Work and Power:
The Connection between Female Labor Force Participation and Female Political Representation

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1. **Introduction**

Over the past thirty years, female representation in the world's legislatures has increased in tandem with the rise of women in the labor force. [figure 1] As the literature suggests, there are a number of reasons why this might be so: on the demand side, voters who are accustomed to women in the workforce may be more open to women in political leadership roles as well; on the supply side, professional women with good education and managerial experience are more likely to be viable candidates; or more broadly, changes in social mores can lower the barriers to women in both the economic and political realms simultaneously. As parents increasingly begin to prepare their daughters for professional careers, gender norms become less differentiated and so presumably do any reasons to prefer men over women for political jobs.

Our exploration of the data finds support for all of these contentions up to a point, but none of the explanations on offer makes sense of the fact that, broad trends notwithstanding, female political representation falls far behind women's advances in the labor market in some countries such as the U.S. We account for the otherwise puzzling variation in how female labor force participation maps onto female political representation by considering political representation as a labor market in its own right. Because women are more likely than men to interrupt their careers for childrearing and other family work, women are disadvantaged in labor markets -- including the market for representation -- where there are increasing returns to specific human capital. Because women are, statistically speaking, a bad bet as someone who will invest in a lifelong

career, women are less competitive for careers that place a premium on skill acquisition on the job and that therefore reward seniority. The U.S. case is illustrative: whereas labor markets in the U.S. are generally fluid and make little use of firm-specific skills that accrue value over time, the U.S. Congress is famous for a link between seniority and legislative effectiveness. It is primarily for this reason, we suggest, that American women have substantially higher representation in the private sector labor markets than in Congress. The situation is reversed in the proportional representation countries of Europe: the private sector labor market is generally more rigid and reliant on workers with specific (ie, not easily transferable) skills, giving firms an incentive to hire and promote men in whom to invest over an entire career, whereas female labor political representation on party-controlled lists is unimpeded by the need for personal effectiveness and hence seniority. In these countries (outside Scandinavia, about which we will say more), the numbers on female political representation are more impressive than the percentage of women who work in the private sector. [Figure 2: FLFP and political representation in the US vs PR countries]

We suggest that the nature of the political market is a powerful intervening factor in voters' demand for female politicians. On the one hand, higher female labor force participation increases the demand for female representatives because working women have different preferences than their husbands, and parties respond to this shift in voter preferences by signaling attentiveness to these concerns by fielding female candidates. On the other hand, however, even female voters may prefer to elect a man in a system that rewards seniority because a man is likely to stay longer in office, acquire more

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experience, better committee positions, etc., and therefore to be more effective in representing their interests. Because of these countervailing concerns, we expect female political representation to be lower in systems with a personalistic bias and hence a premium on the representative's seniority, holding female labor market participation constant.

The rest of the paper is organized as follows. Section 2 reviews the existing literature on the link between labor markets and political representation. Section 3 sketches out our argument in greater detail, laying out testable hypotheses. Section 4 presents our empirical results, which is an examination of pooled cross sectional-time series data for 23 countries, examining the causes of both cross-national and intertemporal variation. It shows in a very unambiguous way how the effects of structural forces of change, especially rising female labor force participation, are conditioned by electoral rules and the different role of political parties.

2. Women in Labor Markets, Women in Government: A Literature Review

In this section we review existing explanations as to why, and the extent to which, work experience is relevant to female political representation. First wave feminism, represented by the work of J.S. Mill and Harriet Taylor Mill (1869), of course predates the question of how female labor market participation affects female political representation. But the Mills' normative analysis points towards an expectation that females would not bother to inform themselves if they did not have the ability to vote,

and that voters would not want female political representation unless females were full participants in society, with knowledge and experience relevant to the full range of issues that concern voting citizens.[1] The Mills decried British coverture laws, under which fathers or husbands owned the labor of dependents including wives. As long as women are not allowed to own their labor, they argued, women lack the motivation or capacity to be morally responsible. Without resources of their own, females connive to get what they want from males, and being disenfranchised they have no incentive to become informed and constructive citizens. We can imagine, by extension, that the Mills would have expected female labor force participation to increase female representation by making women more informed about their interests and more capable of acting on them.

"Second wave" feminists (Friedan, Hochschild, Hartmann) pointed out that legal rights, championed by the Mills and others, did not guarantee gender equality in the labor market, and one might think that sexual discrimination barred females from advancing in economic and political realms at the same time (Hill 1981). While generalized sexual discrimination was doubtless a hampering factor to women in every area of endeavor, women in recent decades have nevertheless joined the workforce as demand for female labor has risen, principally in the service sector where male brawn does not command a premium (Iversen and Rosenbluth 2007). Indeed, Rindfuss, Brewster, and Kavee (1996) have shown that, in the U.S. from the 1960s to the 1990s, attitudes towards women's roles have liberalized after women joined the workforce—rather than changing in advance and leading the way for female labor force participation.

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[1] This argument has an Aristotelian flavor, which also infuses the work of Sen (1990) and Nussbaum (2001), although Aristotle himself thought that women ought to stay home in the private sphere. See Swan, 1994.

Demand side explanations of female political representation focus on how women in the labor market have changed voters' preferences, pulling female political representation along with a lag. There are, in turn, several mechanisms through which changes in attitudes could make it easier for female politicians to win elections. Once public opinion loosens its attitudes towards appropriate levels of gender specialization, and traditional gender roles, the public is less resistant to voting women into public office. For sociologists such as Janet Saltzman Chafetz (1990), wage labor increases the status of women, which influences women's effectiveness in garnering power in other realms of society, including politics. This view emphasizes a lessening of anti-female discrimination as an enabling condition for female political success, but it is also possible that women's preferences themselves change as women enter the labor force. Not only are working women more likely to vote (Welch 1977), but working women are also more likely to vote on the left (Inglehart and Norris, 2003). Elsewhere (Iversen and Rosenbluth 2006), we have argued that women who work outside the home are more likely to develop policy interests that are distinct from their husbands' as they face new challenges trying to balance family and career. Once working women constitute a sufficiently large group of voters, political parties may be motivated to increase the number of female candidates as a signal to working women voters that they are taking those interests seriously (Rosenbluth, Salmond, and Thies 2006). Other political scientists such as Michael Ross (2006) put the emphasis on female collective action:

working women are more likely to form organizations, by virtue of reduced transactions costs, to advance their common interests.[2]

The U.S. case, with its simultaneously high levels of female labor force participation and low political representation, presents demand side arguments with a sharp challenge. Either female labor force participation has not reliably changed preferences, or other factors intervene to impede female political representation.[3] Two decades ago, Uhlaner and Schlozman (1986) found no discernible difference in the campaign receipts of male versus female candidates, once controlling for whether the candidate was an incumbent or a challenger. These results are replicated for the UK case (Welch and Studlar 1987, 1996, Lovenduski and Norris 1993, Mackay 2004) and more recently, Smith and Fox (2001) found that women do better in U.S. open seat elections than when they were challenging seated incumbents. It seems that female candidates are failing to run more than voters are refusing to elect them.

If voters' views towards women seem unable to account for cross national patterns in female political representation, we might consider supply-side explanations that focus on the availability of qualified female candidates. Lane Kenworthy and Melissa Malami

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[2] Marx and Engels (1848), of course, made a similar argument about wage workers in a capitalist society.
[3] Sanbonmatsu (2002) finds persistent gender stereotypes in the U.S. in the sense that voters who think men are better able to handle crime and foreign affairs are likely to prefer male candidates, and conversely, voters are drawn to female candidates if they like the issue positions that females are stereotypically associated with, such as education and healthcare. Based on a telephone survey in Ohio in 2000, she finds that these stereotypes tend to fall along gender lines: women voters have a probability of .44 of preferring the female candidate whereas men have a .55 probability of being neutral, a .30 probability of preferring a male candidate, and a .15 probability of preferring the female candidate (Sanbonmatsu 2002: 27). But there is no evidence that stereotypes are at the heart of the difference between the U.S. and continental Europe where female political representation is considerably higher. If anything, socially conservative attitudes towards the male breadwinner model are even stronger in non-Scandinavian Europe than in the U.S. See Rosenfeld, Trappe, and Gornick 2004 or Pfau-Effinger 2004.

(1999) have argued that the relevant work experience for political careers is managerial and professional work rather than labor market participation more generally. Based on comparative statistical analysis, they find that women's share in professional occupations correlates significantly with the female proportion of parliamentary seats. Notably, they find little correlation between women's overall participation in the paid labor force and female representation. Schlozman, Burns, and Verba (1999) take a similar view, arguing women's labor market numbers may have muted effect on political participation because women are less likely to be in full time jobs that demand education and training that is crucial for political careers.

These findings resonate with studies by Oakes and Almquist (1993) and Matland (1998), which find little connection between female labor force participation and female political representation in agricultural economies in which large proportions of women work in the fields. Matland suggests that subsistence-level primary sector work in the developing world is unlikely to have an "empowering and consciousness raising effect" that would make these women seek a direct political voice (Matland 1998: 118). Kenworthy and Malami would probably agree, though they are specifically concerned with what kinds of work are conducive to political candidacy, for either men or women.

Kenworthy and Malami's data are compelling evidence of a supply side effect, but the broad-strokes picture leaves some jarring anomalies, including the U.S. case. There are more professional women -- by which they mean lawyers, educators, journalists, and business professional -- in the U.S. economy than in any other economy in the world.

And yet, female political representation in the U.S. is notoriously low. The scholarly consensus blames the single member district system (Studlar, McAllister, and Ascui 1988; Norris 1993; Rule and Zimmerman 1994), and we agree, but relatively little is known about the mechanism by which plurality rules harm female candidates.[4] In the section that follows, we propose a way to think about the labor market attributes of political careers. This leads us to consider not only district magnitude, but the variety of ways that electoral rules may increase returns to seniority, thereby disadvantaging women because of their greater likelihood to interrupt their careers for family work.

3. Electoral Rules, Parties, and the Demand for Female Representation

Political scientists are accustomed to thinking of elections as the principal means by which voters keep politicians in check (Schumpeter 1951; Ferejohn 1986; Przeworski and Stokes 2002), and of variation in electoral rules as central to the way societal preferences are aggregated in shaping public policy (Cox 1997; Carey and Shugart 1993; Iversen and Soskice 2006). If principal-agent relationships between voters and their representations were well structured and frictionless, female political representation would not matter, since politicians would aim to construct and implement policies that the electorate favors. For now, we set aside the question of how policies would differ if representation were more proportional to gender, and note only the obvious fact that the extraordinary under-representation of women in many countries is beyond ratios that could happen randomly if everything about male and female candidates were equal.

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[4] Rob Salmond (2006) points out that proportional representation rules do indeed appear more permissive of female representation, but that there is an S-shaped curve of female representation in PR countries ranging from "tokenism" at the low end to equality at the high end. He does not attempt an explanation of why PR countries array themselves along this curve, or if there is an ineluctable logic pushing upwards.

We have reviewed a variety of ways male and female candidates have been thought by the scholarly literature to be unequal, from general discriminatory attitudes towards women in leadership roles to the unavailability of qualified female candidates. Without denying either attitudinal factors or the supply of suitable women candidates, we suggest that both of these may be at least partly endogenous to incentives created by electoral rules that govern women's chances to perform their jobs well. To the extent that political representation entails the use of human qualities and capacities that are found equally across males and females, we should expect both sexes to be represented in rough equality over time and place. Any deviation from rough equality is likely to entail some forms of voter discrimination or barriers to entry. But presumably voters and parties alike maximize their policy preferences by choosing the most competent candidates, and why should competency be related to gender? Or more precisely, why should gender matter even after taking account of female labor force participation, career patterns, and education (which is likely to affect preparedness for political careers)? We suggest that the reason is to be found in the kind of human capital investment that political careers presuppose and that men are in a better position to undertake. Because political systems differ systematically in terms of the type of human capital needed for effective representation, we should expect males and females to be elected into office at different rates.

Our logic rests on the insight by labor economists Mincer (1962, 1974) and Polachek (1975), who argued that when labor productivity rests on specific human capital, workers

who interrupt their careers (such as, for example, child rearing or other family work) will be less valuable to their employers. Employers who utilize production methods that make use of specific human capital either should avoid hiring women, stunting female employment rates, or should pay females at lower rates to reflect their lower expected value to the firm, generating a gender wage gap. The implication of their work is that the actuarial difference in leave rates taken by females compared to males can generate "statistical discrimination" where otherwise negative stereotypes do not exist.

The Mincer/Polachek prediction seems to be borne out in a number of empirical studies of labor markets that show that female labor force participation rates and/or gender wage equality, all else equal, tend to be higher in liberal market economies where labor markets are relatively fluid because there is a lower expectation of returns on long term investment in specific human capital (Estevez-Abe, Iversen, and Soskice 2001; Estevez-Abe 2002; Iversen and Rosenbluth 2006). In coordinated market economies, where firms expect to hold employees throughout a long career, females are at a disadvantage because they are known to be more likely to interrupt their careers and thereby reduce the return to firms' investments in their human capital. It is impossible to ignore the paradox, or perhaps political dilemma, that labor market policies designed at least in part to protect the worker from mercurial dismissals and from business cycle vagaries in fact systematically undermine the competitiveness of females relative to males in one fell swoop.[5]

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[5] Since the 1970s, the Scandinavian countries avoided the trade off by hiring women in a large public sector, where the costs of career interruption could be socialized.

We suggest that there is a parallel phenomenon in the labor markets for elected officials as well. Specific human capital, proxied by seniority, is more electorally valuable in some political systems than others. For our purposes, the key dimension on which electoral systems differ is the degree of intra-party competition required for electoral success (Cox 1987). Where members of the same party must compete with one another to win the party's nomination, such as in party primaries, or compete with one another in the election itself, such as in multi-member district systems, politicians contest elections by making personalistic appeals to voters. In these systems, seniority is a valuable tool with which to take credit for government resources that can be dispensed to constituents in building a personal following. By contrast, where party leadership is centralized and elections are contested on a common party platform, the reputation of the party and the strength of its platform take on greater importance than the popularity or pledges of the individual candidate. Seniority (and other ways to access money) are less valuable assets in strong party systems than in systems where politicians must ensure a personal following that extends beyond partisan loyalties.

If our analysis is right, it should come as no surprise that female political representation in the U.S. is lower than theories based on voter demand or candidate supply would suggest. Electoral politics in the U.S. begins with primaries in which candidates must compete against co-partisans. While party discipline is by no means absent in the U.S., it is certainly weaker in presidential systems generally than in parliamentary systems where the constant possibility of no-confidence votes binds together the political fates of co-partisans. Seniority, and the possibilities of constituency service it entails, is guarded

jealously in systems where the party's platform does not overwhelm other possible strategies for electoral success. Whatever one thinks about personalistic versus party-based electoral competition, the consequences for female candidates may be as damaging in the political arena as we have seen it to be in private sector labor markets.

More generally, when effective candidates have to develop long-term ties to their constituents and to other politicians, women are at a disadvantage. Some will, of course, make the necessary sacrifices, but women are less likely to do so and statistical discrimination – the use of gender as a cue for your vote when information is incomplete -- will magnify the problem because parties cannot know the true types among first-term candidates. The bias is affected by two related factors. First, single member districts, or similar electoral rules that emphasize close ties to constituencies, place a premium on long tenure because the effectiveness of legislators in delivering goods to their constituencies depends on membership in important committees and the ability to make credible bargains with other politicians, both of which are a function of seniority and the prospects of reelection. Because men can more credibly commit to long and continuous careers they are more likely to be elected and reelected, which increases their legislative effectiveness, and hence their reelection chances, etc. Second, weak parties mean that individual candidates cannot rely on the party label to lift them above the electoral threshold. Instead, as emphasized by Carey and Shugart (1995), they have to cultivate a personal following that again puts a premium on seniority and the accumulation of political capital. In turn, weak political parties, as is well understood, are associated with presidential systems where the ability to hold on to executive power does not depend on

strong party discipline. Strong parties are associated with parliamentary systems, except where a single party has such a dominant position that it does not dependent on strict discipline (as in the case of the Italian Christian Democrats or the Japanese Liberal party before the 1990s).

PR with large districts, or smaller districts where votes are pooled across candidates, produces a very different dynamic that is more conducive to female representation. There is little incentive for individual candidates to cater to local constituencies, and the party label becomes much more important in winning elections than the appeal of individual candidates. Likewise, programmatic parties will place more value on candidate loyalty to the party's platform, which in turn incentivizes them to nominate and promote politicians with relatively little independent political power – often with an eye to the symbolic value of adhering to norms such as gender equity. Voters always want effective candidates, of course, but what an effective candidate is depends on the political system. Where the party label is of great electoral consequence, women are in no particular disadvantage since representatives (at least the backbenchers) are mostly asked to simply promote policies and vote for them when bills are sent to the floor. Parties can thus respond relatively easily to demands for gender equality (though perhaps less so at the leadership level).

In the next section, we develop these propositions empirically and test them on data from 23 advanced democracies beginning in 1945 (or at the inception of democracy if later).
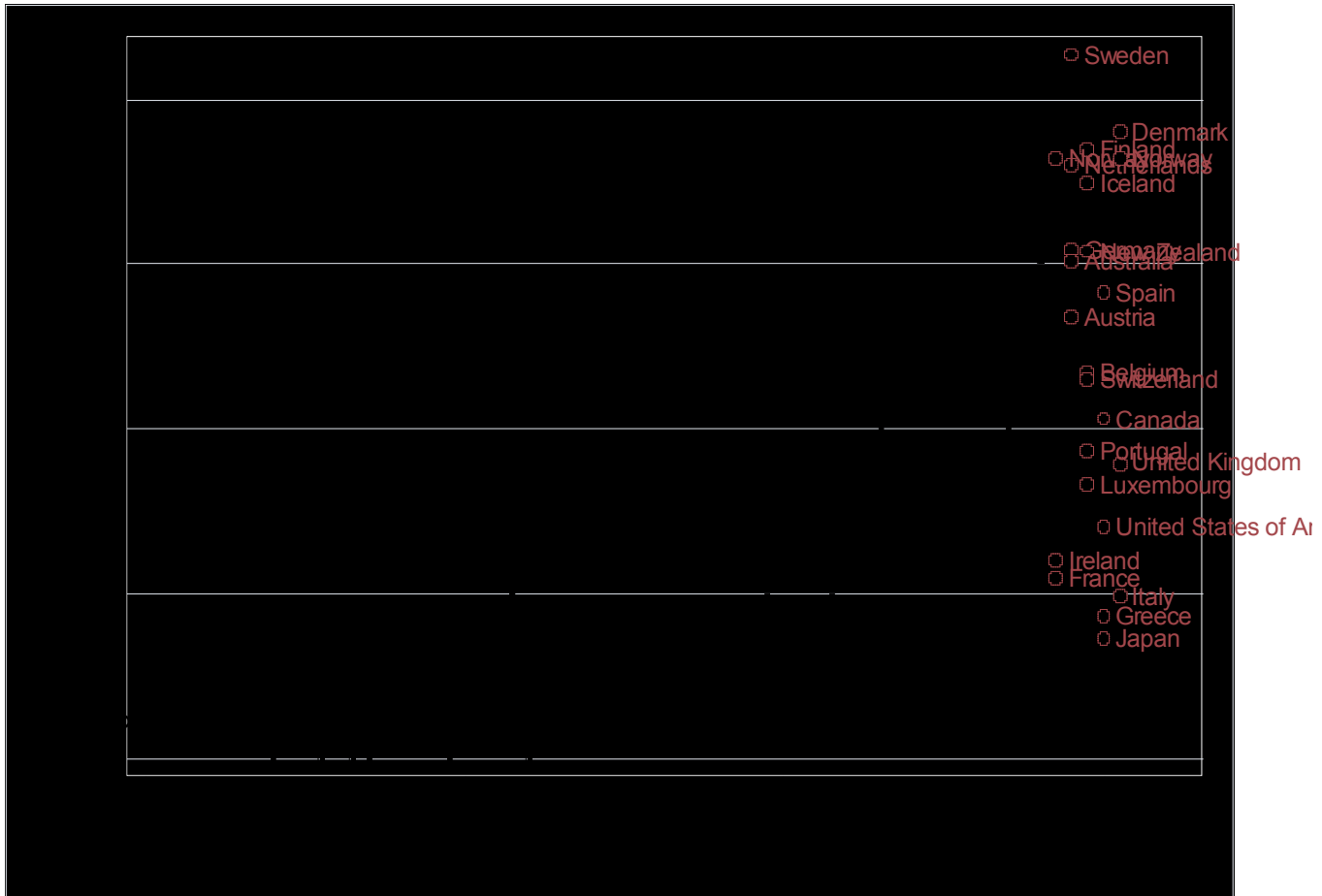
4. Empirical Analysis

The dependent variable is the share of seats in national legislatures held by women, using legislative sessions as the unit of observation. Since nearly all the institutional variation is cross-cross, the effects of these mainly in differences across countries. We do, however, consider possible explanations for the cross-time trends, and we show that while female labor force participation and the rise of services have driven up female representation everywhere, this rise has been powerfully conditioned by the design of electoral institutions.

Figure 1 shows the share of female seats in the lower house of national assemblies across 23 democracies and approximately 55 years. One is struck by a notable rise in representation over time from an average of about 5 percent immediately following the war to about 25 percent around 2000. But the cross-national differences are also large, and they have been increasing sharply over time. Thus, whereas the range is less than 10 percent in the first observations after the war, in the most recent the female share of representatives varies from a mere 7 percent in Japan to near parity in Sweden.

Clearly the inter-temporal variance cannot be explained by changes in political institutions, which have been modest and quite recent where they have occurred, but it is entirely possible that institutional differences have attenuated or magnified the forces of change that have caused female representation to rise everywhere. Along with others we have emphasized two key forces of change in related work (see Iversen and Rosenbluth

2006 add more refs). One is entry of women into paid employment caused by the

postwar economic boom and the rise of services (as well as the associated rise in divorce

rates and public provision of daycare). As women enter the labor market they become

part of networks and organizations (such as unions) where they are more likely to be

Figure 1. Female share of legislative seats in 23 democracies, 1945-2000.

exposed to political discussion and advocacy, which in turn encourages interest and

involvement in politics. Some will also acquire skills through their work that are also

useful for political careers. Although the number of women who end up running for

national office is very small, most are recruited among those who are active in the labor

market, so representation will likely rise with labor market participation. There may be a

significant knock-on effect as women increasingly complete university degrees, which

are important assets for launching successful political careers.

The second force of change the rise of service employment. As we have argued elsewhere, the breakdown of patriarchal values during the past half century is closely linked to the rise of services because these do not depend on physical strength and typically rely more on general than on firm or industry-specific skills. Since specific skills disadvantage women who cannot as easily commit to uninterrupted careers, and since most services rely on social rather than manual skills, postindustrialization has been a big boon for female labor force participation. But it has also had the effect of accelerating changes in gender norms. Because women compete on a more equal footing with men for jobs in services than in either manufacturing or agriculture, it has improved women's bargaining position in the family and encouraged caring parents to emphasize values in daughters that emphasize equality. Like boys for centuries, girls are increasingly taught to be assertive, acquire a good education, and prioritize financial independence. While these values certainly do not lead most women to seek political careers, they do tend to augment the pool of women from which political candidates will be recruited, and voters are less likely to be prejudiced against female candidates.

The importance of labor market participation and the rise of services for female representation can be easily ascertained in a model where we control for all cross-national differences using country-specific intercepts (or fixed effects). Model 1 in Table 1 uses a standard setup with a lagged dependent variable (which removes first-order serial correlation) and panel corrected standard errors (Beck and Katz 1995). The predicted effect of a one percent change in the female share of the labor force is to increase female representation by .18 percent in short run and by .78 percent in the long

run (.18 divided by one minus the parameter on the lagged dependent variable). The effects of a one percent increase in service sector employment are somewhat larger: .23 and 1 respectively. This implies a 26 increase in representation as a result of the observed rise in female and service sector employment between the early 1960s and the late 1990s. The actually observed average increase in representation is only 18, and although the long-term predictions project what will happen well beyond year 2000 the prediction seems implausibly large.

A well-known source of this problem is that the lagged dependent variable can bias the results if it captures effects other than first-order serial correlation (which arises in our data primarily because incumbents are slow to be replaced). An alternative strategy is to omit the lagged dependent variable and instead correct for AR-1 correlation in the residuals. The results of using this approach are shown in model (2). The coefficients on the two independent variables are now estimates of the total (long-term) effects, and we can see that these are smaller than before. The average changes in female employment and service employment between the 1960s and 2000 now translate into a more sensible predicted increase in female representation of 16 percent – close to the 18 percent actual increase.6

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[6] Note also that the predicted Rho of .47 is notably smaller than the coefficient on the lagged dependent variable (.77), which suggests that the latter is picking up more than just auto-correlation and leading us to overestimate the long-term effects.

Table 1. The determinants of female representation in 21 democratic legislatures, 1945-2000 (or beginning of democracy). Standard errors in parentheses.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Female share of labor force	0.18*	0.41**	0.62**	0.83**	0.82**	0.37**	0.22**
	(0.07)	(0.10)	(0.09)	(0.09)	(0.08)	(0.10)	(0.12)
Service employment as pct of working age pop.	0.23**	0.72**	-	-	-	-	-
	(0.05)	(0.09)					
GDP per capita ('000 dollars)	-	-	0.50**	0.36**	0.37**	0.50**	0.44**
			(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
Electoral district size	-	-	-	8.36**	-	-	-
				(1.41)			
Pooling of votes	-	-	-	6.98**	-	-	-
				(0.85)			
Presidentialism	-	-	-	-4.59**	-4.43**	5.67**	-3.04**
				(1.08)	(1.07)	(2.47)	(0.93)
Left party strength (percent seats controlled by left)	-	-	-	-0.04*	-0.04*	-0.03	-1.13
				(0.02)	(0.02)	(0.02)	(1.95)
Programmatic parties	-	-	-	-	7.36**	-	-1.53
					(0.69)		(1.26)
Female share of LF x Programmatic parties	-	-	-	-	-	0.29**	0.64**
						(0.04)	(0.08)
Lagged dependent variable	0.77***	-	-	-	-	-	-
	(0.06)						
R-squared	0.949	0.878	0.874	0.681	0.682	0.895	0.714
N	241	244	266	249	249	249	249
Number of countries	21	21	23	23	23	23	23
Fixed effects	Yes	Yes	Yes	No	No	Yes	No
Correction for AR-1	No	Yes	Yes	Yes	Yes	Yes	Yes
Rho	-	0.47	0.49	0.78	0.76	0.47	0.64

Key: * : $p<.05$; ** $p<.01$ (two-tailed tests)

Model (3) substitutes GDP per capita for service employment because we have data for all 23 countries on the former variable, but only for 21 countries on the latter. The correlation between the two variables is high (.77), and none of the other results presented in Table 1 are notably affected by using GDP per capita instead of service

employment.7 The long-run predictions are also very similar. To maximize country coverage, and since we are primarily interested in the effects of political institutions, we therefore use GDP per capita in the rest of the analysis.

Model (4) substitutes the fixed effects for a number of political-institutional variables. Since these display very little variance over time, we can only assess their cross-national effects by omitting the country-specific intercepts. Our attention centers on two measures of electoral systems.8 One is the size of electoral districts, standardized by dividing by the number of seats in the national assembly.9 The Netherlands is the only country in the dataset that treats the entire country as a single electoral district. In this case the value for the district size variable is therefore 1. As the number of candidates elected from each district shrinks, so does the electoral size variable – approaching 0 as we move towards single member districts. In cases where the electoral system has more than one tier, the measure is an average district magnitude across tiers weighted by the share of seats elected from each tier.

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[7] It is of course also possible that economic development itself drives up female representation, but we think it is plausible that the mechanism is still a rise in service employment (and female labor force participation) for the reasons spelled out above. Oil rich countries with high levels of income, for example, tend to be very gender inegalitarian. But for the rich democracies in our sample, economic development and employment structure are closely related, so one will always be a good proxy for the other.

[8] Carey and Shugart (1995) developed a ranking of countries according to their assessment of the effects of a variety of electoral system attributes on the incentives of candidates to cultivate a personal vote. Their ranking is obviously relevant to our explanation, but it is based on a large number of (implicit) discretionary decisions about the importance of different variables, which can be contested. We prefer to keep the salient dimensions of the electoral system separate and let the data speak about salience. In the end, the composite variable we construct below is correlated with their ranking at a .85 level. We should also note that we are not directly using two of Carey and Shugart's variables: one they call "vote" and refers to "whether voters cast a single intra-party vote instead of multiple votes or a party-level vote", and one they call "ballot" and refers to whether parties control candidate access and position on a party list. There is practically no variance on the former variable in our sample. We discuss the relationship between the variables we use and the ballot or list variable below.

[9] The source for the two measures is ????

District size has a very obvious effect on the electoral strategies of political parties that is important to our story. Whereas it makes good sense to field candidates in SMD systems who can cater effectively to local interests, if the electoral district is the nation as a whole specialization of candidate appeals makes little sense. Even if a party caters to regional interests, or to other narrowly defined constituencies, individual candidates represent the party platform as opposed to their own local or personally cultivated constituencies. In turn, as the focus shifts from individual candidates to party platforms, voters lose interests in the attributes of the former and vote on policies and leadership competency instead.

Another electoral feature that affects the extent to which voters choose parties according to individual candidate qualities as opposed to party platforms is pooling of votes across candidates. If the votes for a candidate which exceeds the required number are transferred to other candidates from the same party, voting for a candidate is also in part a vote for the party. This forces voters to pay attention to the party label in addition to individual candidates. How much depends on the specific rules. If votes can only be pooled among sub-sets of candidates, it still makes sense to pay a lot of attention to individual candidate qualities. If votes are pooled across all party candidates in a district, the party label comes to dominate the qualities of individual candidates in voting decisions, and the party will in consequence choose candidates more because of their ideology and loyalty to the party than their qualifications for cultivating a personal following. Following Carey and Shugart (1995), and the implementation of their coding

scheme by Johnson and Wallack (2006), the variable is coded 1 if votes are pooled across all candidates in a district, 0 if no pooling is allowed, and ½ if pooling is across subsets of candidates. As in the case of the district magnitude variable, if there is more than one tier in the electoral system, the measure is an average across tiers weighted by the share of seats elected from each tier.

It should be pointed out that the pooling variable in our sample of countries is almost identical to distinguishing between list and other types of electoral systems (a distinction we used in the theoretical discussion and is captured by what Carey and Shugart in their coding scheme refer to as "ballot"). Where there is no pooling, there is typically no party list. The sole exception is Japan before the electoral reforms in 1994. Here parties made up lists of candidates, but votes for each candidate were not transferable to other candidates (i.e., no pooling). As a result, candidates from the same party had a strong incentive to differentiate themselves from each other, and a vote for any candidate was not primarily a vote for the party platform. For our purposes the incentives to cultivate a personal following in the SNTV system is captured by the pooling variable, not by a variable distinguishing between lists and no lists.10

Note that the effects of the two electoral variables are in the predicted direction and quite strong. Since both variables vary between 0 and 1 the interpretation of the estimated

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[10] There is also an exception to the rule that no-list systems do not use pooling: Luxembourg. In this system candidates run on party platforms, but parties do not make up their own lists. However, since votes are pooled for each party, voters cannot ignore party platforms and the system in effect works very much like a typical European list system. The key for our purposes is therefore again the pooling. Excluding Japan and Luxembourg, the correlation between pooling variable and a list variable is .89, and it is perfect (r=1) if the ambiguous cases between 0 and 1 on the pooling variable are omitted.

parameters are straightforward: Moving from the smallest to the largest electoral district increases the female share of seats in the legislature by an estimated 8 percent, while going from a system with no pooling of votes to one with pooling across all candidates increases female representation by 7 percent. As it turns out, the effects of the two variables can be almost fully captured by a simple additive index, which we have labeled "programmatic parties" (as opposed to "candidate-oriented" candidates) in Table 1. The estimated parameter on this variable is between that of the two component variables, and since its range is twice that of the component variables so is its total effect. Specifically, going from an electoral system with the fewest incentives of parties to compete on party programs (SMD with no pooling) to one where these incentives are the strongest (a single national district with pooling across all candidates) raises the predicted representation of women by 15 percent, all else equal.

The analysis also includes controls for presidentialism and the share of seats in the legislature that are controlled by left parties.[11] As noted in the theoretical section, there are long-standing arguments that presidentialism reduces the incentives of parties to enforce adherence to the party label since government power does not depend on maintaining a majority in the legislature. This increases the scope for, and presumably electoral salience of, individual legislators who can strike deals with other legislators through log-rolling and other deal-making. And, indeed, presidential systems have 4-5 percent fewer female representatives, all else being equal, than parliamentary systems. Yet, it must be cautioned that since the only two countries in our sample with genuine

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[11] The latter variable is from the Cusack-Engelhart dataset on political parties (see Cusack and Engelhart ???).

presidential systems are France and the US and France, the presidentialism variable is simply a dummy for those two countries. That said, both political systems are known to have comparatively weak parties.

While one may reasonably have expected parties on the left to be more sensitive to gender equality, and while that may be true in particular cases, the effect of having higher left party representation is weak and in fact the opposite direction of the expectation. Left parties may have had beneficial indirect effects on female representation through especially female labor force participation -- which is partly linked to "women friendly" policies such as public daycare provision -- but they do not appear to have contributed much to improving gender equality in the legislature by advancing women farther through their own ranks than other parties.
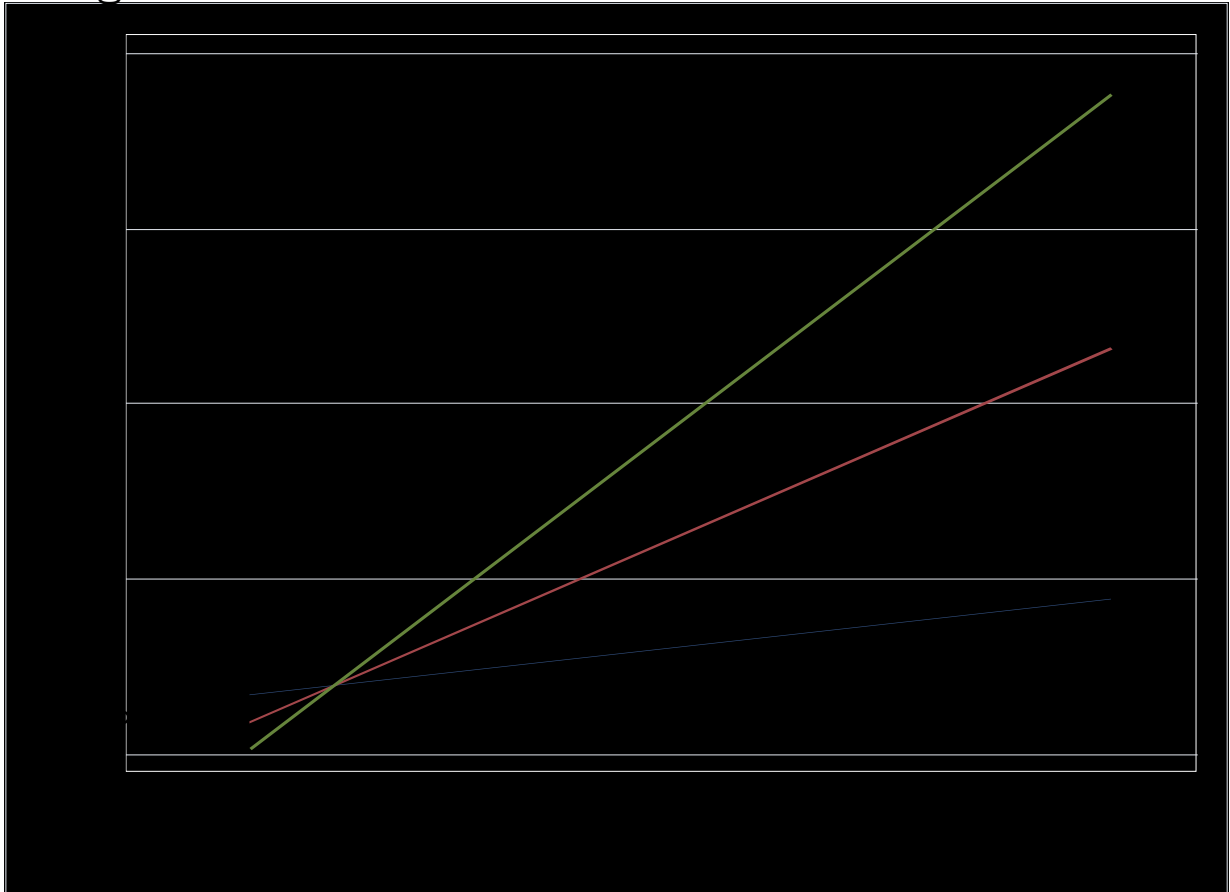
Models (6) and (7) combine the structural forces of change with the cross-national institutional differences, using a methodology proposed by Blanchard and Wolfers (1999). In model (6) we reintroduce the fixed country effects, but we retain the institutional variable ("programmatic parties") as an interaction term with female labor force participation. All the variance in the dependent variable that can be accounted for by our explanatory variables is now inter-temporal, and what the institutional interaction variable tells us is whether pressure for change (represented by an increasing female share of the labor force) is accommodated or hindered in different institutional settings. Indeed institutions do matter is this sense. The rate of change in representation in response to higher female employment is almost three times higher in systems with

strong incentives for programmatic parties than when these incentives are absent (the coefficient on the female labor force variable rises from .37 to .98).

Finally, in model (7) we drop the country fixed effects and re-introduce the programmatic party variable as an independent predictor. The results are very similar to those in the previous model and illustrated in Figure 2. The figure shows women's predicted share of seats in the legislature as a function of female labor force participation (restricted to the in-sample range), for different values on the programmatic party variable. At low levels of female labor force participation, electoral institutions do not matter much, and we could have anticipated this from Figure 1, which started this section. Immediately following the Second World War the there is little variation in female representation, and women were largely outside the labor market. As they gradually enter into paid work, the variance in representation across countries rises. The reason for this divergence, we have suggested, comes down to differences in the design of political institutions, especially electoral rules. Where these incentivize parties to compete mainly on programmatic differences in policies, women fare far better than where parties delegate a lot of power and discretion to individual candidates. In the former countries, political gender equality is quickly catching up with economic equality: gender parity in employment is associated with more than 40 percent female representation. In the latter countries, female representation has trouble breaking above 10 percent. The US is a case in point. Although women have moving towards parity in terms of their share of jobs, they trail men in Congress by a daunting 14-86 margin. By contrast, women in Sweden

have reached virtual parity in both spheres, even though Swedish women started out with

fewer than 8 percent of seats in the legislature after the war.

Figure 2. Women's predicted share of seats in legislature as a function of female labor force participation and programmatic parties.

Note: The lower line is for candidate-oriented party systems, the top line is for programmatic-oriented party-systems.

5. Conclusions

Given that women have been subjected to unfavorable stereotyping and second class treatment for as long as history has kept track, outright discrimination would seem a reasonable explanation for why women are less likely than men to get elected to political office. We might expect that a shift in societal values towards greater gender egalitarianism would contribute both to a rise in female labor force participation and in female political representation at the same time. In rich democracies, particularly in the post World War II decades, women have indeed cut into male hegemony in labor markets as well as in politics. The correlation between the two phenomena is consistent with "demand side" theories that stress general attitudinal changes, and with "supply side" theories about the relevance of labor market skills and experience for political candidacy.

While there is much truth to these stories about changes in voter reception of female candidacy, the correlation between female success in labor markets and in politics fails to account for enormous cross national variation in female political representation. In some countries, such as in Scandinavia, female labor force participation and female political representation are powerfully correlated, whereas in other countries, such as the US, the slope of the curve is much flatter.

Our explanation for the gender gap in representation is very simple and uses the same logic for political careers that we know drives gender inequality in other careers. When

jobs require uninterrupted tenures and long inflexible schedules, women are at a distinct disadvantage. Political parties in advanced democracies may have an ambition to encourage gender equality in representation, but just like firms competing in product markets they are sometimes constrained by electoral competition to put up candidates who are in a strong position to produce specialized constituency goods that require a long tenure and round the clock presence. The pool of qualified candidates for that type of job over-represents men, whether that job is in politics or in private enterprise. By contrast, where parties mainly compete on party labels there is no reason to prefer male over female candidates, at least for filling rank-and-file positions in the party. Ideological commitment and party loyalty are general qualities that do not differ systematically by gender.

The case of the US, where the ascent of women into middle management is not matched by female success in politics, illustrates our argument. American labor markets are characterized by an abundance of general skills jobs, for which women are competitive. The same is not true of Congressional jobs. The reason, we have argued, is that the personalistic qualities of the American political system causes the same cast of characters—the American public—to make considerably less egalitarian choices in the ballot box than in the market place.

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