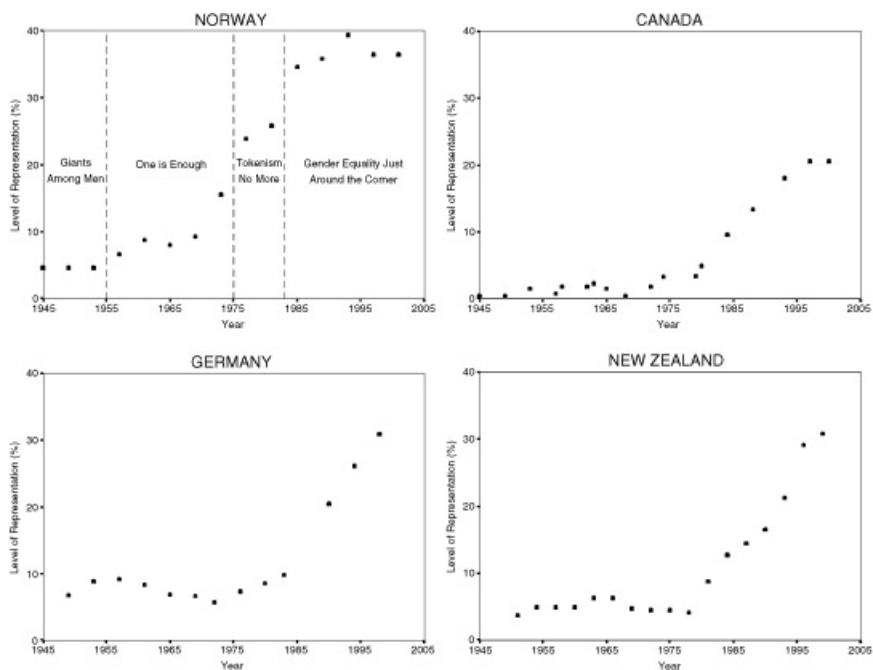


FIGURE 4. Women’s representation over time in four advanced democracies.

than the percentage. Using the percentage as a starting point, the log odds are calculated as follows:

$$\text{LOGODDS} = \ln\left(\frac{[\text{CONSTRAINT}]}{[\text{PERCENTAGE}]} - 1\right)$$

In this equation, the “CONSTRAINT” represents an ex ante researcher-imposed limit on the level to which the predicted value of the percentage can rise. In this study, we set that value at 50%, which would mean gender parity in the legislature—the almost universally agreed goal in this area of the feminist project. Our results, however, are in no way dependent on this choice.¹⁴ One consequence of the log-odds transformation is that it changes the “natural” signs for each of the independent variables in the system. If we expect a variable to be

14. We performed robustness checks, rerunning Model 4 of Table 3 with the constraint set at 30%, 40%, 60%, 70%, 80%, 90%, and 100%. Nothing significant changed.

associated with an *increase* in the percentage of legislators who are women, we would expect that variable to be associated with a *decrease* in the log odds of the percentage. We perform a simple linear transformation on the log odds, which has the effect of restoring the “natural” sign for the estimated coefficients. The dependent variable for the statistical tests is therefore:

$$DEPVAR = 1 - \left[\ln \left(\frac{[\text{CONSTRAINT}]}{[\text{PERCENTAGE}]} - 1 \right) \right]$$

Independent Variables

The two “new” independent variables that we bring to this literature are government spending as a percentage of GDP and a measure of civilian government employees as a percentage of the workforce.

The government spending variable is taken from the World Bank’s World Development Indicators (World Bank 2000). It is intended to measure (roughly) the size of a nation’s welfare state. This is, of course, an imperfect measure of the welfare state, given that other expenditures such as military spending are included. More precise measurements are not as widely available as overall government expenditure, however, and we are confident that total expenditure is strongly correlated with welfare expenditure (broadly defined to include, for example, public health-care, education, and child-care expenditure, in addition to traditional welfare payments). We expect that higher levels of government expenditure should be better for women’s representation in legislatures because welfare state policies that free women from previously held family duties provide increased opportunities for women to work outside the home in any field. Such policies also induce women to involve themselves in politics in order to protect the broad gender equity gains that welfare state policies achieve. Generous welfare state policies thus provide the motive and opportunity for women to enter legislative politics.

To test our argument about employment, we introduce a variable measuring the size of the (nonmilitary) public sector workforce as a percentage of the total. We would have liked to use the female public sector workforce as a percentage of the total workforce, but sufficient data are not available. We expect this public sector employment variable to be positively associated with levels of representation because 1) women in public sector jobs are shielded from statistical discrimination against

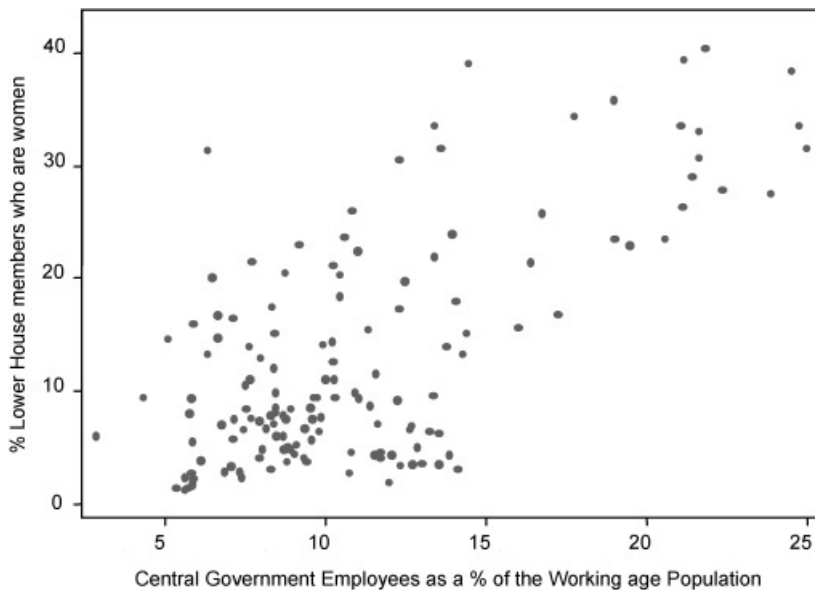


FIGURE 5. Government employment and female representation in parliaments.

hiring women in specific-skills economies; and 2) public sector employees have a greater stake in defending the welfare state that employs them.

In the third section, we argued that welfare states are conducive to women's representation in parliament, and especially so when the welfare state itself employs a lot of women. These two variables allow us to test empirically those two hypotheses. Initial bivariate analysis suggests that there is indeed a relationship between large welfare states and high levels of female representation, measured either in terms of government expenditure (Figure 2) or government employment (Figure 5). The other independent variables are the established covariates of female representation. Most have been examined thoroughly in previous literature on this topic, and so are not subjected to extensive description here. Others have noted that the electoral system, leftism, assembly size, dates of suffrage,¹⁵ and FLFP have impacts on levels of women's representation, and we include variables to capture each of these.

15. All countries did not start nominating women at the same time, and so "year of suffrage" is used to control for the time at which a society started to confer political rights on women.

Methods

Most earlier studies on this topic use purely cross-sectional data and linear estimation methods. We discussed earlier why the assumption of linearity is troubling, and how and why we adopt a nonlinear S-curve model of female legislative representation. Cross-sectional data is also inferior in this context, and in this study we rely on a panel data set covering up to 240 elections¹⁶ in 21 advanced industrialized countries.¹⁷ This allows us to test causal mechanisms while controlling for the autocorrelation caused by such factors as incumbency advantage and cultural acceptance. The cross-sectional studies in this field are unable to account for this important phenomenon. Finally, we use panel-corrected standard errors in our estimations, along with a common-pool correction for autocorrelation (Beck and Katz 1995, 1996).

Results

We report our results in Table 3. In Model 1, we replicate (albeit with cross-section, time series data) a common regression from earlier studies in this area. Our data set provides very familiar results, with high district magnitudes, leftism, and high levels of female labor force participation all being associated with high levels of women in parliament. This gives us confidence that the pooling of several countries into one data set is not artificially “creating” results that are inconsistent with past research.

In Models 2 through 4 we introduce our new variables. Both variables perform well, reaching statistical significance in the expected direction in all models where they are included. Increases in government expenditure are consistently associated with increases in female legislative representation. Note that this result controls for leftism and labor force participation, suggesting that there is something more to the explanation than these variables alone. Our theory provides that “something.” Note also that the inclusion of the government expenditure variable knocks out the significance of the leftism variable, a “usual

16. To take *annual* observations of female representation would falsely inflate the number of observations (e.g., the share of women in the British Parliament in 1980, 1981, and 1982 was entirely determined by the election of 1979—these would not be independent observations but, rather, four recordings of the same observation).

17. We collected data on levels of female representation for 366 elections in 23 countries since World War II, but the availability of some independent variables, particularly those collected by the World Bank, is very limited prior to 1970. Hence, the smaller sample.

Table 3. What explains variations in female legislative representation?

Estimation Method	(1)	(2)	(3)	(4)	(5)
	Time Series Cross-Section Regression with Panel-Corrected Standard Errors and Common ARI				
Dependent Variable	1-(Log Odds of Percent MPs Who Are Women)				
Constant	14.545**	4.754	6.382	-1.887	15.852
p-value	0.006	0.463	0.238	0.751	0.146
Left strength	0.008***	0.004	0.007**	0.003	0.013***
p-value	0.000	0.158	0.006	0.262	0.000
Log(Assembly size)	-0.598***	-0.622***	-0.582***	-0.678***	-0.394**
p-value	0.000	0.000	0.000	0.000	0.007
Log(DM)	0.288***	0.255***	0.286***	0.249***	0.267***
p-value	0.000	0.000	0.000	0.000	0.000
Year of suffrage	-0.009**	-0.004	-0.004	-0.001	-0.009
p-value	0.002	0.218	0.148	0.936	0.115
Female labor force	0.117***	0.136***	0.077***	0.106***	0.081***
p-value	0.000	0.000	0.000	0.000	0.000
Government expenditure		0.019**		0.019***	
p-value		0.001		0.000	
Public sector workforce			0.074***	0.046***	
p-value			0.000	0.000	
Gender gap					0.719*
p-value					0.028
Adjusted R ²	0.680	0.690	0.734	0.752	0.763
N	240	175	191	135	108

• The dependent variable is (one minus) the logged odds of the percentage of lower house parliamentarians who are women.

• “Left” measures the percentage of seats in the lower house that are controlled by leftist parties. The Castles and Mair (1984) research, supplemented by Swank (2002), provide the coding for leftist parties.

• “Log(Assembly size)” is the natural log of the number of seats in the lower house of parliament or congress.

• “Log(DM)” is the logged value of the average district magnitude across the country. For two-tier PR systems, a weighted average of the “two tiers” district magnitudes is used. For mixed-member systems, the DM of the higher tier was used because the overall length of the electable party list is the most important thing for women’s representation. This variable acts as our measure of electoral systems.

• “Year of suffrage” measures the year in which full voting rights were extended to women. This ranges from 1893 in New Zealand to 1971 in Switzerland.

• “Government expenditure” measures total government spending as a percentage of GDP.

• “Female labor force” is the percentage of the total labor force who are women, as collected by the World Bank. Again, and in line with the existent literature on this topic, increased female participation in the labor force should lead to increased legislative representation.

• “Public sector workforce” is the percentage of the nonmilitary workforce employed in the public sector.

* significant at the .05 level; ** significant at the .01 level; *** significant at the .001 level.

suspect” in much of the previous research on this subject. We will return to this in a moment.

The results for the government expenditure variable support our proposition that countries with large welfare states have more female MPs. The size of the public sector *workforce* also appears to be a significant predictor of female representation in parliament. We have argued

that the size of the public sector workforce matters for women's representation because women in public sector employment drive the gender gap that parties seek to exploit by nominating more female candidates. The way we have operationalized our model, with separate measures of the employment and policy implications of welfare states, isolates the public sector employment of women that, we argue, leads to high representation levels. The results in Table 3 provide support for this public sector employment hypothesis. Table 3 also shows that all of the usual suspects from previous literature perform well, with the notable exception of leftism. Electoral systems with large district magnitudes are significantly more conducive to female representation than those with small district magnitudes. Countries with high levels of female participation in the labor force evince higher levels of female legislative representation than do those with low FLFP. These patterns are consistent across all four models in the table.¹⁸

The result on leftism appears at odds with conventional wisdom (although it should be noted that Matland [1998] also found no results on this variable), but it is more of a clarification than a refutation. First, since leftism loses its significance when we control for government spending, this indicates that the primary mechanism by which left governments affect female representation is *through spending*—by way of egalitarian public policy and employment of women in the public sector—rather than through a greater likelihood of leftist parties nominating women per se. Earlier studies that included a leftism (or rightism) variable but excluded any measure of the welfare state conflated these two effects.¹⁹

To check the robustness of our results, we reran Model 4 of Table 3 46 times, each time excluding one country or one year—to ensure that the results are not being driven only by a small subset of the observa-

18. Another consistent result, at odds with previous work, is that larger parliaments include fewer women than smaller parliaments. Further analysis shows that the impact of the assembly size is not simply indicative of population size. Just to be sure, we reran the main analysis without the assembly size variable to check the robustness of our main findings. Both of our new variables retained their sign and size, and statistical significance.

19. Second, any direct (non-policy-based) effect should be transitory. Matland (1993) details how the leftist parties in Norway led the charge in terms of nominating women and how other parties, fearful of losing votes, followed suit. If Matland's story is applicable more generally, then it seems that in equilibrium, every party will converge in terms of gender balance. Remember also that the equilibrium before feminism was that no party had any women on its list. Purely cross-sectional studies may find large but inflated results for leftism. The more nuanced analysis that this study's panel data set allows, however, shows the over-time weakness of the effect.

tions. In all cases, both the public sector workforce variable and the government expenditure variable retained their sign, size, and significance. These robustness checks, in conjunction with the robustness checks using different specifications of the dependent variable as reported in note 14, together provide strong support for our main results.

Earlier, we argued that increases in the size of the welfare state, and especially increases in the state's role as an employer, would lead to a gap emerging in the partisan preferences of men and women, with working women increasingly favoring leftist policies that enshrine large and comprehensive welfare states. We hypothesized that this gender gap precipitates a competition between parties of the Left and the Right to provide descriptive representation for women. If this theory is correct, then columns two through four of Table 3 exclude an important intervening variable—the gender gap. If the gender gap is the mechanism through which the welfare state matters for female legislative representation, then adding a variable measuring the gender gap to the regressions should swamp the coefficients on the two welfare state measures.

To measure the gender gap, we rely on a compilation of the Eurobarometer surveys compiled by Evi Scholz and Hermann Schmitt (2001) that cover the period 1973–99, along with national election studies from the United States, Canada, and New Zealand. We calculate, for each country and each available year of survey data, the difference between the average self-placement of women on a 10 point left–right ideological scale (rescaling 3, 5, and 7 point scales where needed) and the corresponding average for men. Positive numbers indicate that in a given country and year, women are, on average, more left wing than men, while negative numbers indicate that men are more left wing than women. We expect that as this measure of the gender gap rises, the dependent variable should also rise, and therefore expect a positive coefficient on the variable.

The last column of Table 3 repeats Model 1, this time adding our gender gap variable to the regression system. As expected, this new variable is a significant predictor of increases in the descriptive representation of women: As women move to the Left, relative to men, female political representation goes up. If the gender gap is, in fact, the mechanism by which the expansion of the welfare state leads to greater female representation, then an omnibus model including both welfare state and gender gap measures ought to show that the former become insignificant in the presence of the latter. Unfortunately, data deficiencies would

reduce our sample size to only 69 country-years,²⁰ and the sample shrinkage overwhelms any attempt to test these hypotheses in this indirect way.²¹

CONCLUSION

Our principal claim in this study is that the size of the welfare state has two important roles to play in promoting female participation in legislatures. The welfare state promotes representation first by partially “socializing” formerly housewife-dominated services and, second, by acting as a large-scale employer for women. These women are motivated to defend and expand the welfare state, and as they become a large, distinct political constituency, parties become more likely to appeal to them via descriptive representation. This claim links the hitherto parallel fields of women’s representation and political economy. Our results on the welfare state also shed light on *how* leftism impacts female representation.

Women’s interests in the welfare state, both in terms of policy programs and direct employment, lead to a gender gap in ideological self-placement, with working women, especially those in the public sector, leaning further to the left of men. We argue that this gender gap leads political parties to compete for the female vote, using carrots that, under certain conditions, include more female candidates on the ballot. If voters were to show no sign of splitting along gender lines, gender would not become a significant cleavage for politicians to exploit. The gender gap, which we know increases with the expansion of the welfare state, and particularly among women in the public sector, is a key part of our story.

Our theory about the welfare state is broadly confirmed across rich democracies, but female representation varies considerably on account of the trade-off between labor market institutions that inhibit female participation (wage compression) and the countervailing government policies that promote it (public sector employment and other social

20. We did run this model with an N of 69 and found what our theory predicts—that “gender gap” absconds with the explanatory leverage otherwise carried by government expenditure and public sector employment. But the dramatic change in sample undermines our confidence in this result. The Eurobarometer and national election surveys, which provide the best internationally comparable measures of gender and ideology, are unavailable in any countries before the mid-1970s, and for some European Union countries until the mid-1990s. The government expenditure and employment data, from the World Bank, also have only limited availability (see note 17).

21. More direct tests of the hypothesis that the gender gap is the mechanism linking the welfare state to female parliamentary representation are beyond the scope of this study. Future research could include surveys asking female voters directly what drives their vote choices, as well as content analysis of party platforms and campaign literature to code appeals to working women.

programs). So neither is female labor force participation the whole story behind the gender gap nor is public sector employment merely instrumental in raising FLFP. If that were true, the public sector coefficient would drop out once we control for working women. Women employed in the public sector enjoy a combination of flexibility in working hours and job security that only a public employer can afford to provide. These women have a larger stake in the welfare state than either private sector women, who have internalized some of the costs of career interruption, or public sector men, for whom substantial career interruption on account of family work is less likely.²²

One implication of our research is that female parliamentary representation and welfare state policies are mutually reinforcing. Women, because of the gender voting gap and their greater participation in government, have the means and motive to protect and even expand the welfare state. However, if governments feel compelled to retrench the welfare state for other, exogenous reasons (for example, on account of overstretch due to aging populations or structural economic downturn), our research also implies that this should bode ill for female representation.

While we believe that the expansion of the welfare state has been instrumental in promoting female legislative representation, it is not the only path to this end, nor does it imply that a wait-and-see approach is necessary or desirable. Some countries have “fast-tracked” female representation by adopting mandatory gender quotas for party nominations without experiencing the long history of welfare state spending and feminist activism of the Scandinavian countries (Dahlerup and Freidenvall 2005). We have offered an explanation for why political parties in Scandinavia were motivated to accommodate women’s preferences at that particular time, but emulation, political entrepreneurship, and party competition, at least in PR systems, may be able to achieve similar results with far less delay.²³ Women in single-member district systems may have a bigger challenge.

22. One anonymous reviewer suggested an intriguing refinement of our logic, that it is not just working women (or even public-sector working women) who drive the gender gap, but that it is working *mothers*. This is consistent with our understanding of the benefits that the welfare state provides, and is consistent with our argument, in that public sector jobs, with their general-skills orientation and more flexible approach to leaves of absence, etc., are more attractive and accessible to working mothers than are private sector jobs. Unfortunately, we do not have the data to further parse the policy and partisan preferences of female workers by both sector *and* motherhood.

23. To cite gender quotas as somehow explanatory, or to advocate their enactment, begs the very question that this literature seeks to answer—what motivates the men who run political parties to change the rules to include more women? Gender quotas will not appear simply because they are suggested. The conditions under which they are enacted is something to explain.

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