How the West Was Won: Competition, Mobilization, and Women's Enfranchisement in the United States

SHORT TITLE: How the West Was Won

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Abstract

A longstanding puzzle in American political development is why Western states extended voting rights to women before states in the East. Building on theories of democratization and women's suffrage, I argue that politicians have incentives to seek out new voters in competitive political environments. A strong suffrage movement reinforces these incentives by providing information and infrastructure that parties can capitalize on in future elections. If politicians believe they can mobilize the latent female vote, then large movements and competitive political environments should produce franchise expansion. Using data on legislative decisions pertaining to suffrage in 45 states from 1893 to 1920, I show that political competition and movement strength are robust predictors of support for women's suffrage in state legislatures. In the West, fluid partisan politics and relatively strong mobilization produced early reform. Since states determine who voted for national, state, and local offices, these decisions mattered for advancing political equality.

Keywords: democratization, franchise extension, American political development, political machines, suffrage, women and politics.

Supplementary material for this article is available in the appendix in the online edition. Replication files are available in the JOP Data Archive on Dataverse (http://thedata.harvard.edu/dvn/dv/jop; doi:10.7910/DVN/EVYI2H). Support for this research was provided by the Carrie Chapman Catt Award for the study of women in politics and by the National Science Foundation Doctoral Dissertation Improvement Grant.

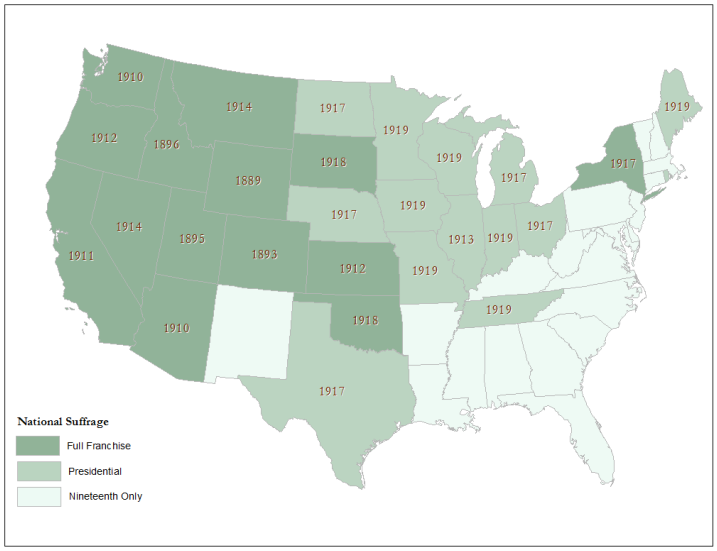


Figure 1: National Suffrage Extensions in the United States. For locations that were incorporated as states, the dark shaded areas gave women full national suffrage in the year listed; the mid-shade extended presidential voting rights in the year listed; and states in the light shade only allowed women to vote when the Nineteenth Amendment was implemented. Michigan extended equal suffrage in 1918, a year after presidential suffrage. Source: Keyssar (2000).

As the year 2020 approaches so too does the centennial anniversary of the ratification of the Nineteenth Amendment to the federal constitution of the United States. Because the Constitution empowers state legislatures to decide who can vote in local, state, and national elections, the Nineteenth Amendment did not actually extend the right to vote to women, but instead decreed that insofar as states confer voting rights, states may not withhold voting rights on the basis of sex.[1] Prior to the Amendment's passage, fifteen of the then 48 states had granted full federal, state, and municipal voting rights to women, and another fourteen had granted women the right to vote in presidential elections. Although the occasion was momentous, in some sense the passage of the Nineteenth Amendment was a federal reflection of battles that had already been fought and won in many of the U.S. states.[2]

[1]Article I, Section 2, establishes that whoever is eligible to vote for the 'most numerous' office in each state may vote for the national House of Representatives; Article II, Section 1 gives state legislatures the power to choose presidential electors. Until the Seventeenth Amendment provided for "direct" election in 1913, national senators were elected indirectly by state legislatures.

[2]Before statehood, many territories extended the vote to women: UT (1870, annulled by congress

Through an examination of state legislative decisions concerning national voting rights for women, this paper offers a new explanation for the timing of women's suffrage in the United States. As the map in figure 1 shows, equal enfranchisement of women – that is, the right to vote in the full gamut of national, state, and local elections on the same terms as men – followed a distinct pattern, with Western and Midwestern states emerging as early adopters of women's suffrage long before any Eastern or Southern states extended equal rights.[3] To understand women's enfranchisement, a rich body of scholarship has emphasized the institutional hurdles to reform (McCammon and Cambpell 2001, McConnaughy 2013), the rhetorical tactics and mobilizational strategies of suffragists (Kraditor 1981, McCammon and Campbell 2001, Banaszak 1996), and the importance of political coalitions and suffragists' resources for forging reform (McConnaughy 2013, Teele 2014). Here, I will argue that variation across and within states in legislative support for women's enfranchisement, as well as the regional pattern that can be seen in figure 1, can best be explained by relatively high levels of mobilization by suffrage activists and propitious conditions – marked by robust political competition – in state legislative assemblies.

The theoretical argument begins with two premises: politicians care about re-election, and they will not needlessly undertake costly or risky reforms. Electoral reform such as franchise extension is undoubtedly costly – it requires political capital to galvanize, takes time away from other priorities, and often must overcome steep institutional hurdles related to amendment procedures. Reform is also potentially risky if the true preference distribution of the disfranchised group is unknown. For these reasons, I suggest that politicians will only agree to enfranchise a new group if they are insecure in their current posts and looking for new ways to win, and if they believe they have a chance at mobilizing the newly enfranchised voters to support their party. To make inferences about whether women can be mobilized, politicians of any party can look to the activities and alliances formed by politically active women. Women's movements, especially those that are highly organized and

in 1887; 1895, became a state with suffrage 1896); WA (1883, territorial supreme court declared it unconstitutional in 1887); WY (1889, became a state with suffrage in 1890); AK (1913); MT (1887, 1914 as a state), (see Keyssar 2000, tables A.16 A.18).

[3]Equal does not mean universal, as immigrants and most women of color did not gain access to the ballot at this time. See Terborg-Penn 1998.

subscribed, have the potential to provide politicians with information about women's preferences and an infrastructure that can be capitalized on in future elections to mobilize the female vote (Harvey 1998, Teele 2014). Together, a competitive political environment provides an incentive, and a large social movement provides the information, that make electoral reform a political possibility.

Using a unique state-level dataset that includes 45 states over nearly 30 years, I examine the relationship between the strength of the women's movement as proxied by state membership in a large national suffrage organization, six measures of political competition, and the passage of suffrage legislation in U.S. state assemblies. I find strong positive correlations between competition, women's mobilization, and support for women's suffrage. Turning to interactions between competition and mobilization, I find that across the range of political competition, higher mobilization was generally correlated with higher support for suffrage. At the highest levels of competition, the impact of mobilization is even stronger, suggesting a positive interaction between these forces.

After presenting the main results I consider several potentially confounding variables that are favored explanations of women's early enfranchisement in the West, such as political culture, gender-egalitarianism, progressivism, temperance, and women's scarcity. To examine these alternative mechanisms I generated a host of new indicators that will be of use to other scholars interested in America's political development. These include an original longitudinal measure of urban political machines; a series that tracks progressive reforms and gender-egalitarian policies around the turn of the century; and a new measure of temperance forces within states that draws on the internal documents of the Women's Christian Temperance Union.[4] Overall, even when potential confounding variables are considered, there is substantial evidence that a well mobilized movement for voting rights reform and a highly competitive electoral environment are correlated with support for women's enfranchisement.

The paper provides a new account of women's enfranchisement, and ample new data to understand its mechanisms, but the empirical results are consistent with broad understandings of electoral politics around the turn of the last century. Whereas male voters in the North and South exhibited strong partisan attachments, often over generations, and were unlikely to switch parties, voters in the West were more likely to do so (Gimpel 1993; Kleppner 1983), prompting politicians

[4]The online appendix contains detailed descriptions of the data collection process.

out West to take on the entrepreneurial task of recruiting new supporters (Rosenstone et al. 1996; Shortridge 1978). A relatively smaller Western suffrage movement was able to capitalize on this electoral landscape and secure early (though not always immediate) victory. In the Solid South, single party rule translated into large legislative majorities and little need for new constituents to bolster Democratic control. Indeed, not a single state south of the Mason-Dixon line and east of the Mississippi River granted women full voting rights before 1920. Finally, in the Northeastern states, the dominance of political machines and entrenched parties militated against easy suffrage extension. But, in spite of machine dominance in the Northeast, the well organized and tightly administered suffrage cadres were able to make some inroads after nearly 70 years of mobilization (Lerner 1981: 7, 206; Strom 1975: 313). Although there is a growing consensus that democratic politics has contributed to the persistence of undemocratic institutions in the United States (Bateman 2013. Engstrom 2006; Smith and Fridkin 2008), my conclusion is more hopeful: when competition is robust, a strong political movement can help forge a more inclusive body politic.

Enfranchisement of Men and of Women

There are two strains of scholarship that can inform the discussion of women's enfranchisement. The political economy literature on democratization has focused on explaining the enfranchisement of men, particularly those of the working classes, and has tended to emphasize strategic choices made by elite actors.[5] Alternatively, the literature on women's suffrage has tended to look at the activities and strategies of the suffragists themselves.

The political economy approach addresses the puzzle of why a ruling group would ever include non-ruling groups when doing so would dilute their political power and threaten their economic interests. Influential studies within this tradition have argued that franchise extension occurs when elites are threatened by large-scale mobilization of the masses;[6] when elites are split and driven into competition by divergent sectoral interests or programmatic preferences (Ansell and Samuels 2014; Collier 1999; Lizzeri and Persico 2004; Llavador and Oxoby 2005); or when elites are so

[5]For critiques of the male-centered approach see Caraway (2004) and Paxton (2000).

[6]Acemoglu and Robinson, 2000; Berins Collier 1999; Przeworski, 2009; Rueschemeyer, Stephens and Stephens, 1992.

powerful or have such well-insulated economic interests that they do not fear popular participation in politics (Boix 2003; Therborn 1977). Despite their differences, each of these explanations for men's enfranchisement turns on the decision framework faced by elected politicians or established political elites.

By contrast, the literature on women's suffrage asks why women's incorporation was swifter in some places than in others. Suffrage scholars who stress the primacy of political culture argue that women won the right to vote in progressive political environments where egalitarian values were common in political discourse, or when progressive political parties gained political power.[7] These arguments square with several narratives of American political development, which, beginning with Turner (1894), have theorized the frontier states as more "receptive" to political reform (Shefter 1994).[8] But even if we suspect that the Western culture was distinct, there is probably too much variation in the timing of Western states' enfranchisement – from Wyoming's territorial enfranchisement in 1869 to Nevada in 1914 – and many Western states in which reform attempts failed before they succeeded – for culture alone to account for women's enfranchisement.

Pointing instead to the tactics of women's movements, social scientists and historians have suggested that some repertoires of contention were more effective than others (Banaszak 1996), arguing, for example, that suffragist rhetoric that stressed the special capacities that women, as mothers and humanitarians, would bring to the political sphere were ultimately successful (McCammon and Campbell 2001: 63, 67). The efficacy of suffrage activism could also depend on the targeted mobilization of working class and immigrant women (Dubois 1987; Lerner 1981: 206; Strom 1975), and on structures of political opportunity, such as the difficulty of amending a state constitution (McCammon et al. 2001, McConnaughy 2013). In many of these accounts, more important than the strategic actions of self-interested politicians are the activities of the suffrage activists, and the atmosphere in which women mobilized.

[7]See Flexner,1995 [1959]: 160; Larson 1970; Beeton 1986; Mead 2004.

[8]Although Bridges (1997) argues that reformers benefited most of all from weak party organizations.

The decision to extend the vote

If the political economy literature focuses our attention on the incentives that drive leaders to make decisions about voting rights reform, the scholarship on women's suffrage emphasizes country- or state-specific features of politics, and the actions and alliances of the suffragists themselves. These approaches can be reconciled by theorizing how strategic choices made by politicians and the strength of the suffrage movement together form a logic of franchise reform.

Political Competition Most political scientists agree that one key goal of elected politicians is to get re-elected (Downs 1957). Even if politicians have programmatic commitments, to pass policy they still need to hold office (Mayhew 1974). Thus, when considering any number of actions, from roll-call votes, to public appearances, to electoral reform, politicians will want to know how these choices will affect their prospects of re-election (Schattschneider 1942). There is a longstanding debate about whether elected leaders want to win super majorities in elections – by capturing the greatest number of votes – or whether they hope only to secure a minimum winning coalition – securing just enough votes to win comfortably (Bueno de Mesquita et al. 2003). Typically, game theoretic approaches to democratization and enfranchisement argue for the former: parties are vote maximizers, meaning they will try to win the largest number of votes possible (e.g. Acemoglu and Robinson 2000; Lizzeri and Persico 2004). Departing from this, I suggest that although parties that are already secure may want to win with the biggest possible majority, secure parties do not have strong incentives to change the rules to win more votes. If electoral reform is costly and there is some uncertainty about the future loyalties of the disfranchised group, politicians will be reluctant to reform electoral laws if they do not *need* additional votes in order to win.

As Boix has argued, so long as the rules already serve politicians' interests, politicians have no incentive to change the rules (Boix 1999: 611). In the words of Walter Long, a Tory MP who took part in negotiations over the Fourth Reform Act in the UK, "no Government undertakes Reform Bills if they can possibly help it. It is the most ungrateful and difficult task with which any Government can be confronted."[9] In effect, this reluctance to change the rules creates a bias toward the status-quo. If passing reform requires expending political capital or log-rolling, if it takes parliamentary time away from other matters, if the procedures for changing the law are complex (as

[9]See Teele 2014: 554 and fn 70, 72.

electoral changes often are), or if there is some uncertainty about who will benefit from the reform, the status quo becomes more attractive.

But, if politicians feel that the current rules do not serve their interests, they have good reasons to make changes that can enhance their power, and one such innovation might be found in electoral reform. Because heightened competition can make politicians vulnerable under the status quo, while a lack of competition can bolster the power of the ruling group, competition is a crucial ingredient for electoral reform. This idea has solid grounding in the literature on democratization. Mares (2015) shows that higher levels of political competition incentivized parties to switch to the secret ballot, and Smith and Fridkin (2008) demonstrated that the adoption of the ballot initiative, an element of direct democracy in the U.S., was bolstered by inter-party competition. From the opposite direction, Boix (1999: 617) argues that the adoption of proportional representation was less likely in countries where conservative parties remained united, while Engstrom (2006) shows that a lack of inter-party competition has been linked to biased redistricting in the U.S. If suffrage expansion is similar to other strategic changes in the rules, then competition should make it more likely.

My contention is that politicians have an incentive to seek out new votes in competitive political environments, and they will support enfranchisement if they believe they can win the excluded group's support. Naturally, this raises the question of how politicians know whether the excluded group can be mobilized in future elections.

Movement Strength

It is often said that there is strength in numbers. In the social movements literature, large movements may accumulate greater resources with which to contest injustice (McConnaughy 2013), and can use mass demonstrations to threaten instability and exert pressure over leaders (Acemoglu and Robinson 2006, Przeworski 2009). In addition to these benefits, larger movements also have the potential to communicate information about a group's preferences, and, in the case of electoral reform, can provide an infrastructure for future voter mobilization.

If only a few members of a disfranchised group are agitating for the vote and group members are generally not politically active in other arenas, politicians may not know much about what this group, as voters, will want. In this case, politicians may not have confidence that group mem-

bers can be mobilized during the next election. As a movement grows its leaders will attempt to garner a greater public presence, whether through leafletting, holding meetings and rallies, writing editorials, forging ties with other movements or with governing elites. When these activities proliferate, politicians can learn about a group's preferences by observing which members are recruited into the movement, by forming alliances with movement leaders, and by listening to the leaders' demands. A large movement can therefore generate more information about members' preferences and demonstrate the organizational capacity of movement adherents.

Several studies of social movements and electoral politics see mobilization as providing informative cues to legislators and to parties. Protest events by racial and ethnic minorities can serve as a window into those groups' policy preferences, and larger protests may provoke greater substantive changes in the voting behavior of elected representatives (Gillion 2012: 951). Highly mobilized movements are also a potential asset to political parties. As Frymer (2010 [1999]: 55) shows, parties will attempt to capture the loyalty of different social groups, and may focus in particular on those groups that are large and already mobilized.[10] This was true after women gained the vote in U.S., where political parties moved quickly to appoint high-level suffrage organizers in party posts so as to mobilize women into party operations (Harvey 1998). Here, a large movement is important because it acts both as a conduit for information about group members, and because it provides politicians with potential allies in future elections.

Competition, Mobilization, and Suffrage

Taken together, heightened competition provides an impetus for politicians to seek new rules of play, and mobilization provides an idea about the preferences of excluded groups. The broad contours of this argument are consistent with previous empirical findings in the suffrage literature.

In Switzerland, in spite of an extremely stable party system from 1919-1975, Cantons that were more competitive, where the power of the Center and Right was contested by viable Left parties, were earlier to adopt pro-suffrage positions (Banaszak 1996: 112, 120, 127ff.). In the United States, previous work found a link between an electoral threat from a third party and state-level adoption of women's suffrage (Grimes 1967; McCammon and Campbell 2001), as well as for

[10]Of course, for Frymer, a group can be "captured" if they are always affiliated with one party.

patterns of referendum voting (Berman 1987). McConnaughy (2013: 215) provides evidence that electoral vulnerability often rose just prior women's enfranchisement in the states.[11] And in the U.K., the nascent Labour party's national ambitions became a lever for the suffrage movement as party competition increased during the First World War (Teele 2014)

Although the importance of competition is apparent, the evidence for the role of women's mobilization has has been mixed. Banaszak (1996: table 4) finds that in the U.S., movement strength is correlated with some but not all measures of women's suffrage at the state level, while McConnaughy (2013: tables 6.5 and 6.7) finds quantitatively small, but statistically significant, relationships between state membership in the largest suffrage organization and suffrage reform.[12] The mixed findings may emerge if the success of a strong movement is conditioned by political context and openings in the political opportunity structure.

For instance, Baldez (2002) shows that the political opportunity afforded by a period of partisan realignment allowed both conservative and progressive women's movements in Chile to coalesce into mass mobilization. In a similar vein, Harvey (1998) argues that the realignment of American parties in the late 1960s provided new avenues for independent women's organizations to press for reforms, resulting in several policy concessions that the women's movement was unable to secure in the previously stable party environment. As both of these studies emphasize, a movement's ability to press for political demands can rise in an environment of heightened competition.

Inside Suffrage

If competition spurs politicians toward electoral reform, it follows that one party or other must believe it can have a mobilizational advantage in future elections. A belief in the distinctiveness of the female vote is important for adjudicating between my argument and the most recent major account of suffrage in the United States. McConnaughy (2013), argues that strategic attempts at suffrage were unsuccessful because politicians thought that women would vote the same way as their

[11] p.215 and tables 6.5 and 6.7. Note that McConnaughy finds only limited statistical support for her argument that the presence of coalition partners drove women's suffrage.

[12] McConnaughy (2013) also uses the NAWSA budget as a measure of strength and resources, but this data is not available on the state level (p.211, note 11).

husbands and so enfranchising women would merely double the vote for each party. Although plenty contemporaries made the double-the-vote argument – especially among anti-suffragists (Schuyler 2008: 28-9) – a considerable body of historical research suggests that, even though few people thought that women would vote as a 'bloc' (Gustafson 2001: 133-4), both party elites and suffragists expected the female vote to tilt toward one party or the other (Corder and Wolbrecht 2016: 131-135).

Women's moral purity, and their positions as mothers, were often claimed to give women unique purchase on the political problems of the day. This moral argument was capitalized on by suffragists as a justification for women's need for the vote, and was successful in drawing adherents to the movement. It was bolstered by women's prolific civic activity in the late nineteenth and early twentieth centuries linked to social issues such as abolition, temperance, compulsory education, child welfare, the eradication of child labor, and labor protection for women (Carpenter and Moore 2014, Skocpol 1992). In the words of one advocate who was "Interested in all topics of the time: education, religion, politics, the liquor questions, social purity" she would gladly go to the polls "to exert an influence in the direction of progress and reform."[13] In the late nineteenth century, the female vote was often thought to be anti-saloon, verging on prohibitionist, and therefore closely linked to the Women's Christian Temperance Union and the Republican Party (Grimes 1967: 68; McDonagh and Price 1985: 418).[14]

Nevertheless, the association of women with the Republican Party does not necessarily hold up across regions, or throughout the 70-year period during which the suffrage battle was waged. In the South, the expectation was that white women would vote Democratic to preserve racial hegemony. In fact, Southern suffragists notoriously argued that they should be enfranchised precisely because adding their numbers to the electorate would shore up the white majority (Morgan 1972: 15-16). Yet it was not only in the South where Democrats may have seen some potential advantage in the women's vote. In the early twentieth century, as nativist fears were sparked by a large influx of immigrants, women's votes, even among the immigrant groups, were hailed as a salve to the votes

[13] 28-Oct-1888, *The Indianapolis Journal*, "Would the Women Vote?" Kate Sanborn.

[14] Corder and Wolbrecht (2016: 131-135) suggest that although in 1920 the Democratic platform contained more planks advocated by the League of Women voters, and did reach out to women, Republicans may have had a stronger pro-suffrage claim in 1920.

of the less scrupulous men's votes. In a House judiciary committee on suffrage in 1908, progressive Senator Owen (D-OK) said he would have been willing to give ballot to lower class immigrant women "because the vote of the male immigrants is largely dominated by the saloon and brothel influences and the vote of the women would counteract the votes of this class of males."[15] Depending on the local and temporal political context, contemporary observers had different intuitions about the fate of the female vote, but most thought women would be progressive voters, and thus women's enfranchisement would not merely double the electorate for each party.

Crucially, notions of a distinctive female vote could draw politicians towards or away from the suffrage cause. The fear that women were more likely than men to support prohibition caused the liquor lobby to mobilize against women's inclusion in many states (Catt and Shuler 1923: ch. 10). At a Democratic convention in South Dakota in 1890, where certain women urged the party to support suffrage, anti-suffrage protestors won the day with signs that read 'we are against prohibition and Susan B. Anthony. We want our beer, and the men do the voting.'[16] In California in 1895, the Wholesale Liquor Dealers' League beseeched saloon-keepers, hotels, and grocers to vote against suffrage claiming "It is in our interest and yours to vote against this amendment. We request and urge you to vote and work against it and do all you can to defeat it," (Grimes 1967: 86). And, fearing that women represented the "dry" vote, the head of the United Liquor Dealers personally went to fight against suffrage in Illinois in 1913 (NAWSA 1940: 87). Even on the eve of the ratification of the Nineteenth Amendment in Tennessee (after the prohibition amendment was in force) liquor companies plied state legislators with whiskey in an attempt to sway the decision against suffrage (Catt and Shuler 1923: ch 10).

In addition to prompting anti-suffrage lobbying, ideas about the distinctive female vote were used to justify women's inclusion. Woodrow Wilson, a longtime opponent of women's suffrage, underwent a political "conversion" on the issue that began with his decision to vote for the New Jersey suffrage referendum in 1915 (Behn 2012). Judge Bledsoe of the LA district court wrote to congratulate Wilson on his change of heart: "Your declaration at this time will serve to win

[15] 4-March 1908, "Woman's Suffrage Discussed Universal Suffrage Advocated by Senator Owen of Oklahoma", The Idaho Statesman.

[16] 25-July-1890, *Wessington Springs Herald,* South Dakota, p.1.

support for us in the suffrage states whose 62 electoral votes...will be most helpful to us in 1916."[17] Wilson thereafter worked hard to secure suffrage, often stressing the strategic benefits it would bring the Democratic Party. In May 1917, he urged Representative Edward Pou (D-NC) to appoint a committee on the subject, suggesting that "it would be a very wise act of public policy" to consider the issue in the House.[18] In August 1918, when Wilson was struggling to get the last votes in the Senate necessary to pass the suffrage amendment, he wrote to Kentucky Governor Augustus Stanley regarding a recently vacated senate seat, stating "It would be of great advantage to the party and to the country if his successor entertained views favorable to the pending constitutional amendment."

Given that some politicians emphasized the partisan benefits of enfranchising women, and that many contemporary observers believed women would vote distinctively, a strategic logic of enfranchisement is theoretically possible. Although we cannot measure all politicians' beliefs about the fate of the female vote across time and space, I have suggested that a large movement can increase information about the types of women who are likely to participate, and the issues that may matter, after the vote is extended. If what matters to politicians is the preferences of those who are most likely to turn out – the preferences of the median "likely" voter (Kasara and Suryanarayan 2015) – they can find this out more easily when the movement is strong.

The wedge between the argument here and McConnaughy (2013) is whether, given divergent assumptions about politicians' beliefs, reform would be more likely when competition is high or low. If McConnaughy's (2013) argument holds and politicians believed that women would double the vote, then there could be no electoral advantage to enfranchisement. If there is any degree of uncertainty about women's preferences, then reform might pose some unknown risk to the parties. It follows that we should see franchise extension in less competitive environments, as it is only when a party is secure that a reform which will *probably* double the vote will not put the party at risk. On the other hand, if politicians believed women would vote distinctively, and one party or other hoped it could capture the lion's share of women's votes, then we should see reform in competitive political environments.

[17] 5-Oct-1915 quoted in Morgan 1972: 81.

[18] Carrie Chapman Catt Papers, Box1/3/14-May-1917, New York Public Library.

Table 1: Summary statistics

Variable	Mean	Std. Dev.	Min.	Max.	N
Suffrage Support	0.1	0.29	0	1	589
Mobilization	0.34	0.62	0	9.97	579
Longevity Ruling Party	13.06	10.58	1	48.5	540
Majority Surplus	0.27	0.14	-0.07	0.5	589
Pop. Under Machines (%)	9.67	16.57	0	64.32	589
Power Split Across Branches	0.08	0.28	0	1	589
Third Party Presence, frac.	0.03	0.1	0	0.82	589
Runner-up to Winner	0.33	0.24	0	0.97	589
Women's Property Rights	1863.63	12.62	1844	1889	549
Women's Sole Trader Laws	1865.73	17.59	1811	1894	441
Women's Earnings Laws	1874.62	14.44	1857	1943	449
Year Australian Ballot Adopted	1898.58	18.01	1888	1950	589
Year Initiative Reform Adopted	1910.21	5.11	1898	1918	204
Year Direct Primary Adopted	1911.19	4.88	1902	1921	417
Fraction Dry Counties	0.35	0.41	0	1	589
Dues paid to WCTU	500.86	650.65	5.05	3672.7	430
Men per 100 Women	107.73	13.96	94.7	179.98	589

Data and Methods

The following sections analyze decisions concerning women's suffrage taken within state legislatures from 1893-1920. The dataset has a panel format and takes a state-legislative session as the unit of analysis.[19] Although the first (highly contentious) demand for women's suffrage was promulgated during the Seneca Falls convention in 1848, membership information for the suffrage movement does not become reliable until 1893, after the merger of two prominent suffrage organizations in 1890. The study window therefore begins in 1893 and ends with the Nineteenth Amendment in 1920. If a state joins the union after 1893, its observations begin in the year of statehood. The observation

[19]Legislative sessions incorporate information across two chambers because all state legislatures were bicameral in this period (Moschos and Katsky 1965). Electoral data from Burnham (1986) does not record special elections, so the competition measures do not change within sessions. The electoral data generally are marked by even-numbered years, which I infer is the election year. By 1890 most states had adopted an early November election schedule (Dubin 2007), so I assume that the newly elected legislators do not take office until January in the odd year. Therefore, if a state had elections in 1880 and 1882, 1881 and 1882 would represent one legislative session, and hence a single row of the dataset, and 1883 and 1884 would be another row.

period for a state ends if equal suffrage is adopted for women. For all states but Delaware this would have been after a public referendum. Although there were 48 states in this period, Arizona, Wyoming, and Utah entered the union as franchise states and so do not appear in the dataset. Overall, there are 45 states in the analysis, 14 of which fully enfranchised women ahead of the Nineteenth Amendment. In the dataset, 98 percent of the state sessions cover a period of one or two years. On average, the data contain almost 8 legislative sessions per state, with a minimum of four for earlier enfranchisers like New Mexico and Arizona, and a maximum of 27 sessions for late enfranchisers, like New York, or non-enfranchisers like Massachusetts and New Jersey. All summary statistics are in table 1.

The Dependent Variable: Suffrage Support in State Legislatures

The dependent variable is *suffrage support* in state legislatures. I operationalize this concept as the passage of a bill for "equal suffrage" in both houses of a state legislature.[20] Equal suffrage is defined here as voting rights granted to women on the same terms as men, meaning that any age, literacy and property requirements are not distinguished by gender. Since all state legislatures were bicameral, suffrage support takes the value of one in each state-session in which both houses pass an equal suffrage bill. The dependent variable is zero in all other session-years.

Importantly, the dependent variable can take on the value of one in several session years because a state might have had to pass a bill several times before it became law.[21] There are four reasons for this. First, because all U.S. states except Delaware required a referendum vote after the legislature approved of a constitutional amendment, if the referendum failed, the legislature

[20]Examining bill passage allows for more statistical leverage than previous studies. Banaszak (1996), McCammon and Campbell (2001b), and McConnaughy (2013), conduct analyses of the final date of enfranchisement, which, for all states but Delaware, occurs in the year a referendum was approved by the voting public. This is problematic because competition, if measured in the year of final passage, may not reflect the composition of the legislature that actually approved the change prior to the referendum.

[21]This variable comes from King, Cornwall, and Dahlin's (2005) *Database on Women's Suffrage*. Complete details on the coding process are in Online Appendix A.

would have have to re-pass and re-refer the amendment. Idiosyncratic legislative rules could also prompt multiple passage. Nevada, for example, required proposed constitutional amendments to pass in two consecutive legislative sessions (McCammon and Campbell 2001a: 65). Others, such as Arkansas, only allowed three amendments to be referred per year.[22] Finally, a governor's veto could drive the process to begin again. Governors vetoed equal suffrage bills in North Dakota (1885), California (1893), Arizona (1903), and Wisconsin (1913). Although we might worry that politicians could approve suffrage bills knowing the bill would fail down the line, this strategy would have been risky because four of the first states to grant women voting rights – Wyoming, Utah, Idaho, and Arizona – did so in their first referendum. Events in the state legislature mattered, then, because they might stick. Among the 45 states in the sample, the average number of times a full-suffrage bill passed both houses is 1.29 with a standard deviation of 1.49.[23] The maximum number of times a single state passed an equal suffrage bill in both houses was four. The minimum was zero.

Key Mobilization Variable: National American Women's Suffrage Association Membership

The indicator of suffrage mobilization, *movement strength*, is measured as state-level membership, per thousand residents, in the largest suffrage organization in the United States, the National American Women's Suffrage Association. The NAWSA was formed in 1890 after a merger of the American and the National Women's Suffrage Associations.[24] The data, which come from Banaszak (1996), is recorded annually in each state beginning in 1893. Because the unit of analysis is the state legislative session, movement strength is averaged by legislative session within each state. Several states had no NAWSA members, so this right-skewed indicator has many zeroes.

[22] Arkansas's HJR 7 passed both houses in 1915 but was not referred for this reason.

[23] From 1848 to 1920, there were 560 equal suffrage bills introduced in state legislatures, and 71 instances in which a suffrage bill passed both houses of the state legislature.

[24] The NAWSA was a predominantly white organization (Kraditor 1981: 39), but black women were also mobilized for the vote, most notably within the Equal Suffrage League, which represented 40,000 African American women in 1908 (Terborg-Penn 1998: 162).

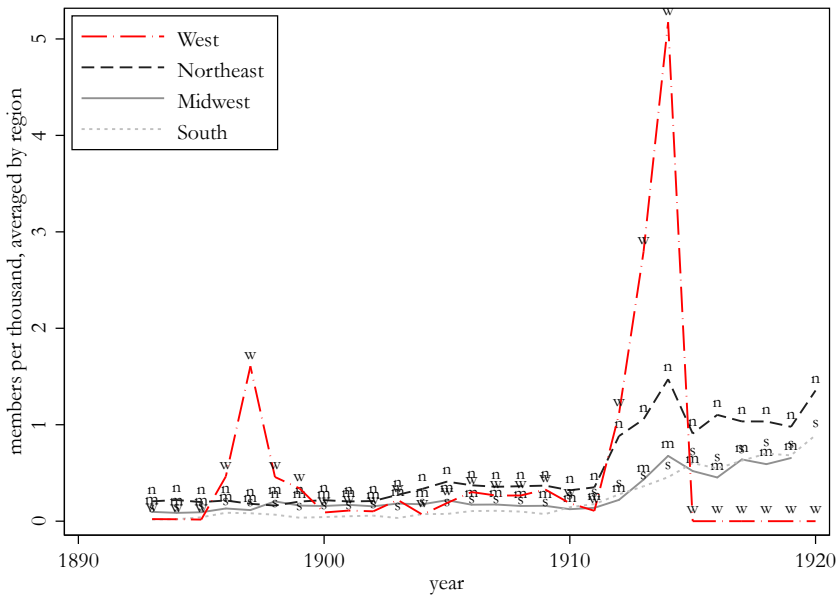


Figure 2: Membership in the National American Women's Suffrage Association, per thousand. Source: Banaszak 1996.

Figure 2 plots the evolution of NAWSA membership by U.S. region. The figure shows that overall suffrage membership was the most intense in the Northeast, but that there were several moments of heightened activity in the West vis-á-vis the other regions.[25] Interestingly, while suffrage scholars have long thought of the early Western enfranchisement puzzling because of the weaker suffrage movement on the frontier (e.g. McCammon and Campbell 2001: 59), the population weighted measures suggests more activity out West than we previously realized.

Varieties of Political Competition

The heart of the strategic account of women's enfranchisement is that politicians will resist reform if their positions are secure, while robust competition creates an environment for change. Since competition is a multifaceted concept, I attempt to measure it in several standard and period-relevant ways. I first describe measures that represent lower competition which I expect will be linked to resistance to reform and then move to measures that should entail higher probability of

[25]For example, Nevada saw membership surge just prior to a bill's passage by a Third party legislature in 1895, and again after 1910 when two consecutive sessions of a split legislature finally passed and referred the bill. The referendum, the state's first, succeeded in 1914.

reform. Over-time graphs, averaged by region, with all of the competition variables discussed below, are presented in figure 3.

Indicators of Low Competition.

Longevity of the ruling party measures the number of years in which the same party has held both houses of a state legislature. It is coded by taking the average incumbency over both houses when the largest party is the same. If either house changes hands, it is set to zero. In the dataset, the average length of time that the same party held both houses was about 12 years, while the maximum is 48.5. As figure 3 shows, parties were resilient in the North and South over the whole period, and there was much more turnover in the West.

Majority Surplus is defined as the fraction of seats that the largest party holds over fifty percent. When majority surplus is high, the dominant party is less vulnerable (David 1972). If the party with the largest share of seats holds a plurality instead of a majority, majority surplus can take on negative values. To construct this measure I took the average over both houses. In the dataset, the average value of majority surplus is 0.27 with a standard deviation of 0.14. At the mean, the largest party controls 77 percent of the seats. A one-standard deviation increase would put the largest party with 91 percent of seats. Over the whole period, as seen in figure 3, majorities had the largest margins in the South and the lowest in the West.

Political Machines are a type of traditional party organization common in the early twentieth century that would have resisted reform (Gimpel 1993; Shefter 1994). Political machines, which presided over urban politics from Trenton to San Francisco, were run by bosses and subscribed to by clients under a currency of patronage. Women's organizations often claimed that female voters would help to clean-up politics, giving political machines specific reasons to resist women's enfranchisement (Buenker, 1971; Flexner, 1995 [1959]: 309; Scott and Scott 1982: 26). A placard from the era perfectly captures these tensions, claiming "Machine politicians do not want equal suffrage for *woman,* too much *truth, honesty* and *purity* applied to *the machine* would demolish it," (see Online Appendix B.2, emphasis in original). Because political machines sought to create and maintain political monopolies through tight control of the electorate (Trounstein 2009), their presence should signal a heightened resistance to women's enfranchisement.

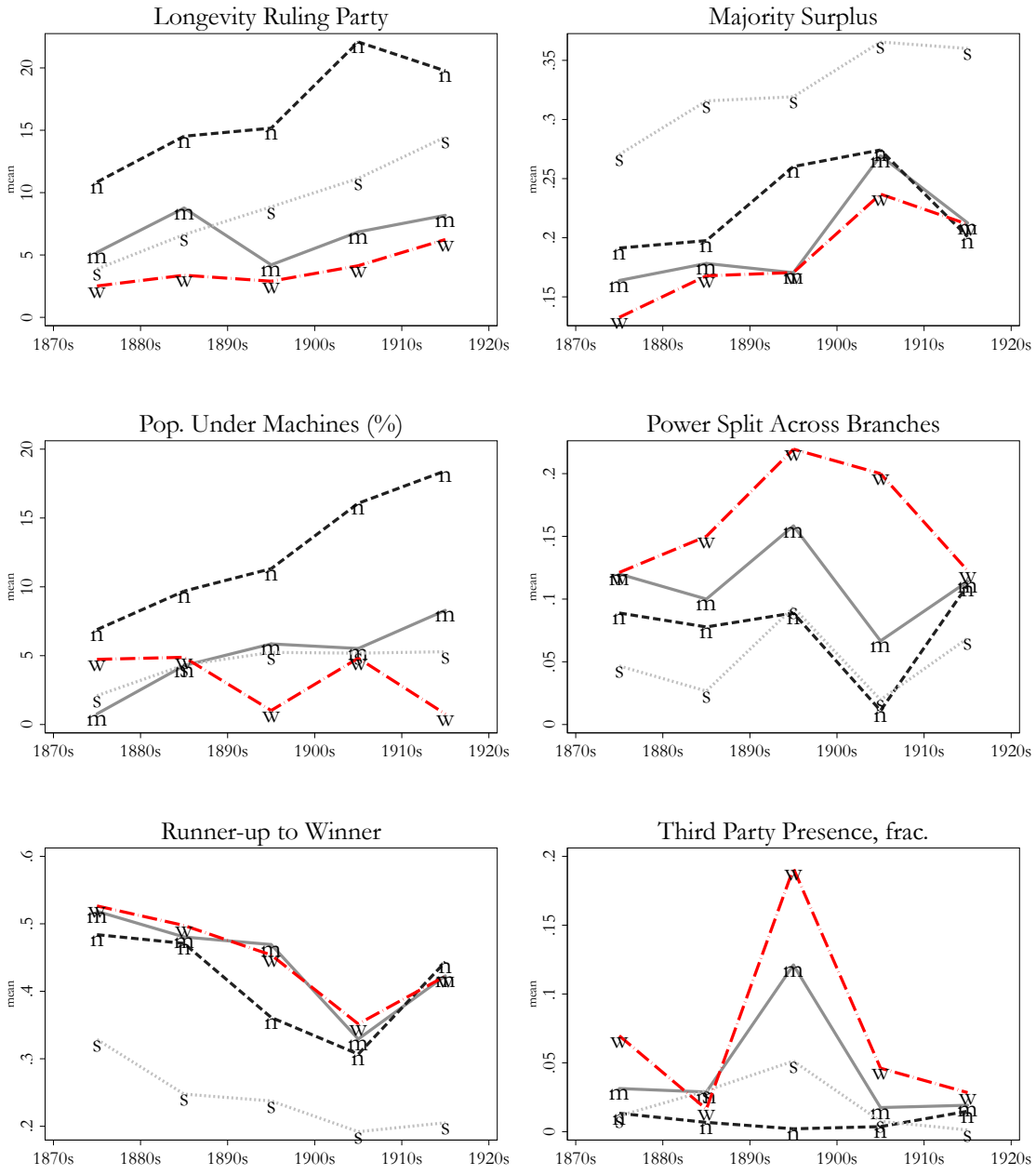


Figure 3: Regional variation in political competition variables. Each graph presents a decadal average of the variable by region.

Population under machines (%) divides the total population living in machine dominated large cities within a state by the state's total population to construct an annual measure of the intensity of machine politics in urban areas. Drawing on the large literature on Gilded Era urban politics, each large American city has been coded annually based on whether or not it was run by a political

machine.[26] Large cities are considered to be those with more than 25 thousand residents circa 1900. In 1900, 160 cities had more than 25 thousand residents. Overall, 38 of the then 48 states had a city this large, and the average number of cities of this size in the states which had at least one was 4.21. Within the group of 160 cities, 30 had a machine circa 1900.

Midwestern and Northeastern states are often thought of as "machine" dominated, but the big cities in the South (like New Orleans) and the West (like San Francisco and Sacramento) did have urban machines. Nevertheless, figure 3 shows that the Northeast has the highest proportion of residents living in machine cities, reaching a high of 18 percent in the 1910s. Theoretically, the preponderance of machines should lower the probability of enfranchisement. When this variable is used, I also control for total population.

Indicators of High Competition

Ratio of runner-up to winner measures the fraction of the winner's seats held by the next closest party, averaged over both houses. A ratio closer to one indicates that the ruling party is vulnerable to a competitor, making suffrage reform more likely. Note that when third parties have seats in the legislature, the ratio of the runner-up-to-winner and majority surplus are not generally linear transformations of each other. As figure 3 shows, the runner-up is farthest from the winner in the South.

Power split across branches is a measure of split partisanship across the legislative houses, coded as 1 when the largest party differs across the state houses and zero otherwise. As scholars have noted, in the late nineteenth and early twentieth centuries, Western voters were more likely to split votes across the various parties and to change party allegiance over their lives (Gimpel 1993; Kleppner 1983). Thus this measure captures the extent to which voters chose different parties to lead their state houses. Generally speaking, power was unified across legislative branches and majorities ruled. Even when power was split, parties had majorities.[27]

Fraction Third Party acknowledges the fact that minor parties were also quite prevalent in

[26]The machine data have been collected for a longer period, 1850-1950. The indicator was double-coded by the author and a "blind" research assistant. See Online Appendix B.2.

[27]A single party was the largest in both houses in 540 out of 589 legislative sessions (92 percent).

the era of suffrage (Hirano and Snyder 2007), and were especially common in the Midwest, West, and parts of the South (Goodwyn 1978; Postel 2007). The existence of minor parties is relevant under plurality rules because it can be an indication that competition is not so tight as to preclude entry by new groups and because these parties' electoral strategy was often premised on mobilizing those who were not already committed to the major organizations (Rosenstone et al. 1996; Shortridge 1978). A high fraction of seats held by a third party signals that there are more opportunities for outsiders to enter the political arena in a given state, which should increase the probability of reform.

Analysis and Results

To probe the correlation between political competition, movement strength, and suffrage support, I first use ordinary least squares to estimate a linear probability model and then investigate interaction effects. The basic model is:

$$\pi(x_{st}) = \alpha_0 + \beta_1 * competition_{st} + \beta_2 * movement_{st} + \gamma time + \alpha_s + \epsilon_{st},$$

where $\pi(x_{st}) = P(Y = 1|x_{st})$ represents the probability that a legislature in state s passes a suffrage bill in both legislative houses in session-year t.[28] Also included are a constant α_0 and state fixed effects α_s. Because the number of panels is small, I use a linear time trend instead of year fixed effects. In any given state, the random disturbances ϵ_{st} are likely to be correlated across time, so all specifications report standard errors clustered at the state level. Assuming that random disturbances across states are not identically distributed, White's robust standard errors are reported below the coefficients.[29]

[28] Traditional logistic regression is not well suited to studying rare-events or when censoring occurs, and with fixed effects they drop all obsservations with no variation on the dependent variable (which would eliminate the South) (Allison 1984; Box-Steffensmeier and Jones 2004). And event history estimators do not deal well with discrete time data, with time-varying covariates, or with fixed effects (Allison 1984).

[29] The estimators are implemented using Stata 14.0 "xtreg", "xtlogit", "streg" and "stcox".

Table 2: Estimated correlations between competition, mobilization, and suffrage support.

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: Competition proxied by:	Suffrage Support Longevity Ruling Party	Suffrage Support Majority Surplus	Suffrage Support Pop. Under Machines (%)	Suffrage Support Power Split Across Branches	Suffrage Support Frac. Third Party	Suffrage Support Ratio runner-up-to-winner
$\widehat{Mobilization}$	0.0845**	0.0829**	0.100***	0.0873**	0.0795**	0.0851**
	(0.0256)	(0.0262)	(0.0254)	(0.0259)	(0.0248)	(0.0264)
$\widehat{Competition}$	-0.00561	-0.313*	-0.0101*	0.0086	0.518*	0.140
	(0.00354)	(0.134)	(0.00461)	(0.0456)	(0.201)	(0.0734)
$\widehat{Time}$	0.0086**	0.0071**	0.00279	0.0069**	0.0087***	0.00689**
	(0.0024)	(0.0022)	(0.00271)	(0.0022)	(0.0023)	(0.00219)
$\widehat{Constant}$	-16.16**	-13.43**	-5.510	-12.99**	-16.47***	-13.11**
	(4.603)	(4.175)	(5.105)	(4.118)	(4.460)	(4.163)
$\widehat{TotalPop}$			0.000***			
			(3.79e-08)			
State FE	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	579	579	579	579	579	579
R^2	0.108	0.111	0.146	0.101	0.126	0.108

The dependent variable is 1 when both houses in a state legislature passed a suffrage bill. The key independent variables related to political competition are listed in column headers. Standard errors robust to heteroskedasticity, clustered at the state level, are in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Results: Movement Strength and Political Competition

Table 2 presents the primary results. Each initial regression includes only the constant, the competition variable indicated in the column header, the strength of the women's movement, the time trend, and state fixed effects. When the machine variable is included, the regression also controls for total population.[30] The parsimonious presentation of the baseline model helps to avoid the in-

[30]When total population is included for all regressions, the longevity of the ruling party and the runner-up to winner have similar point estimates and become statistically distinguishable from zero.

flated estimated variances that arise because of multicollinearity. As in figure 3, the three leftmost competition variables are expected to have negative relationships with enfranchisement while the three on the right should be positively associated with reform.

Results for Movement Strength. The first row of results in table 2 shows the estimated coefficient of the correlation between suffrage mobilization and suffrage support. The coefficient is positive, statistically significant, and extremely stable across specifications. To interpret this coefficient first consider the magnitude of its lower bound using the value in column (5). Here we find that average level of Third-party presence (3 percent of legislative seats) increasing NAWSA membership from its mean at 0.34 members per thousand by one standard deviation to 0.96 increases the probability of passage in both houses from 9 percent to 14 percent. So a near doubling of the probability of reform. On average, Illinois had just shy of 3 percent of its legislative seats held by third parties and 0.15 NAWSA members per thousand population in this period. In 1913 when it passed presidential suffrage, suffrage membership had grown to 0.64 members per thousand and third party presence rose to 14 percent of the legislature.

The largest coefficient on NAWSA membership is in column (3). Here, at the average share of the population living in machine-dominated cities (9.67 percent), increasing NAWSA membership from its mean by a standard deviation increases the probability of passage from 9 percent to 15 percent. Wisconsin had about an average level of its population in machine dominated areas (9.19 percent) but below average suffrage mobilization (0.19 members per thousand). After 1910 the movement surged, from 0.03 to 0.42 members per thousand by 1912. Incidentally, in 1911 and 1913 suffrage bills passed both houses of the state legislature. Although the 1912 referendum failed, the legislature adopted presidential suffrage in 1919. Overall, I find that the substantive magnitude of the correlation between suffrage mobilization at average levels of political competition is quite large, and maps nicely onto state-level trajectories.

Results for Indicators of Low Competition. The first three columns in table 2 contain indicators of low political competition. All have the expected negative sign, and all but the longevity of the ruling party are statistically significant. Consider the variable majority surplus. The average value of majority surplus is 0.27 with a standard deviation of 0.14. Here, the largest party controls 77 percent of the seats. Holding NAWSA membership at its mean, if we increase majority surplus by a standard deviation (the largest party holds 91 percent of seats) this lowers the probability of

passage from 9 percent to 4.5 percent. Substantively, this is like moving from the more competitive California to the less competitive Vermont. The average value of NAWSA membership in California during this time period was 0.33 members per thousand, while in Vermont it was similar at 0.32 members. California enfranchised women in 1913 after three state-sessions in which a bill passed both houses of the state legislature, while Vermont never passed a bill in both houses, and in fact only ratified the Nineteenth Amendment after it was federally ratified.

Results for Indicators of High Competition. Columns (4) through (6) in table 2 contain indicators of high political competition. All three of four have the expected positive sign. The fraction of seats held by a third party is the only statistically significant correlate. At the average level of NAWSA membership, increasing the share of seats held by a third party from the mean (3 percent) by a standard deviation (to 13 percent) increases the probability of passage from 9 percent to 14 percent. This is like moving from Illinois to Washington in terms of third party shares. Illinois had 0.15 members in the NAWSA per thousand on average while Washington had 0.18 members per thousand, both well below average. Yet Washington enfranchised women fully in 1910 while Illinois only extended presidential voting rights to women in 1913 but never passed an equal suffrage bill in either house of the state legislature.

Interaction Effects

Given the theoretical argument, a natural question to ask is whether there is an interaction between competition and mobilization. Does enfranchisement become likelier when competition rises, and is this relationship conditioned by the level of women's mobilization? Hainmueller et al. (2017) emphasize that interaction effects can only be investigated when the key independent variable – here political competition – spans the range of the moderator variable – here suffrage mobilization. That is, when there is enough competition data across different levels of mobilization. The only variable that fails this test is the fraction of seats that is held by the third party. Here, I present findings for two variables that display an interaction with mobilization: the ratio of the runner-up to the winner and the longevity of the ruling party. (For a longer discussion and complete results see Online Appendix C.1.)

Raw data plots, similar to those recommended by Hainmueller et al. (2016), are presented in figure 4. The figures show the relationship between the average level of suffrage support (y-axis)

across deciles of the competition variable (x-axis) when mobilization is low, medium, and high. The point markers represent the proportion of data in each competition decile for each level of mobilization in light of the total number of observations. Each plot also displays a linear fit line and a Lowess curve. These plots are helpful for visually diagnosing interaction effects and detecting potential non-linearities of the interaction over a relevant range of the mobilization variable.

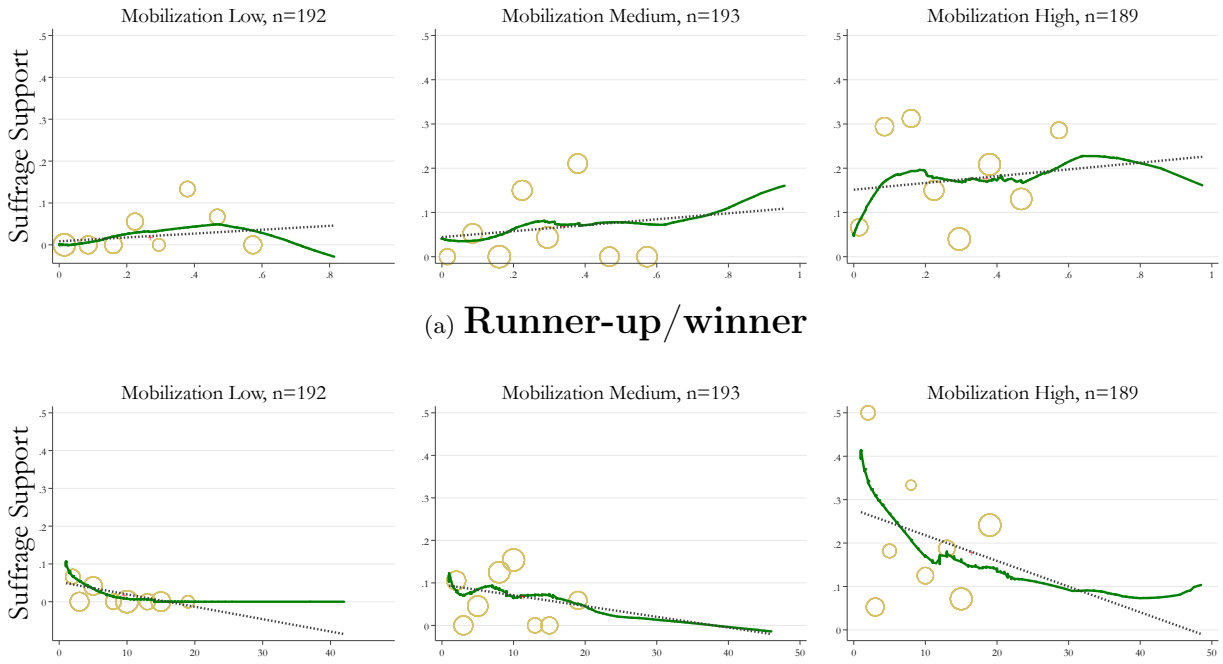
The first thing to note from figure 4 is that competition, as indicted by the ratio of the runner-up to the winner, and suffrage support are positively correlated (panel a). Across all levels of mobilization, there is a slight increase in the probability of enfranchisement for higher levels of competition. Second, although the slope of the line remains similar, mobilization raises the baseline probability of enfranchisement. This implies a general relationship between competition and enfranchisement, which becomes even stronger when women are highly mobilized.[31]

Turning to the potential interaction between ruling party longevity and mobilization (panel b), we should expect that the interaction coefficient on longevity of the ruling party and mobilization is zero. This is because longer rule is associated with less incentive to reform, independent of the level of mobilization. Using the kernel density estimator suggested by Hainmueller et al. (2017), consistent with expectations I find that there is no interaction between the longevity of the ruling party and suffrage mobilization. On the other hand, as the runner-up-to the winner grows, the theory suggests that we should expect this to positively interact with mobilization. The kernel density estimator shows a positive interaction between the runner-up to winner, mobilization and suffrage support, but only from the 95th-99th percentiles of mobilization (see OA-C.1).

Consistent with the theoretical argument, at *very* high levels of mobilization there is a positive interaction between high competition and suffrage support. Finally, the fact that enfranchisement is very unlikely when competition is at its lowest levels, even when mobilization is high, suggests that the interpretation of movement strength here may be apt: in the absence of a political incentive, a mobilized group may not be able to affect political reform.[32]

[31]The Lowess curves seem to be quite close to the linear fit, suggesting that non-linear interaction effects are not a huge problem here. The fraction of seats held by the third party does not have "common support" across the range of competition variables and so cannot be evaluated for an interaction.

[32]The online appendix presents a series of sensitivity analyses using variations on the model pre-



(a) **Runner-up/winner**

(b) **Longevity of the Ruling Party**

Figure 4: Raw Data Plots. The figures show the relationship between the average level of suffrage support (y-axis) across deciles of the competition variable (x-axis) for terciles of mobilization. The markers are proportional to the number of observations for a competition decile in the whole sample at that level of mobilization. A linear fit and Lowess curve also appear on each graph.

Robustness: Alternative Explanations

As with any observational study, the specter of omitted variable bias looms large. The study of women's suffrage benefits from a long tradition of historical and theoretical work that can inform the search for confounding variables. Many scholars writing about women's suffrage see a state's receptivity to reform, its gender-friendly policies, and the size of the temperance movement as driving support for or resistance to franchise extension. While still others contend that the legal landscape reflected the need (or lack thereof) for immigration (McCammon and Campbell 2001: 65). Under this theory, a higher ratio of men to women on the frontier would drive Western states to offer a better "package" of rights to women in order to encourage female settlers (Braun and

sented in table 2 using logistic regressions instead of OLS (OA-C.2) and variation within region (OA-C.3). Also shown are event history regressions with different parameterizations (OA-C.4). The mobilization variable is generally statistically significant and positively correlated with suffrage support, with no major sign reversals on the competition variables.

Kvasnicka 2013). There is also a possibility that partisanship of legislatures drove reform.

Gender Egalitarian Policies I draw on Skocpol (1992), Kahn (1996) and Hoff (1991), to locate the year of enactment of three women's rights policies that were implemented beginning in the mid-1800s: *women's property rights* are state-level provisions for the right of a married woman to own property; *earnings laws* likewise allow women control over their wages; and *sole trader laws* allow women to be the sole proprietors of businesses.[33] The existence of gender egalitarian laws is expected to be correlated with suffrage expansion.

Progressive Political Culture is measured by three policy reforms: the adoption of the *secret ballot* makes votes private and less subject to coercion (Katz and Sala 1996); the shift to *direct primaries* empowers citizens over parties by letting voters to select official candidates (Harvey and Mukherjee 2006); and the adoption of *initiative rights* allows citizens the opportunity to bypass the legislature and change laws directly by appealing to the majority of voters using ballot initiatives (Smith and Fridkin, 2008).[34] In Grimes's (1967) classic account of the Western enfranchisement, women's enfranchisement along with the direct primary and direct election of senators became the lynchpin in the Progressive party's attempt to maintain standing after 1910.

Temperance Forces are conceptualized in two ways. I first measure state-level support for the Women's Christian Temperance Union (WCTU). This measure records *WCTU per-capita dues* from 1884-1914 using the organization's yearly bulletins (WCTU, various years). Dues payments were intended to be a function of the size of a state's membership, making higher dues a reasonable proxy for WCTU membership at the state level. Second, I measure the *fraction of dry counties* in a given state using Sechrist (2012). Drier states might have been less resistant to reform because the laws were already more prohibitive, reducing the threat from women's suffrage. But the literature suggests that larger temperance movements should depress enthusiasm for women's suffrage (Scott and Scott 1982: 25). Finally, to examine whether gender imbalances drove the extension of voting rights I measure the *men per 100 women* using population data from Kuznets and Thomas (1982).

[33]Mothers' Pensions, a focus of Skocpol, come into being in 1911, after many franchise reforms (Skocpol, 1992: Table 10).

[34]Other popular reforms, such as adopting non-partisan city governments, have been revealed to be quite anti-democratic, rather than progressive. See Bridges (1997), and Shefter (1994).

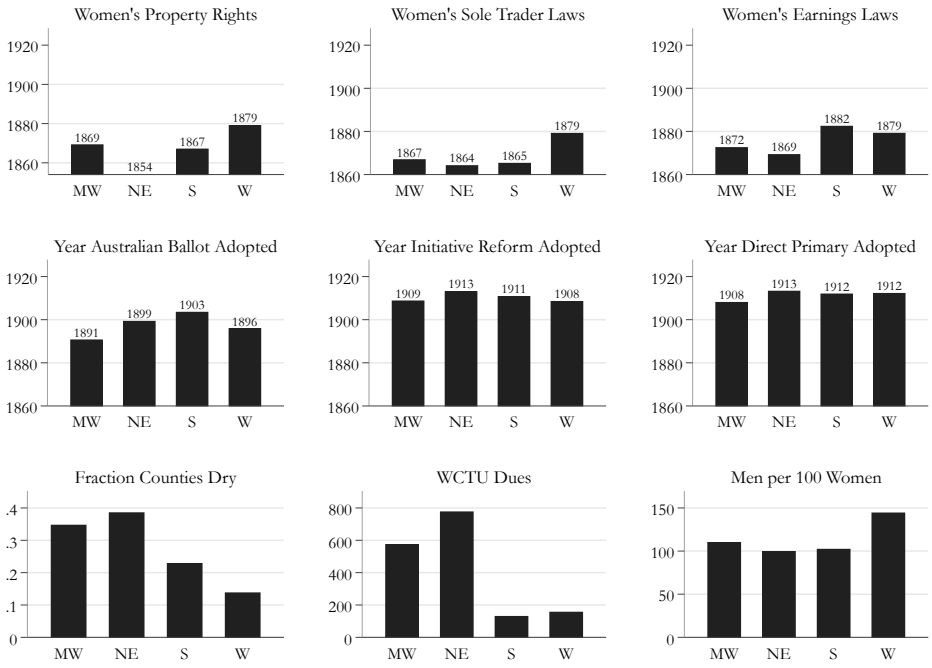
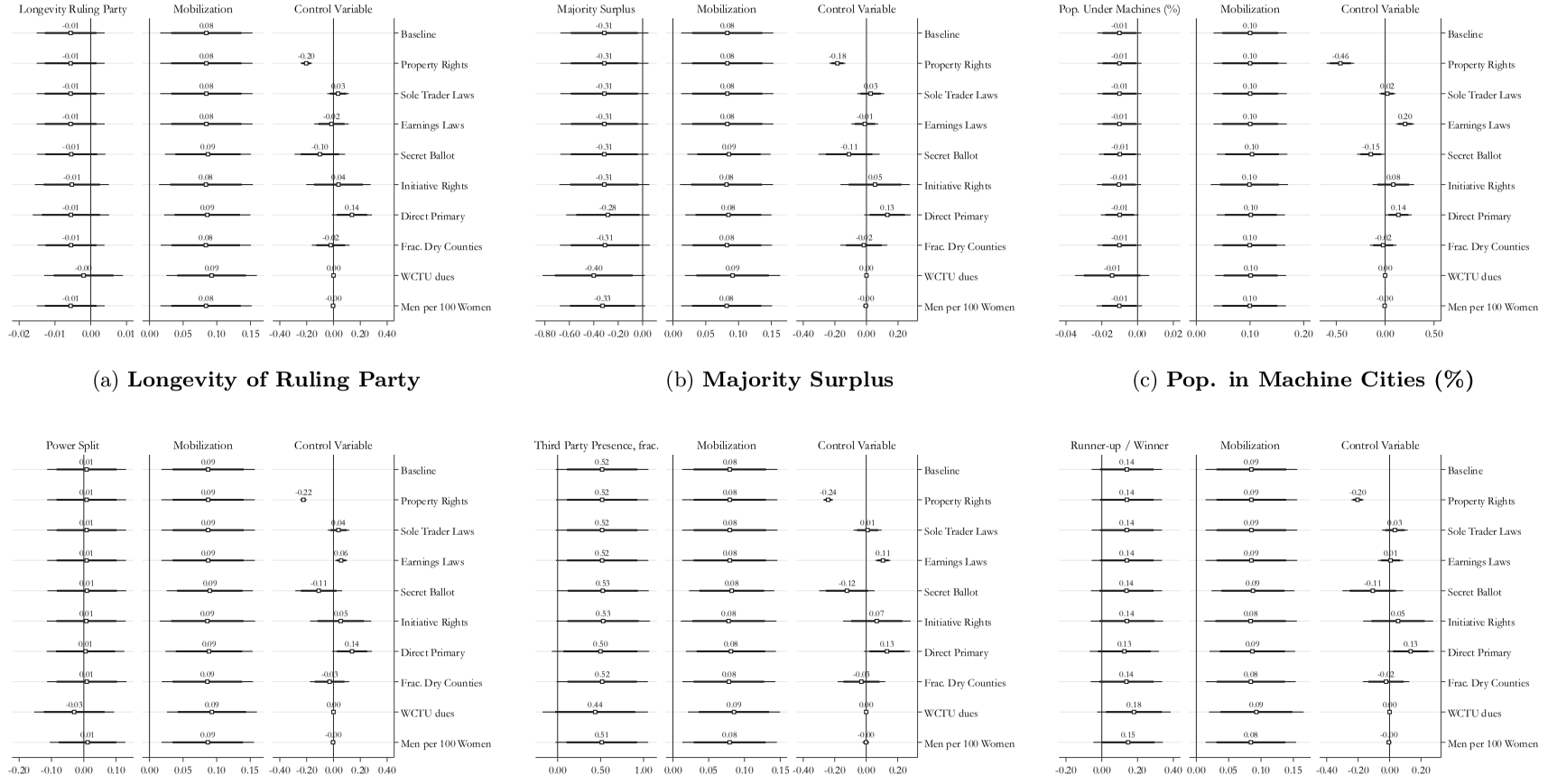


Figure 5: Regional variation in alternative hypotheses, average year of adoption, or value taken, by region.

Because population data is available only from the decennial censuses, missing values are linearly interpolated using Stata's "ipolate" command.

Figure 5 presents regional averages for each of the measures described above. The top three graphs show the average date at which women achieved certain economic rights. The middle three graphs show the average year of adoption of progressive policies, while the bottom three graphs depict the variables related to temperance and to gender ratios. In terms of women's rights, what is immediately striking is that the Western states were *later* adopters, particularly in comparison to the Northeast. For the adoption of the direct primary and initiative reform, the dates are all fairly similar across regions, but for the adoption of the secret ballot on average the Western and Midwestern states are ahead of the other regions by about seven years. For the temperance related variables, the Northeast and the Midwest have the highest share of dry counties, and larger support for the WCTU. Finally, the West shows a slightly greater gender imbalance: for every hundred people, the West has two more men on average than the other regions.



(a) **Longevity of Ruling Party** (b) **Majority Surplus** (c) **Pop. in Machine Cities (%)**

(d) **Power Split Across Branches** (e) **Frac. Third Party** (f) **Ratio Runner-up-to-Winner**

Figure 6: Sensitivity Analysis: Coefficient plots of regressions in table 2 substituting measures of alternative explanations. All regressions include robust standard errors clustered by state. Coefficient estimates appear with 95th and 99 percent confidence intervals.

Figure 6 presents sensitivity analyses by comparing the baseline results in table 2 after controlling for the potential confounding variables one at a time. In each graph, the first column shows the estimated coefficient for the competition variable listed in the header, the second column shows the estimated coefficient for NAWSA membership, and the third column shows the estimated coefficient for the alternative explanation demarcated on the right vertical axis. As in table 2 all regressions include state fixed effects and robust standard errors clustered at the state level. The coefficient estimate is listed in the proper place and the "darts" surrounding the estimate represent 95th (thick), and 99th (thin) percent confidence intervals around the estimates.

Overall, the point estimates of the coefficients on the competition measures and on mobilization are extremely stable. The estimated coefficients on the alternative explanatory variables are also fairly consistent across specifications and some of them are statistically significant. For example, adoption of women's property rights are always negatively correlated with support for suffrage and statistically significant, while adoption of earnings laws and sole trader laws tend to be positively correlated with suffrage support. Sole trader laws are always statistically distinct from zero while the earnings laws are significant in about half of the specifications. In terms of adoption of progressive reforms, they tend to be positively correlated with support for women's suffrage, but only the adoption of the direct primary is consistently statistically significant. The indicators of temperance support are not statistically distinct from zero in any of the regressions. Finally, gender imbalance is always positively correlated with suffrage support and is statistically significant in about half of the specifications.

A party project? Finally, it might be suggested that the Republican party was responsible for reform. Online Appendix C.5 presents several tests of this relationship, looking at Republican control of both houses (no change); Republican control interacted with all competition variables (the only significant interaction is with the machine variable);[35] and differences across region when the Republicans were in control. I find that comfortable Republican leads did not produce enfranchisement, but more competition coupled with Republican dominance did.[36] Outside the South,

[35]Most urban machines were Democratic (67 percent), so this might drive the interaction if Republicans hoped to reduce machine power.

[36]In the South, mobilization is never distinguished from zero. Further, in the South, when Republicans are in control with a high majority surplus, enfranchisement is less likely, but, when

the point estimates for women's mobilization are always statistically significant and have similar magnitudes as in table 2. When Republicans have control, suffrage support is higher when there is more party longevity, and when there is a higher proportion of the population living in machine cities.

Taken together, examination of ten alternative explanations does not change the substantive results described in the previous section. The divergent findings from different measures of women's rights and different measures of progressive reforms do serve to remind us that equality and progressivity are potentially complicated ideas that may be shown to have different correlates and effects depending on how they are measured.

Conclusion

In this paper I have argued that conditions of close competition, combined with the possibility of mobilizing a large latent female vote indicated by an active suffrage movement, made women's enfranchisement more likely. These dynamics help to explain why women won the vote earliest in the Western United States. In pointing to the importance of differences across regions and within states in political competition, instead of regional political cultures, this paper gives a new answer to a longstanding puzzle in the history of women's suffrage. The evidence also provides a rebuttal to those who claim that women's political emancipation arose independent of suffrage mobilization (Miller 2008), that it was "granted" by politicians except when women turned to militancy (Przeworski 2009), or that it emerged for ideational instead of strategic reasons (Acemoglu and Robinson 2000: 1186).

In many ways these findings represent a new beginning rather than the end of the story of women's suffrage in the United States and beyond. A key outstanding question is whether women's mobilization and political competition were important correlates of suffrage in other countries. A preliminary glance at histories of suffrage suggests that politicians abroad – from the Liberals in the United Kingdom, the Radicals in France, to the Conservatives in Chile and populists in Argentina

Republicans in control and there is a high runner-up to winner – when the Democrats or a Third Party are close on their tail – suffrage support is higher.

– were also influenced by the electoral consequences of enfranchising women.[37] Application of this paper's argument in these and other cases, using both qualitative and quantitative methods, is a fruitful area for future inquiry. Further, we might ask whether male enfranchisement, particularly that of the lower classes and minority groups outside of revolutionary contexts, followed similar patterns.

There is also much work to be done to understand the effects of women's political emancipation. A growing quantitative literature has shown that the enfranchisement of women increased social spending in Western Europe (Aidt and Dallal 2008), in the OECD countries (Bertocchi 2011), and in Switzerland (Abrams and Settle 1999), and produced large and immediate changes in public health expenditures in the United States (Miller 2008). And yet apart from the influential work by Harvey (1998), Anderson (1996), and Corder and Wolbrecht (2016), all on the United States, and a recent paper by Gerring et al. (2015) which shows that suffrage increased competition in a handful of countries, we know very little, but would benefit by knowing much more, about how women changed the landscape of electoral politics after the vote was won.

Finally, by focusing on women instead of the working classes this paper heeds the calls made by Paxton (2000) and Caraway (2004) to bring a fresh perspective to the democratization literature by using gender as a lens to interrogate theories of democratic reform. It advances the study of democratization by proposing that rather than revolutionary, sectoral, or ideological explanations, ordinary forms of democratic mobilization explain variations in political equality. Perhaps revolutionary unrest is responsible for democratic openings, but political competition and social movements are central to the long process of democratic deepening.

[37]For sources, see Teele 2014: 588 and Teele 2015: 43, 102.

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Online Appendix: How the West Was Won: Competition, Mobilization, and Women's Enfranchisement in the United States

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Online Appendix A: Construction of the Dependent Variable

The dependent variable pertains to whether a bill for full suffrage for women passed both houses of the state legislature during a legislative session from 1893-1920. To locate each time a suffrage bill passed both houses of the state legislature requires an understanding of the history of all suffrage bills, ad a differentiation between bills that allowed for partial suffrage versus those that allowed for full suffrage.

Marie Cornwall generously shared the database used in King, Cornwall and Dahlin (2005) in which she and her collaborators recorded all bills that were introduced on behalf of women's suffrage in its various forms, including partial suffrage bills for school and municipal voting rights, in US state legislatures. Leads on bills were culled from the History of Woman Suffrage (Anthony et al., 1969 [1881]), "Blue" books, which are legislative guides to each of the states, as well as the state House and Senate Journals. When discrepancies between sources arose, the dataset's compilers noted them.

Most entries include the following: name of the bill – whether a House Bill (HB), Senate Bill (SB) or Joint Resolution; the original language of the bill; the bill's sponsor (though not his party affiliation); and a brief description of what happened to the bill. When bills were voted on, the total votes for each side, including abstentions, were recorded. In Cornwall et al.'s (2005) complete database there were 1124 records of suffrage bills introduced into state legislatures, just over half of which (610) were bills that would have fully enfranchised women on the same terms as men.

The language of full franchise bills varied – some proposed extending franchise rights to women but denying them to aliens, some bills simply proposed taking the word "male" out of the constitution as a qualifier for suffrage rights, four proposed something along the lines of "Grant suffrage to all women who pay property taxes of at least $100" (e.g. Montana, 1899; HB50), and some bills proposed allowing the citizens to vote on the issue themselves (e.g. Arizona, 1912; HB18). The majority of bills, however, took a form similar to a 1919 proposition in Arkansas: "Purpose of this amendment to confer the right of suffrage equally upon men and women, without regard to sex" (Arkansas, 1919; HJR 1).

Even if there are property qualifications or literacy requirements, my dataset treats equally all bills coded as proposing full suffrage for women on the same terms as men. Nevertheless, some deletions were made among the 610 full suffrage bills: 13 pertained to suffrage rights in the territories; one called for a survey of women in the state of Missouri as to their preferences for voting rights; A Connecticut bill was for all franchise but state legislatures (CT, 1886, HB289). There is also one case, from South Dakota in 1909, which has no record of introduction into either chamber of the legislature and is given no bill number, no sponsor, no record in either journal (but which lists p.586, ostensibly from HWS, as a reference). This case was excluded.

Removing these cases leaves 593 bills. Of these, there are 31 cases where a bill was dropped because

another identical bill was introduced simultaneously, or because a similar bill got sent over from the other house, or because a similar bill was already decided upon in that session. These replaced bills, which are essentially duplicates, were dropped from the data set leaving 562 full suffrage bills.[1]

Among the 562 legitimate cases, we also have to account for those bills that were given a hearing in both houses. Using data on the dates that bills were introduced into state legislatures, I coded for three categories, 1.) bills that were introduced only in the house, 2.) bills that were introduced only in the senate, and 3.) bills that were introduced in both, not necessarily at the same time. Among the 139 bills that were introduced into both, only 6 were cases of simultaneous introduction, and of these 3 were cases where it was never voted on, and the other three were cases where it didn't pass either house. After this coding 552 cases were accounted for. Among the 10 unaccounted for, I coded the bills as a 1, 2 or 3 above using information on whether the bill was voted on in either house, which dealt with four cases. If no record of that existed, I used information on who sponsored the bill in each house, which accounted for another three cases. Finally I used the legislative ID to account for one more bill.

This leaves 2 unaccounted for cases – an 1893 bill from North Dakota and an 1879 Bill from New York. These cases have no information on the legislative ID, dates of introduction, sponsorship or voting record. The New York case has a Senate Journal citation 565 that could be followed up on. (I did not code that as a senate bill because many bills that appear to be introduced into only one house have references in the journal of the other house.) After all this reconnaissance, the final number of full suffrage bills is 560: State assemblies have 257 unique bills; state senates have 163; and there are 140 that were given some hearing in both. Among all of these cases, there are 71 instances in which both houses of the state legislature passed the bill prior to the Nineteenth Amendment. The empirical portion of this paper looks only after 1893, when movement data become available. In this window there are 56 instances where a full suffrage bill passed both houses of the state legislature.[2]

[1] NB: There are also many cases where a bill was introduced as a concurrent resolution. Often this is apparent in the name HCR would be House Concurrent Resolution versus HJR which would be a House Joint Resolution. In the national congress concurrent resolutions don't have the force of law because the President does not sign them. They are used as a way to get majority approval of budgets, vacation days, and to express sentiments. In the state legislatures I think that representatives could use concurrent resolutions instead of normal bills because constitutional amendments required the citizens' approval rather than the governor's approval. Thus though a concurrent resolution wouldn't have the force of law at face value if it passed both houses, it should have the force of law if it passed a referendum. Thus, I retain cases of concurrent resolutions in the data.

[2] Note that King, Cornwall, and Dahlin (2005) find 67 instances in which a full suffrage bill passed both state legislatures. They begin their study only in 1860, thereby dropping a few cases.

Online Appendix B: Key Explanatory Variables

This section provides additional information on some of the key explanatory variables utilized in the main body of the paper.

B.1: Suffrage Movement Strength

The following figure shows the total membership in the National American Women's Suffrage Association by region. It demonstrates that in absolute terms membership was lower in the West than in the East. Figure 2 in the main text shows this to generally be the case in relative terms as well.

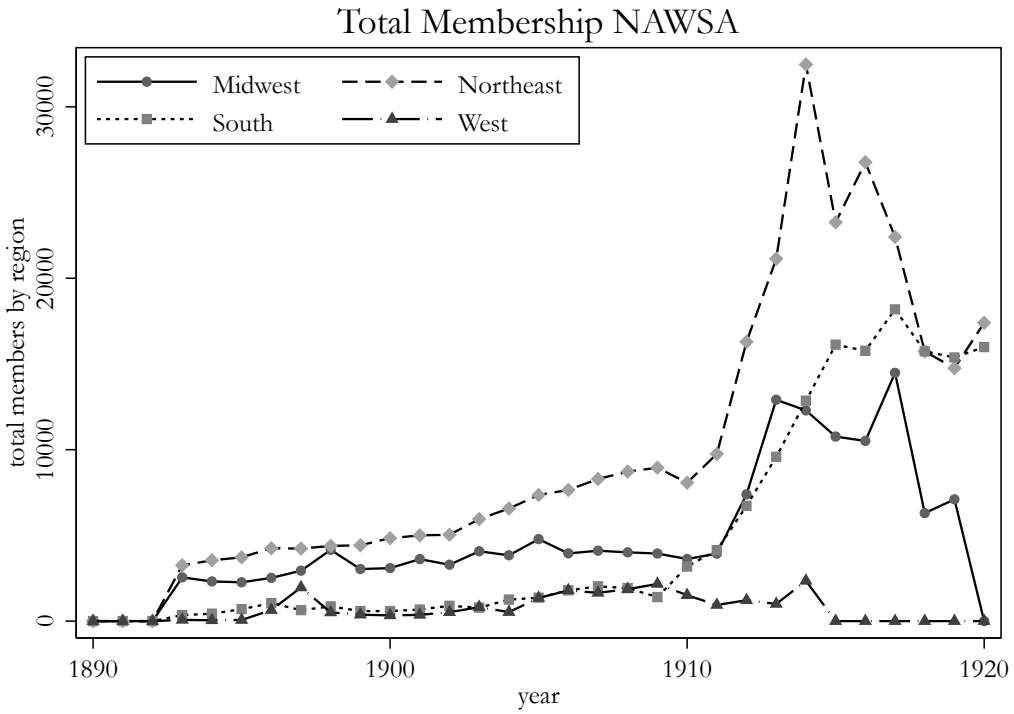


Figure 1: Total Membership in the NAWSA. Source: Banaszak (1996).

B.2: Construction of Political Machine Variables

Political machines in the U.S., especially "Tammany Hall" in New York City and various Bostonian machines, were long known to resist women's suffrage. One theory about why this is so claims that women, who were as yet unintegrated in the powerful patronage system, felt themselves and were perceived to be incorruptible moral forces. Their emergence on the political scene posed a direct threat to the machine way of doing business. Members of the Tammany Hall electoral machine in New York State gave explicit voice to this concern, complaining that women's votes could not be bought (Flexner, 1995 [1959]: ch 22, p.309). As such, machine leaders rallied against women's suffrage (Buenker, 1971). Figure OA.2 is a suffrage placard from

the era perfectly captures these ideas.

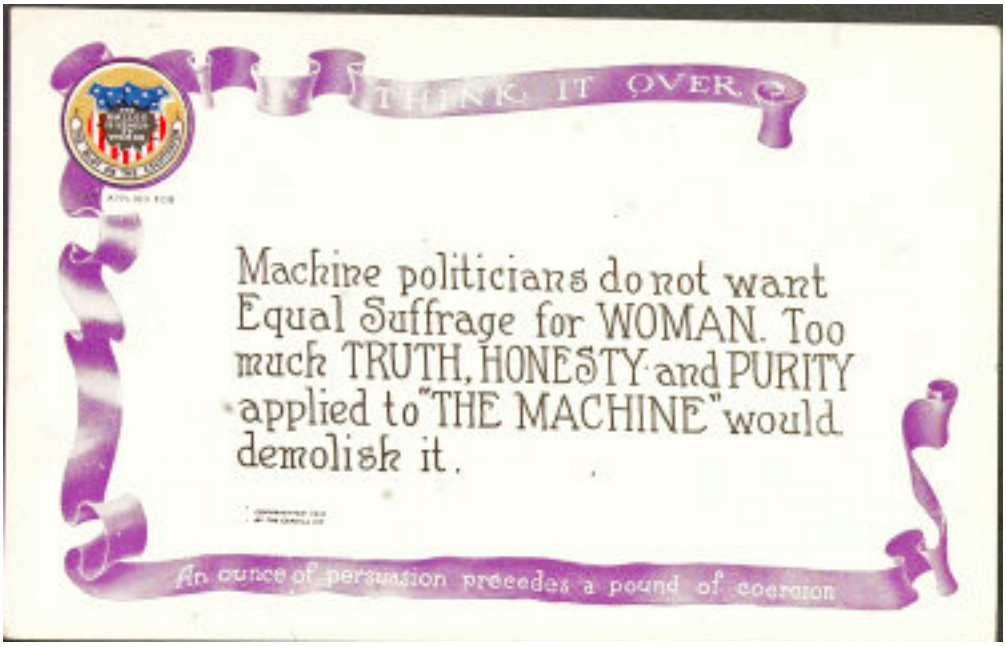


Figure 2: Placard demonstrating received wisdom for why political machines opposed women's suffrage. Source: Women's Suffrage Collection at the University of Delaware. http://www.lib.udel.edu/ud/spec/exhibits/fifty/suffrage.html

To try to understand and measure the extent to which political machines interfered with the suffragists' aims I constructed several variables. The coding closely hews to the definition of Traditional Party Organization developed by David Mayhew (1986). That is to say it was not enough to find in a history of a given city that a "machine" existed there, but rather that an organization (or several) with the following four characteristics was important in getting candidates on tickets in city politics.

1. Patronage Based organization with an identifiable political boss.
2. Must be living for at least 2 election cycles.
3. Cities more than 25,000 population in 1900.
4. Local bosses could promise large blocks of votes.

Mayhew's (1986) "Traditional Party Organization" (TPO) score measures hierarchical party and non-party organizations that attempt to get preferred candidates on the ballot and that use patronage as a way to reward constituents. My definition is thus quite close to his. In order to construct the measures of machine presence I took the following steps:

Step 1: Find all cities that had more than 25,000 people at the turn of the century.

Source: Census Statistics of Cities (p.54). Group I Cities had over 300,000 ppl in 1903; Group II 100k-300k in 1903; Group III 50k-100k in 1903; Group IV 25k-50k in 1903.

Figure 3: Total number of US cities with Machine organizations 1860-1920.

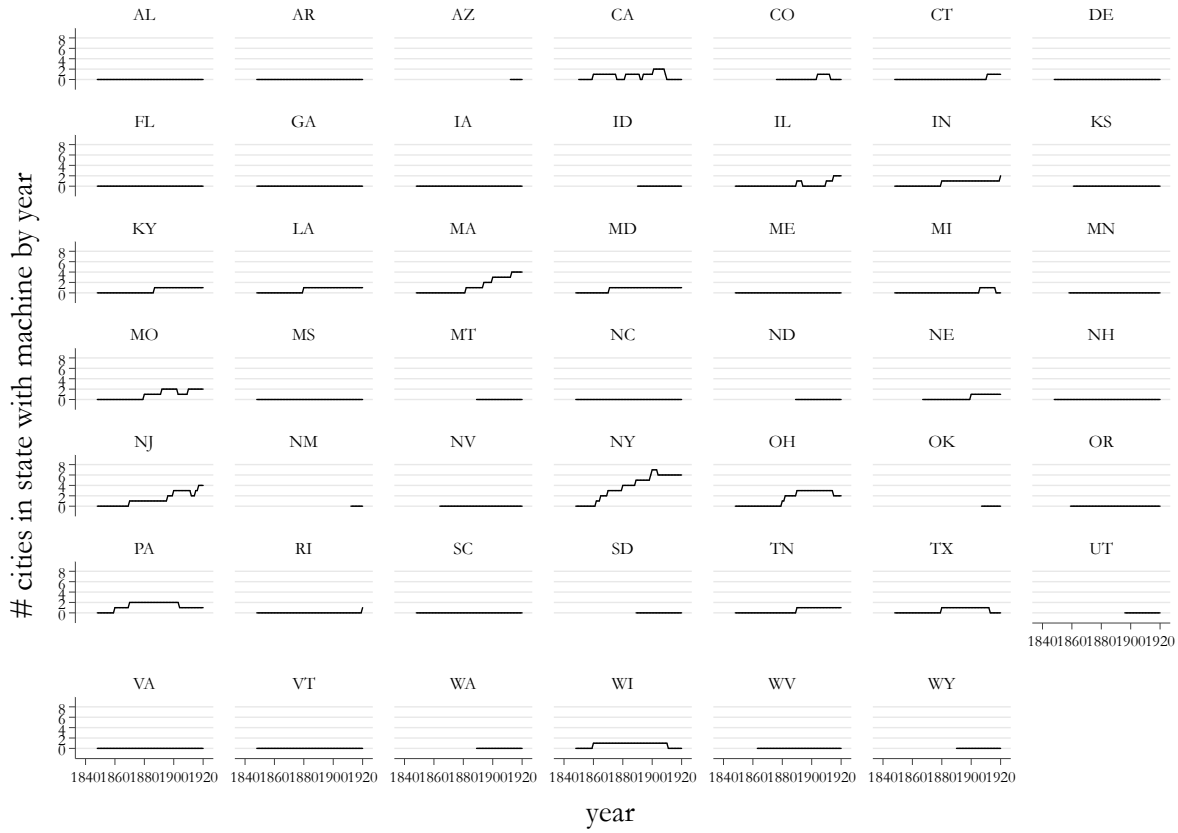


Figure 4: Number of Machine cities by state.

Step 2: Find Cities that had machine organizations

Within the cities enumerated in Step 1, I searched for organizations that would fulfill criteria 1-4 around the turn of the century. I began to identify such places using Gimpel (1993), who studies machine politics in Northern cities over 20 thousand people circa 1900. Then I compared his classification with that of

Menes (1997), who studies cities over 25 thousand people in the whole US circa 1900. Additional cities were supplemented with DiGaetano (1988, 1991) and Brown and Halaby (1987). In 1900, 160 cities had more than 25 thousand residents. Overall, 38 of the then 48 states had a city this large, and the average number of cities of this size in the states which had at least one was 4.21. Within the group of 160 cities, 30 had a machine circa 1900.

Step 3: Assign dates to the "rise" and "fall" of the organizations

Using this expanded list of cities with potential machine organizations I searched through relevant city histories and comparative texts to fill in information about bosses, party affiliations, and dates that a given organization was dominant in city politics. (See References in this document for a guide to the sources.)

In August 2012 I came up with an initial classification of where and when machines were present. Many of the "rise" dates were hard to pinpoint while the decline was easier as this has been studied. In January 2013 I employed a history student as a research assistant to conduct a blind pass at doing the same thing. The student was given a list of the cities with over 25,000 inhabitants around 1900, and the coding scheme, but was not given any sources or references. Her task in particular was determining 1. whether a machine existed in the city at any point in time, and the date of its rise and fall.

Step 4: Compare my classification with replication dataset

There were two cases where the secondary coder's date on the fall of a machine differed from mine. In both cases I adopted her coding. Each of these were outside the timeframe of this study.

Step 5: Construct Machine Presence circa 1900

I constructed several indicators of political machines, some which do not vary over time so that they might be compared to Mayhew's TPO score. Only the population weighted variable appears in the paper's main analysis, but the others are available upon request.

Machine Score measures the presence of political machines in a state's urban areas circa 1900. This variable = 0 if there are no reports of political machines in a state's urban politics, =1 if there are some reports, =2 if more than 50 percent of a state's largest cities were dominated by a political machine circa 1900.

Step 6. Machine presence over time: Share of Large Cities with Machine

Share of Large Cities with Machine. When a rise and fall date could be pinpointed, I created a time series variable that captures the proportion of large cities (measured in 1900) in a given state that were governed by political machines. The variation in this variable comes only from whether a given city has or does not have a machine, not from populations over time.

Population under machines (%) divides the total population living in machine dominated large cities within a state by the state's total population to construct an annual measure of the intensity of machine

politics in urban areas. The city population data come from the census so are measured decennially.[3] Within cities Stata's "ipolate" command is used to linearly interpolate populations in the intercensal years.

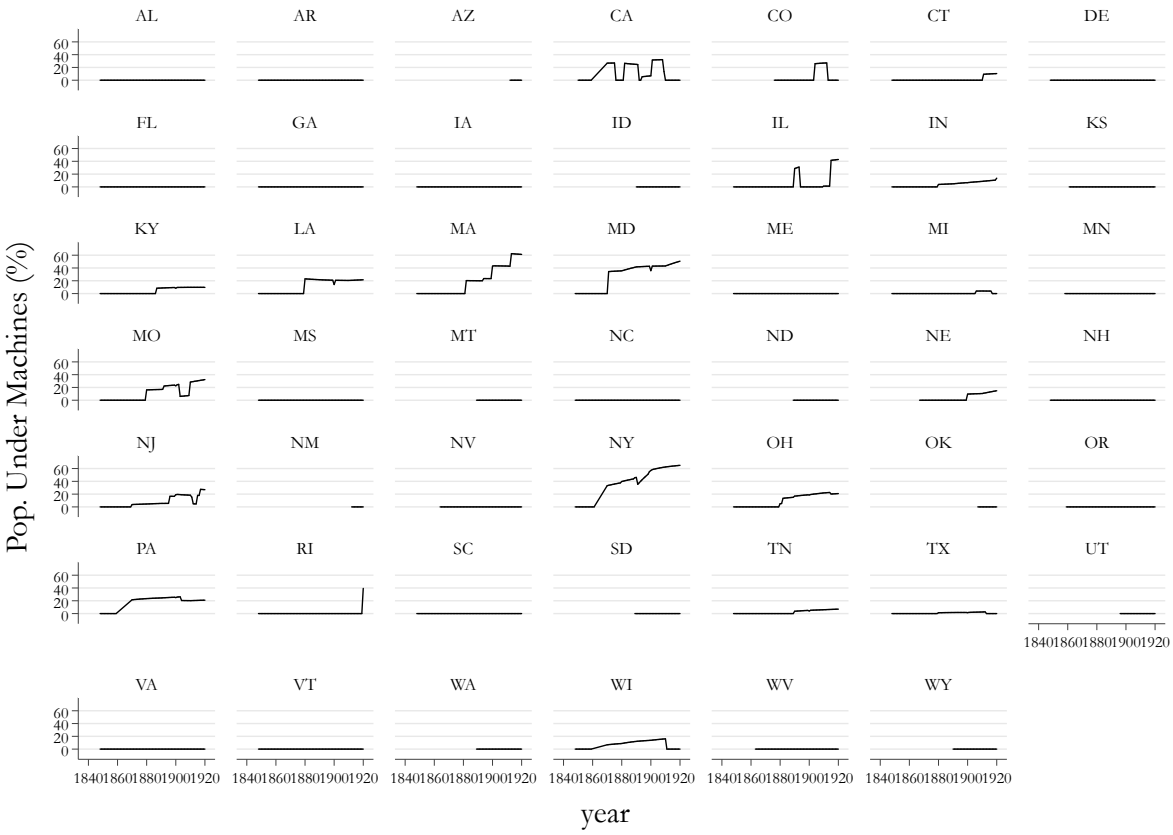


Figure 5: Population Living Under Machines (%) by state

[3] http://www.census.gov/population/www/documentation/twps0027/

B.3: Raw Data and Suffrage Dates

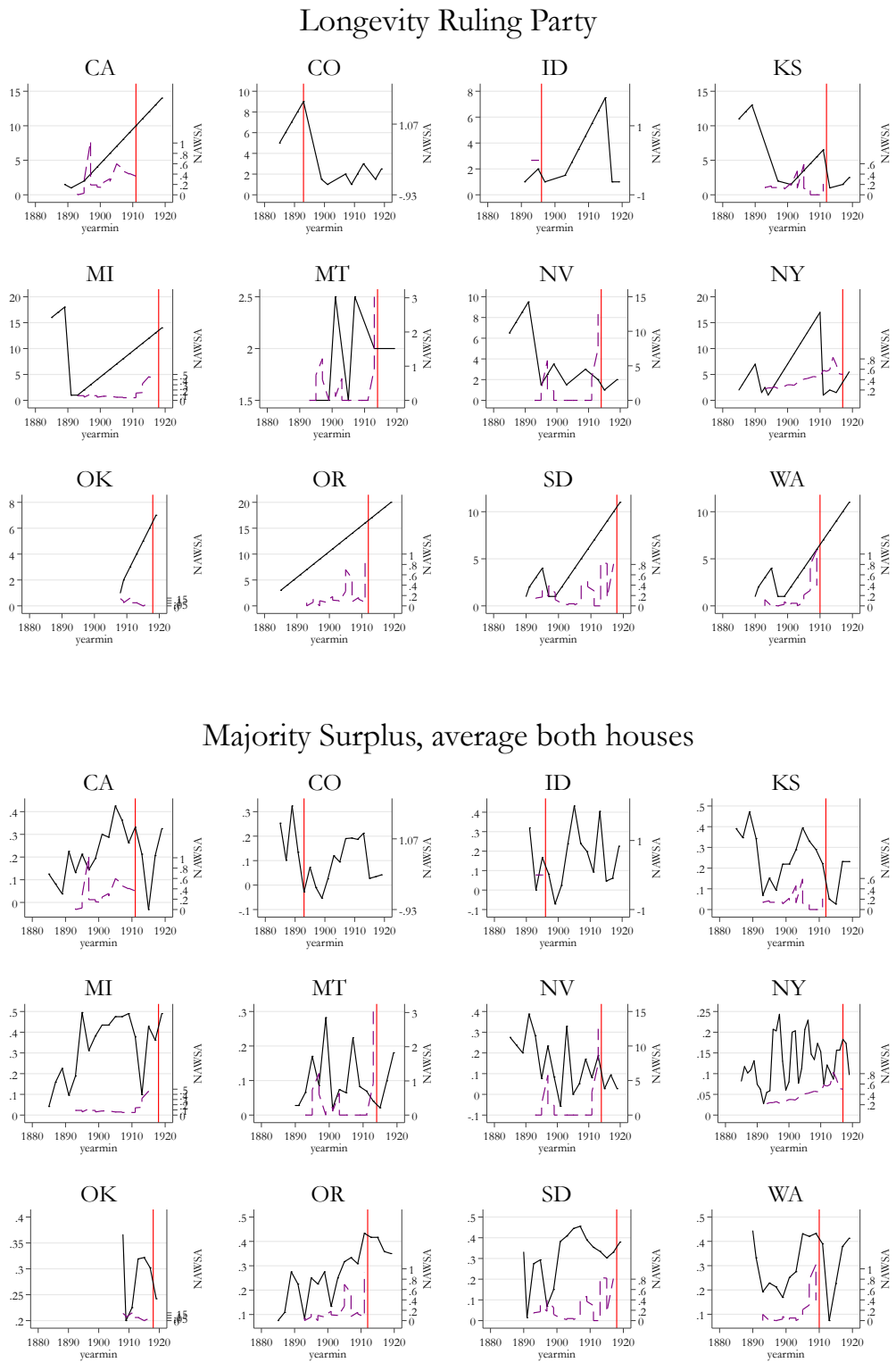


Figure 6: Raw Data I. Grey line is the competition variable listed on the plot (scale on left y-axis); purple line is NAWSA membership (scale on right y-axis). Included states extended voting rights to women prior to the Nineteenth Amendment, in the year marked by the vertical red line.

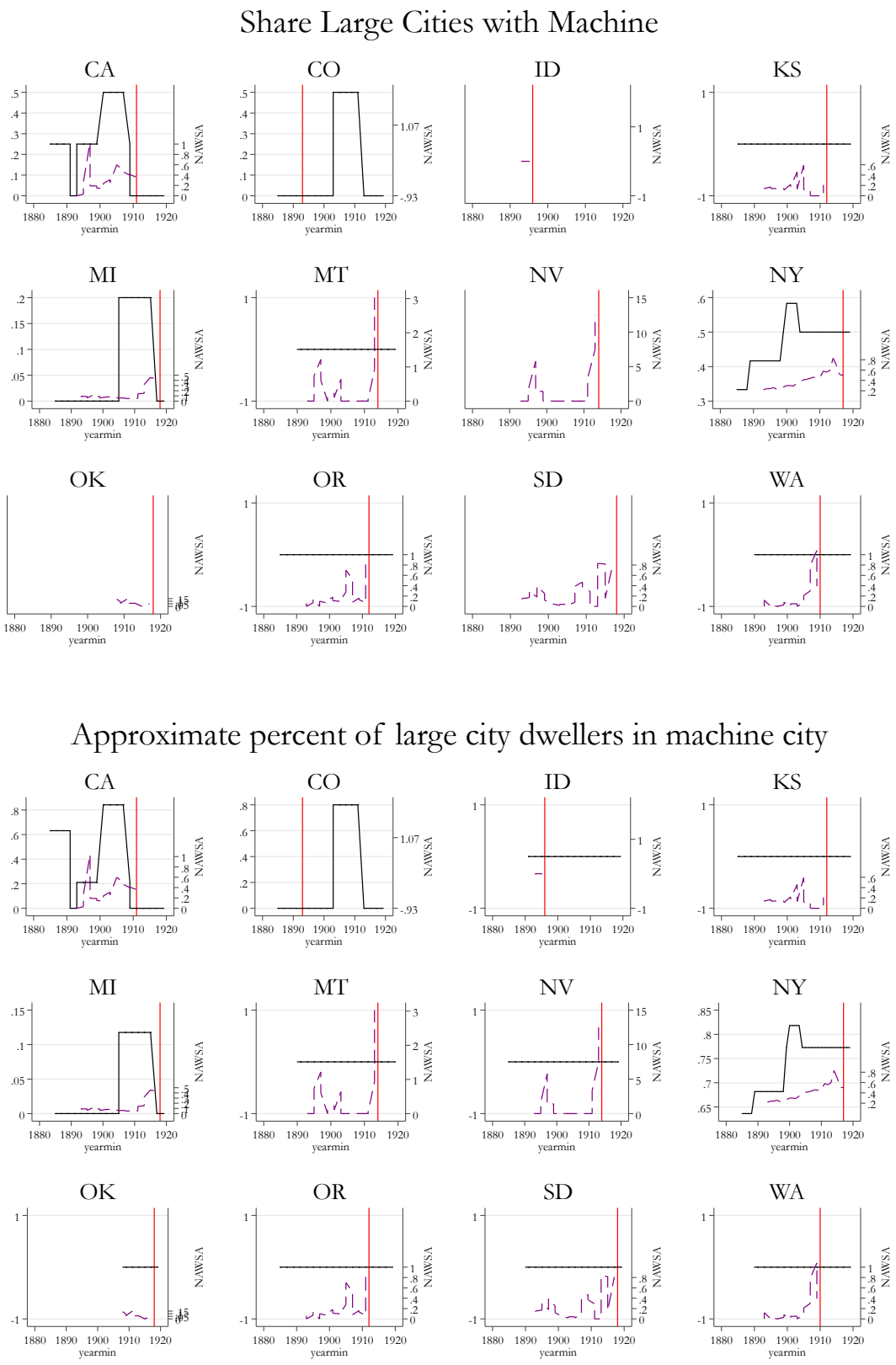


Figure 7: Raw Data II. Grey line is the competition variable listed on the plot (scale on left y-axis); purple line is NAWSA membership (scale on right y-axis). Included states extended voting rights to women prior to the Nineteenth Amendment, in the year marked by the vertical red line.

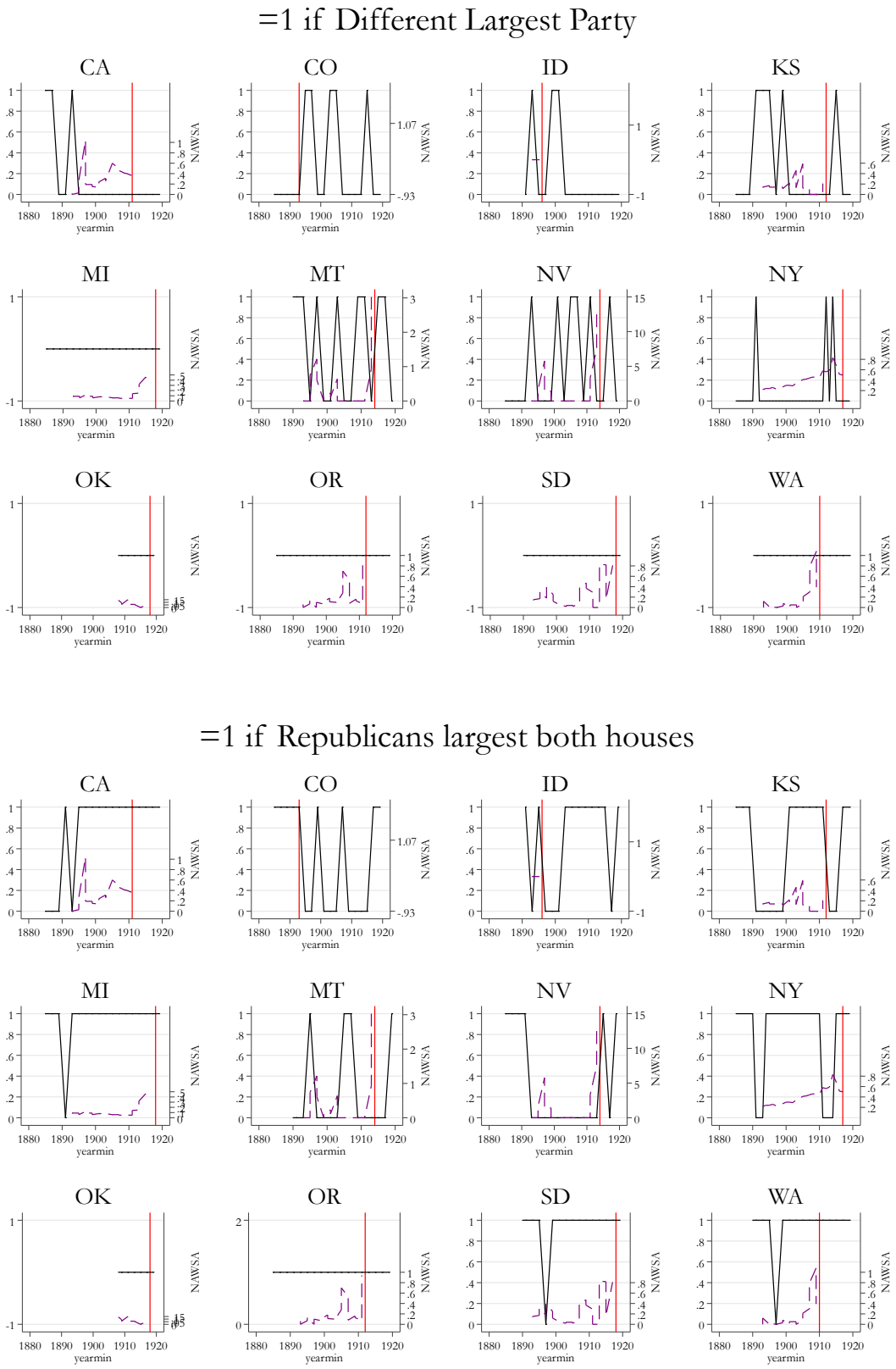


Figure 8: Raw Data III. Grey line is the competition variable listed on the plot (scale on left y-axis); purple line is NAWSA membership (scale on right y-axis). Included states extended voting rights to women prior to the Nineteenth Amendment, in the year marked by the vertical red line.

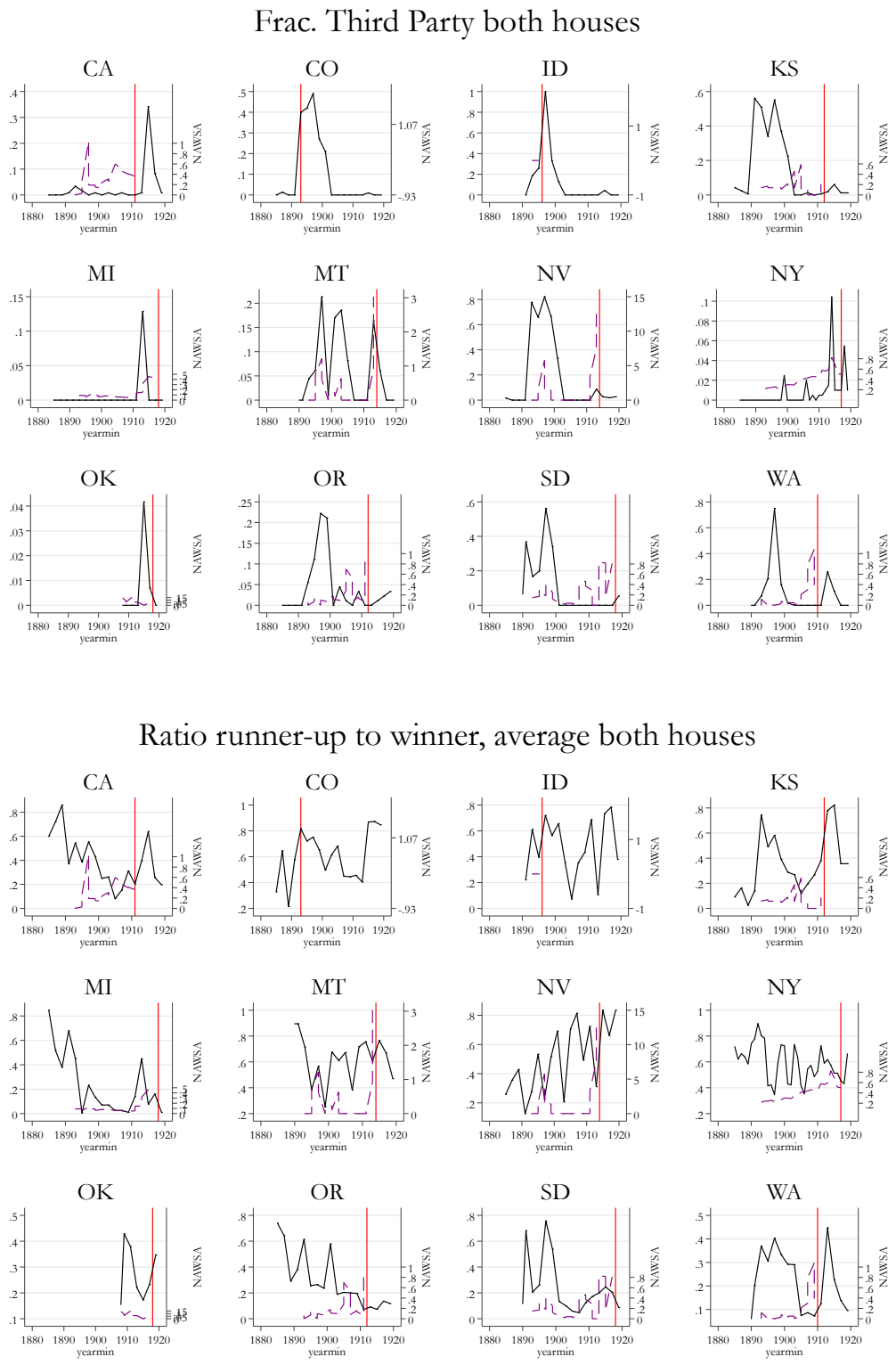


Figure 9: Raw Data IV. Grey line is the competition variable listed on the plot (scale on left y-axis); purple line is NAWSA membership (scale on right y-axis). Included states extended voting rights to women prior to the Nineteenth Amendment, in the year marked by the vertical red line.

Online Appendix C: Sensitivity Analysis

C.1: Interaction Effects

The theoretical section claims that uncompetitive political environments do not provide politicians with an incentive to support enfranchisement, regardless of the size of the movement, but competitive political environments allow for entrepreneurial thinking, which is more likely to lead to enfranchisement when the movement is strong. Although I expect zero effect of competition when mobilization is zero, there may still be an interaction between competition and mobilization. A common linear regression model that matches this argument takes the form

$$Y = \mu + \alpha D + \eta X + \beta(DX) + \epsilon$$

where Y is the outcome, suffrage support as defined above, D represents political competition, the key independent variable, and X, the strength of the suffrage movement, is a moderator which captures contextual differences that make enfranchisement more attractive to political leaders. The intuition behind the model as presented is that the effect of D on Y, of competition on suffrage support in legislatures, rises with higher levels of X, women's mobilization. In what follows I draw from Hainmueller et al. (2016), Brambor, Clark and Golder (2006), and Braumoeller (2004).

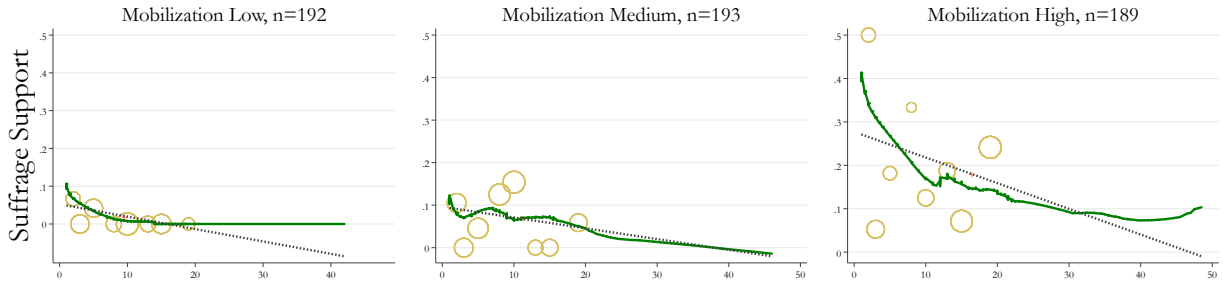
The reliability of the standard linear regression model with multiplicative interaction terms depends on all the independence assumptions of ordinary least squares estimators, and on both on the linearity and monotonicity of the relationship between D and Y over the range of X (Hainmueller et al. 2016). Theoretical expectations for the estimated coefficients on linear models with multiplicative interactions also need to be carefully specified: the lower order coefficients should not be interpreted as unconditional marginal effects (e.g. α and η), but rather represent the correlation between the baseline variable (e.g. D) and the outcome Y when the other variable (X) is zero.

As described in the paper, political competition, the key variable of interest, can take a lot of different forms. Depending on the conceptualization used, theoretical expectations about the signs for the lower order and for the interactive terms can vary. In particular, when a measure represents "low competition" where higher values indicate less competition, I expect the lower order coefficient on competition η to be zero. In most cases, too, when there is zero competition, I expect the lower order coefficient on Mobilization α to be zero.

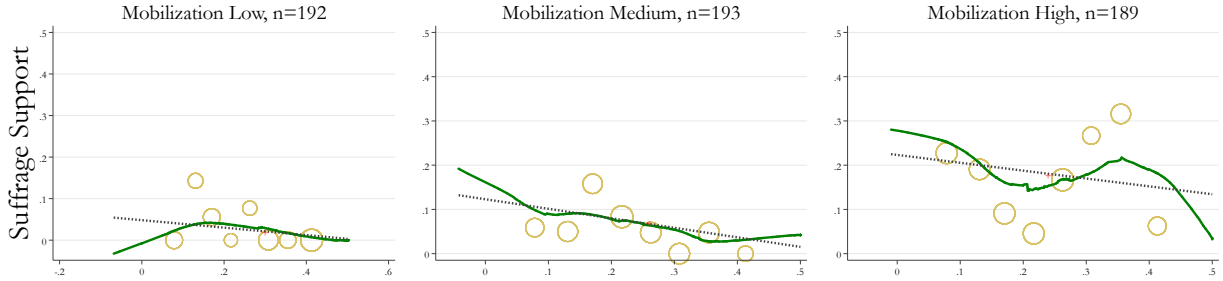
Raw Data Plots. I begin the exploration of potential interaction effects by presenting raw data plots similar to those recommended by Hainmueller et al. (2016). These plots are helpful for visually diagnosing interaction effects and detecting potential non-linearities of the interaction over a relevant range of the

moderator variable. When the competition variable is continuous, the raw data plots will present average suffrage support (y-axis) against decile bins of the competition variable for three levels of mobilization labeled "Low", "Medium", and "High" (33rd, 66th, and 99th percentiles). The mobilization variable is right-skewed: the 25th percentile still contains zeros while the 76th to 99th percentile contains extreme values (which include states with 2.23 to 9.97 members per thousand in the NAWSA). When the competition variable in question is binary, the raw data plot will present the average support for suffrage in state legislatures (y-axis) against decile bins of women's mobilization for each level of competition.

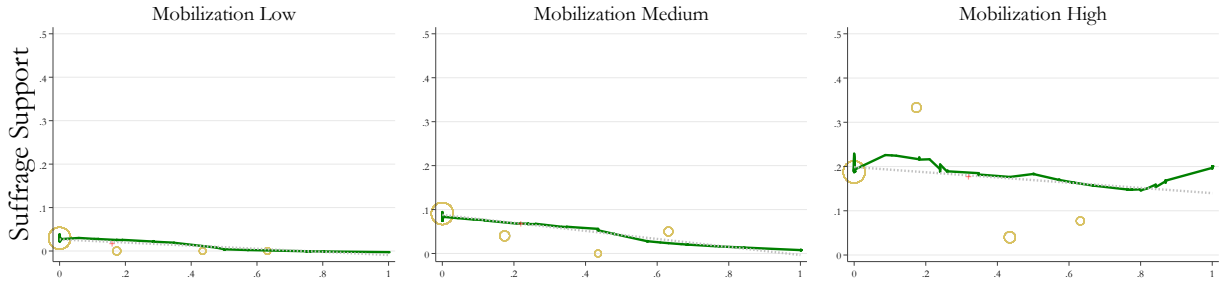
The thing to note from figures 10 and 11 in Online Appendix C.1 is that the average support for suffrage generally grows levels of mobilization across the terciles of the mobilization variable. Most often, though, the relationship between competition and support remains relatively constant across the terciles of mobilization. In general, the Lowess curves seem to be quite close to the linear fit, suggesting that the worries of Hainmueller et al. (2016) regarding non-linear interaction effects are not a huge problem here. The two variables that look as if the slope depends on the level of mobilization are the longevity of the ruling party and the runner-up to the winner (the fraction of seats held by the third party does not have "common support" across the range of competition variables and so cannot be evaluated for an interaction). Theoretically, we expect that the interaction coefficient on longevity of the ruling party and mobilization is zero. This is because longer rule is associated with less incentive to reform, independent of the level of mobilization. On the other hand, as the runner-up-to the winner grows, we should expect this to positively interact with suffrage as competition is increasing. Using the kernel density estimator suggested by Hainmueller et al. (2016) I find that there is no interaction between the longevity of the ruling party and suffrage mobilization. On the other hand, there is a positive interaction between the runner-up to winner and mobilization, but only from the 95th-99th percentiles of mobilization. See Online Appendix C.1 for more detail. Overall, what this exercise suggests is that mobilization seems to be affiliated with a shift in the intercept across the range of political competition, but does not drive different slopes.



(a) **Longevity of the Ruling Party**

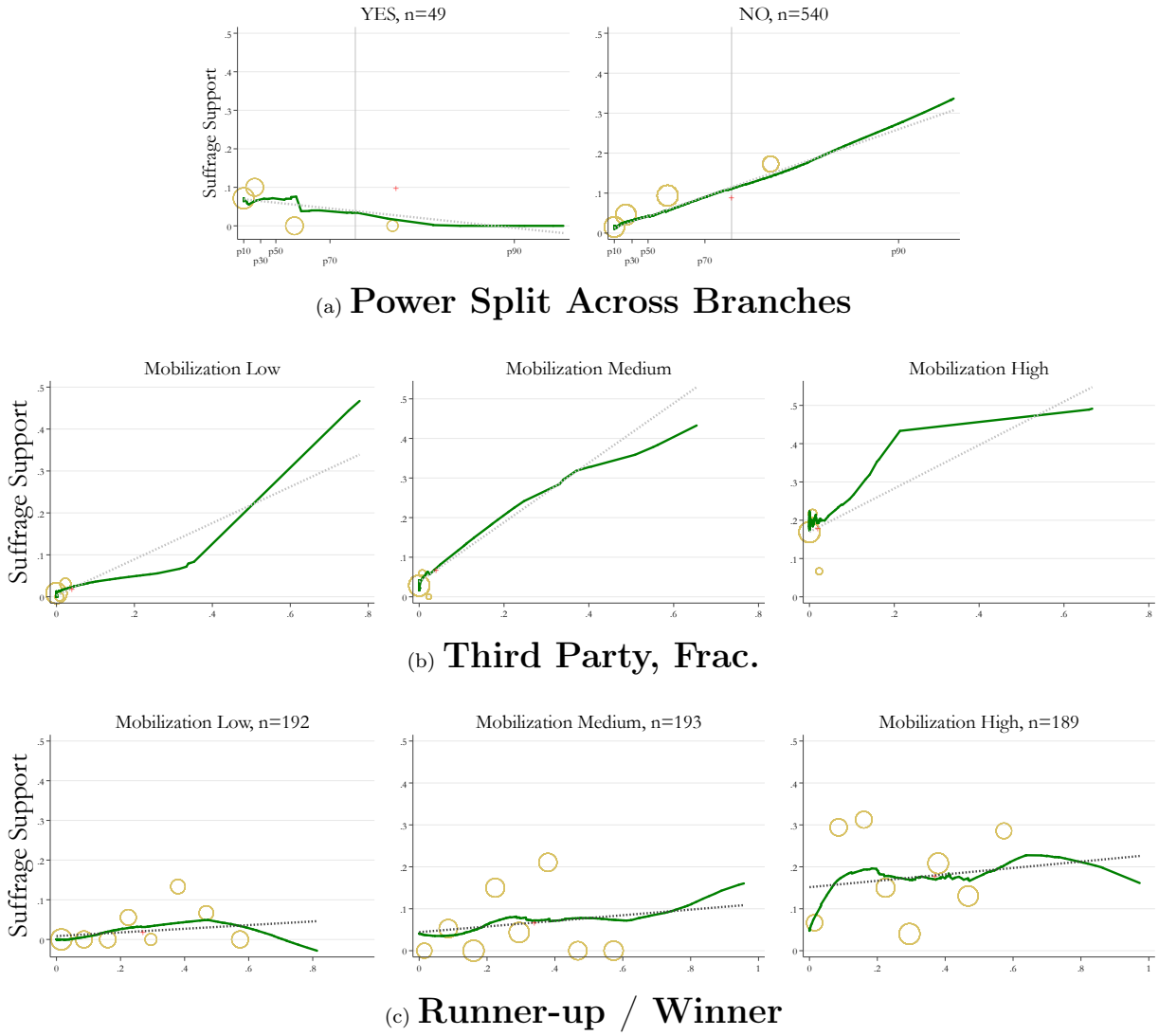


(b) **Majority Surplus**



(c) **Population in Machine Cities, frac.**

Figure 10: Raw Plots for continuous competition variables. The x-axes of the graphs pertain to the competition variable listed in the subtitle, and the y-axis measures suffrage support. The scatter plot presents average share of state-sessions that passed a full suffrage bill in both state legislative houses for decile bins of the competition measures. The sub-graphs pertain to the level of mobilization calculated at the 33rd, 66th, and 99th percentiles. The numbers below the dots represent the number of observations in that competition category for that bin to give a sense of the common support on which estimates of differences can be made. The solid lines represent Lowess smoothed lines, and the dashed lines represent a linear fit.



(a) **Power Split Across Branches**

(b) **Third Party, Frac.**

(c) **Runner-up / Winner**

Figure 11: Raw Plots for continuous competition variables II.

Results. The table 1 below charts the expected values for coefficients in the interaction model and notes whether the expectations are matched by the linearly estimated equation in table 2. The Wald statistics presented use Hainmueller et al.'s (2016) binning estimator (with three groups of mobilization cut at terciles) to compare the coefficient estimated for the interaction term in the high mobilization group to that estimated for the low mobilization group. When the p-value is greater than .05, we fail to reject the null of no effect, meaning that there is not much evidence that the interaction is statistically different in the low versus the high group. Table 1 also contains some notes about the Kernel Estimator plots in figures 12 and 13, noting that in two cases, majority surplus and runner-up to winner, there does seem to be an interaction but only when mobilization is very high (e.g. above the 95th percentile).

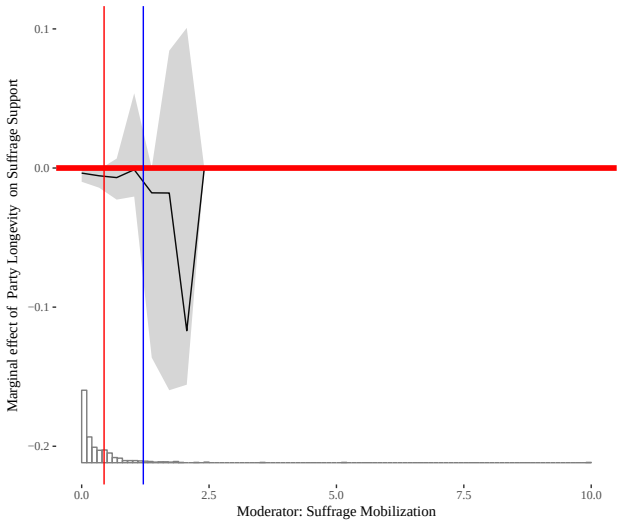
Table 1: Expectations for Interactive Model $Y = \mu + \alpha D + \eta X + \beta(DX) + \epsilon$, where D is mobilization, X is competition.

	$E[\alpha]$ Effect of Mobilization When Comp=0	$E[\eta]$ Effect of Comp when Mobilization = 0	$E[\beta]$ Interaction Prediction	Wald Test, H0= No Stat. Sig Treatment (L v H mobilization, three bins)
Longevity of Ruling Party	+, ✓	0, ✓	0, ✓	Wald Fail to Reject, p=0.2941.
Majority Surplus	0, ✓	0, ✓	0, ✓	Wald Fail to Reject, p=0.5752.
	Not many zeroes in variable so α not easily interpretable.		Kernel Estimator: Interaction - above 95th pctile.	
Fraction Machine Cities	+, 0	0, -	0, ✓	Wald Fail to Reject, p=0.5656.
Frac. Population Machine Cities	+, ✓	0, -	0, ✓	Wald Fail to Reject, p=0.6452.
Power Split	0, +	0, ✓	+, 0	Wald Fail to Reject, p=0.6136.
Frac. Third Party	?, +	0, +	+, -	Reject Wald p=0.07333.
Runner-up to Winner	0, ✓	0, ✓	+, 0	Wald Fail to Reject, p=0.7661.
	No zeroes in variable so α not easily interpretable.		Kernel Estimator: interaction + from 95th-99th pctiles.	

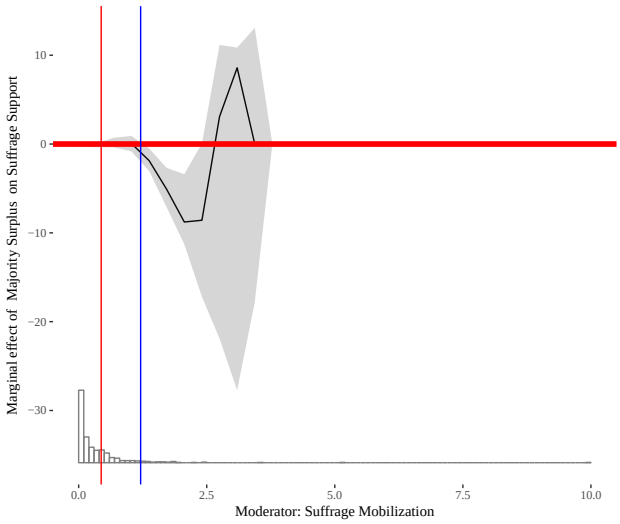
Table 2: Regression estimates of passage of full suffrage bills in both state houses using a Linear Probability Model and Interactions for competition and Mobilization

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Competition Variable:	Longevity Ruling Party	Majority Surplus	Frac. Machine Cities	Frac. Pop. Machine Cities	Power Split Across Branches	Frac. Third Party	Ratio runner-up-to-winner
$\widehat{\eta}Competition$	-0.00567	-0.265	-0.836**	-0.449**	0.0190	0.633***	0.119
	(0.00428)	(0.163)	(0.288)	(0.135)	(0.0523)	(0.156)	(0.0899)
$\widehat{\alpha}Mobilization$	0.0839**	0.107	0.106	0.0789**	0.0910***	0.101**	0.0659
	(0.0245)	(0.0864)	(0.0714)	(0.0235)	(0.0255)	(0.0329)	(0.0565)
$\widehat{\beta}Interacton$	0.0000829	-0.142	-0.0316	0.140	-0.0217	-0.233**	0.0461
	(0.00338)	(0.398)	(0.165)	(0.144)	(0.0800)	(0.0778)	(0.181)
$\widehat{Time}$	0.00854**	0.00729**	0.00677*	0.00636*	0.00682**	0.00829**	0.00688**
	(0.00247)	(0.00209)	(0.00283)	(0.00242)	(0.00217)	(0.00236)	(0.00220)
$\widehat{Constant}$	-16.15**	-13.75**	-12.72*	-11.95*	-12.93**	-15.76**	-13.09**
	(4.694)	(3.965)	(5.372)	(4.615)	(4.128)	(4.488)	(4.208)
State FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	579	579	495	579	579	579	579

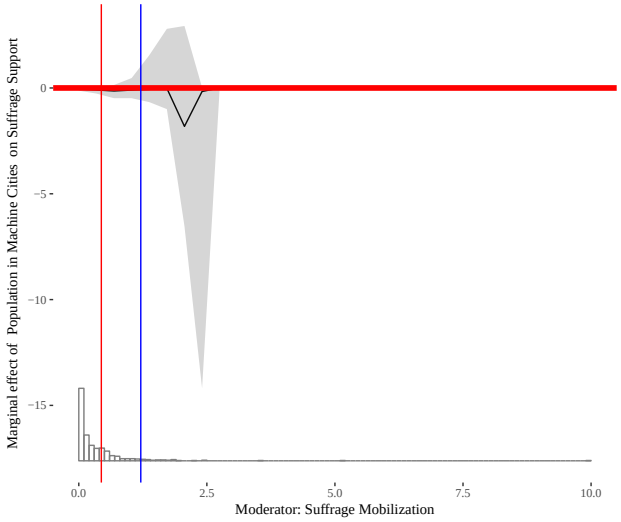
The dependent variable is 1 when both houses in a state legislature passed a suffrage bill. The key independent variables related to political competition are listed in column headers. Standard errors robust to heteroskedasticity, clustered at the state level, are in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.



(a) Longevity of Ruling Party

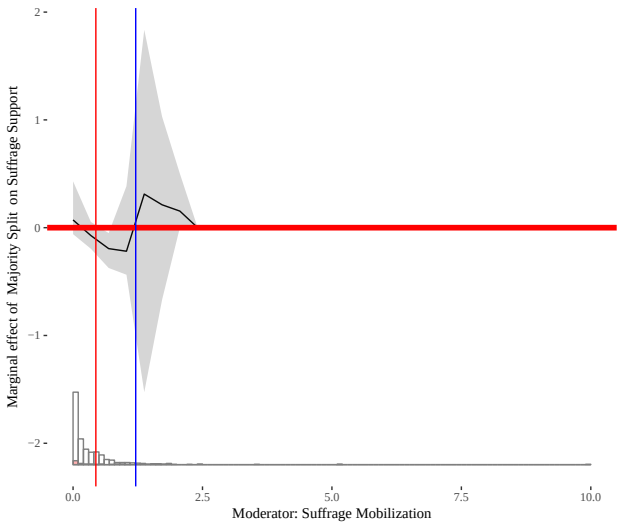


(b) Majority Surplus

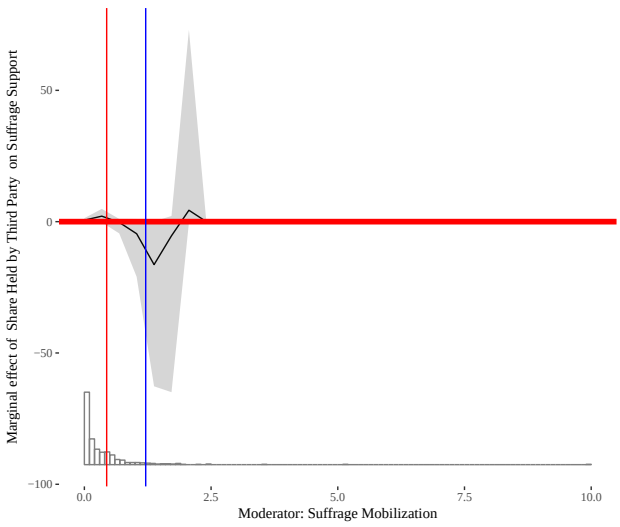


(c) Machine Cities (%)

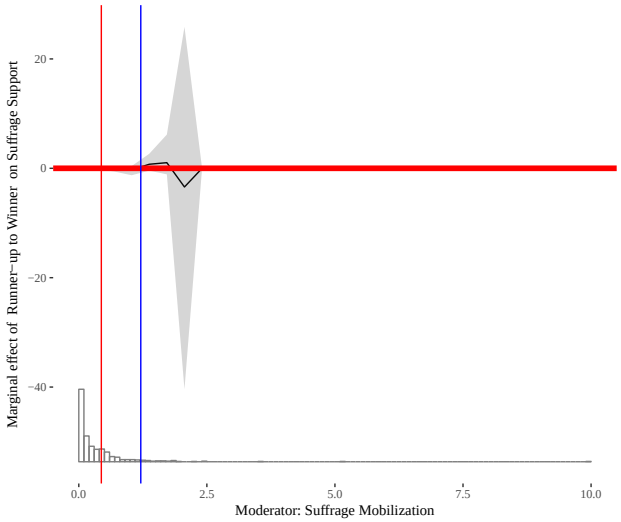
Figure 12: Interaction Effects I, high competition variables. Kernel density estimators plots of the marginal effect of the listed competition variable on suffrage support over the distribution of mobilization. The red line indicates the 75th percentile of mobilization (0.44 members per thousand), while the blue line represents the 9th percentile (1.21 members per thousand). Year trends are included and standard errors are clustered at the state level, but no state fixed effects were used.



(a) Power Split Across Branches



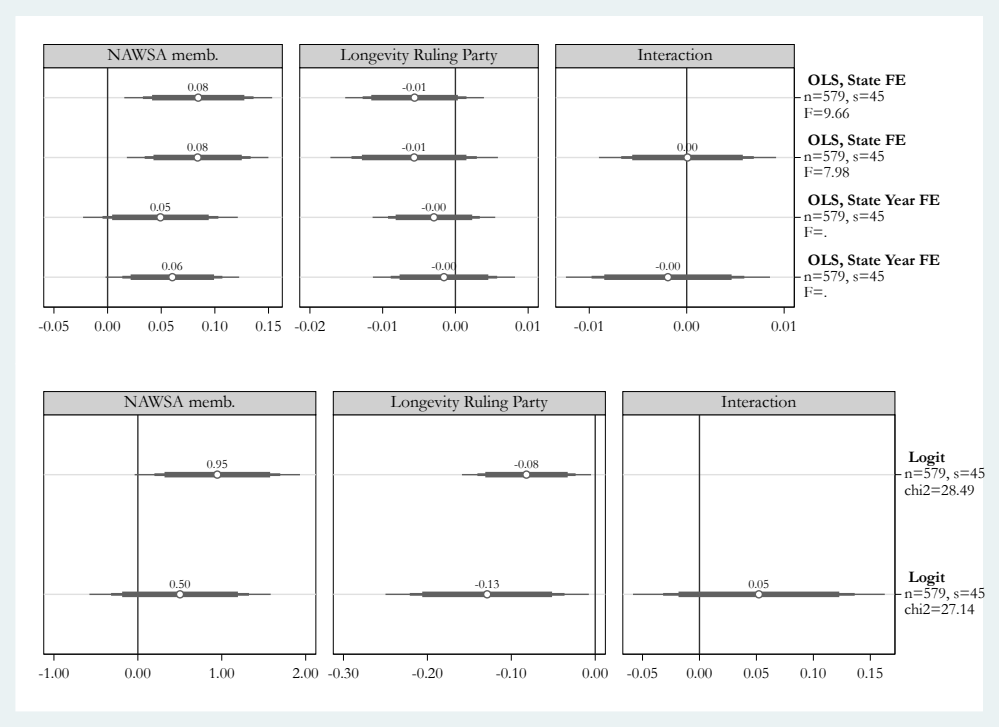
(b) Frac. Third Party



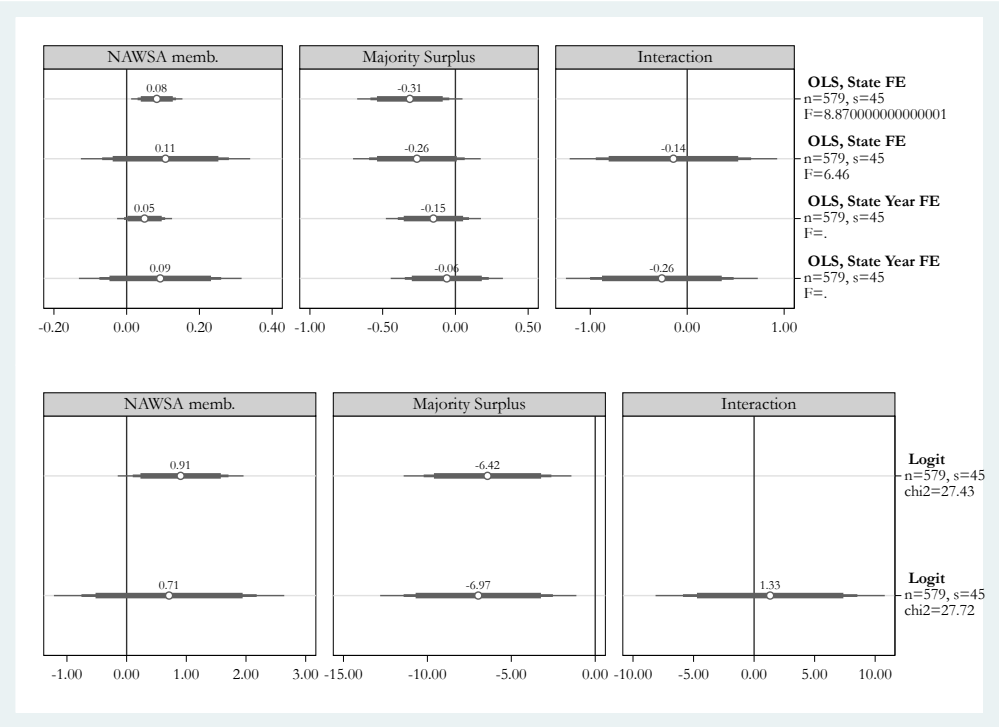
(c) Ratio Runner-up-to-Winner

Figure 13: Interaction Effects II, low competition variables. Kernel density estimators plots of the marginal effect of the listed competition variable on suffrage support over the distribution of mobilization. The red line indicates the 75th percentile of mobilization (0.44 members per thousand), while the blue line represents the 9th percentile (1.21 members per thousand).

C.2: Specification Check

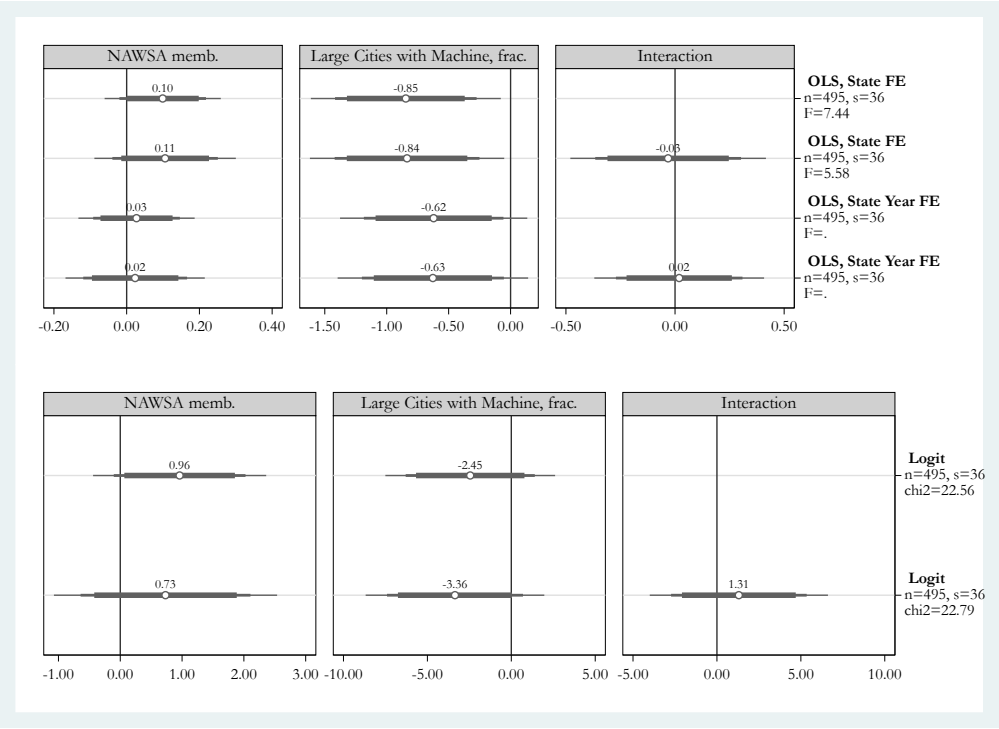


(a) Longevity Ruling Party

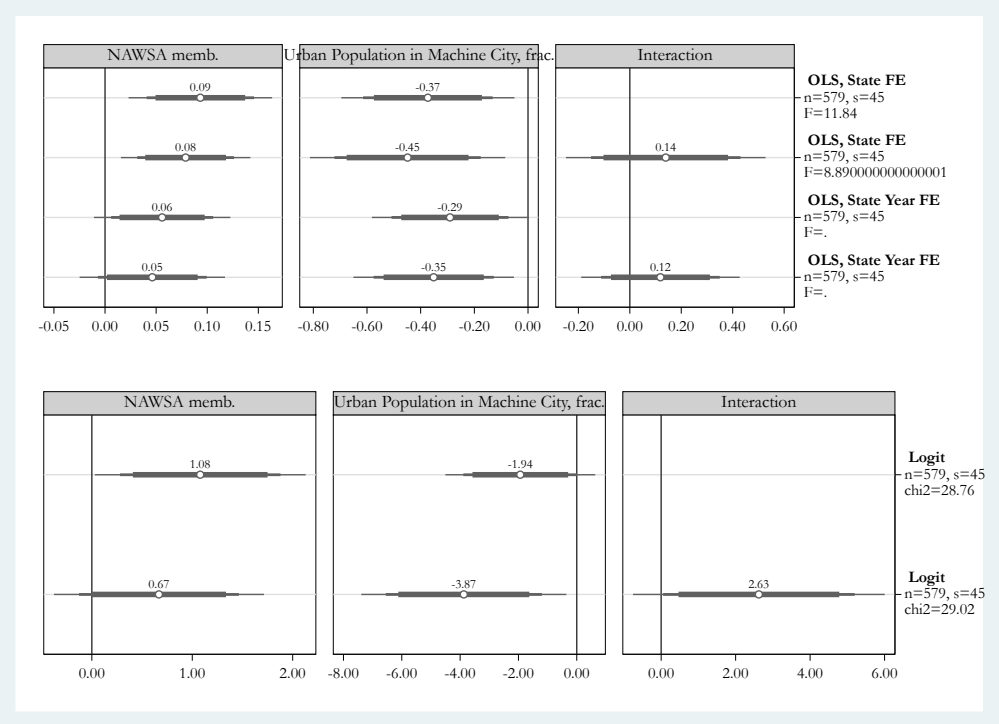


(b) Majority Surplus

Figure 14: Specification Checks I. The figures show how the "baseline" coefficient estimated for a given competition variable in table 1 in the primary paper changes under different empirical specifications. All standard errors are robust, clustered at state level, and the baseline regressions have a year time trend. Coefficient estimates appear with 90, 95, and 99 percent confidence intervals. Test statistics cannot be computed when there are too few degrees of freedom.

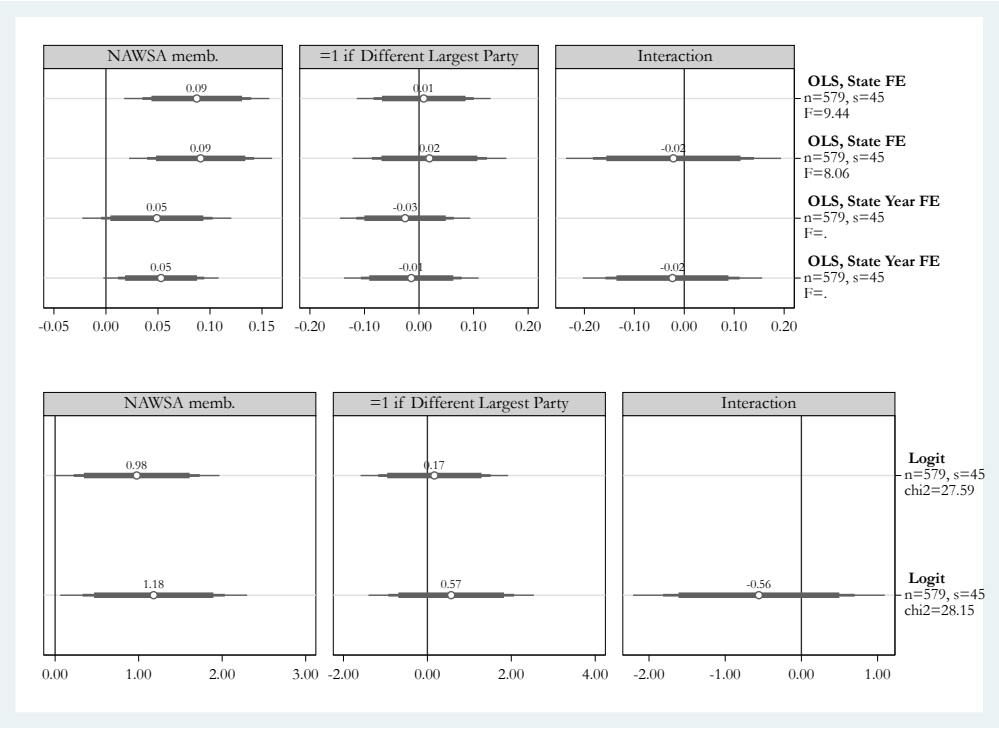


(a) Share Machine Cities

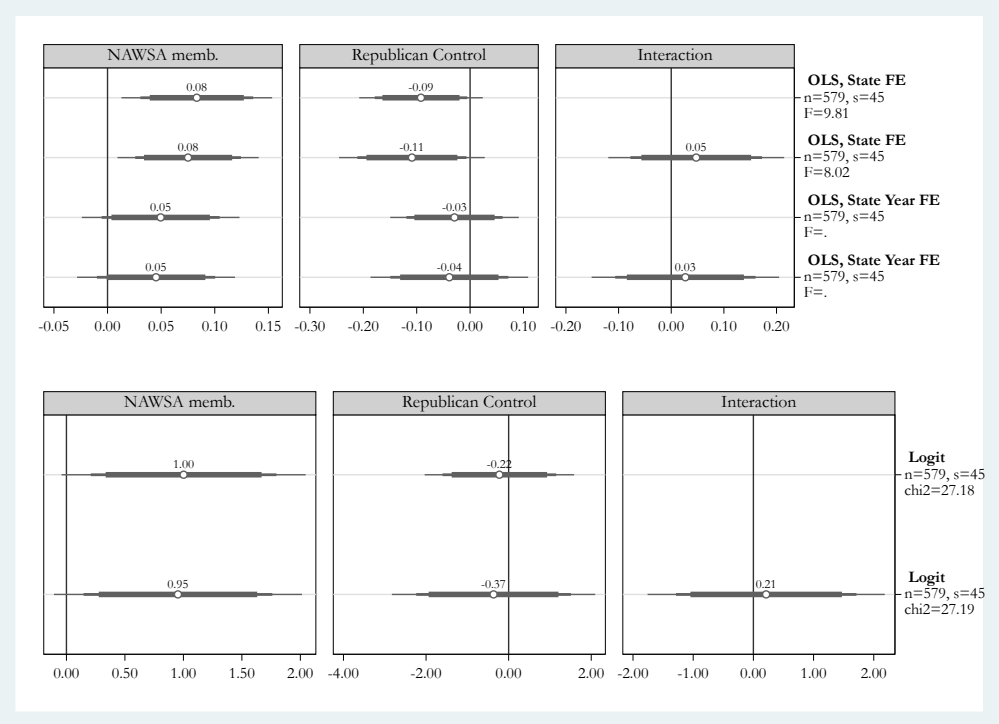


(b) Population Machine Cities

Figure 15: Specification Checks II. The figures show how the "baseline" coefficient estimated for a given competition variable in table 1 in the primary paper changes under different empirical specifications. All standard errors are robust, clustered at state level, and the baseline regressions have a year time trend. Coefficient estimates appear with 90, 95, and 99 percent confidence intervals. Test statistics cannot be computed when there are too few degrees of freedom.

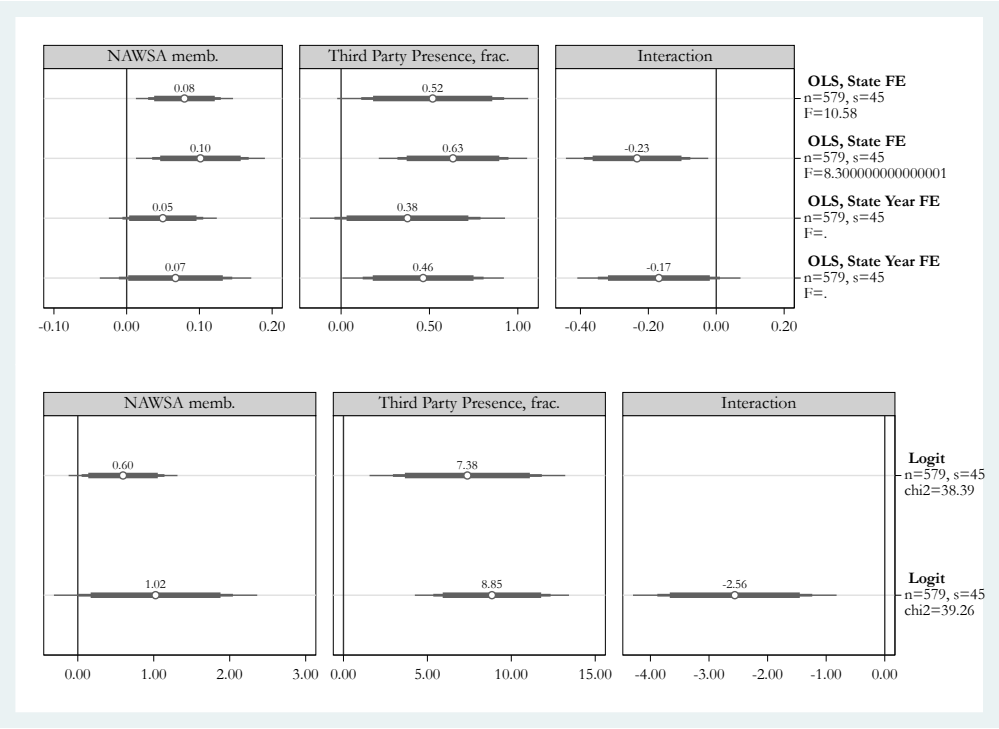


(a) Power Split Across Branches

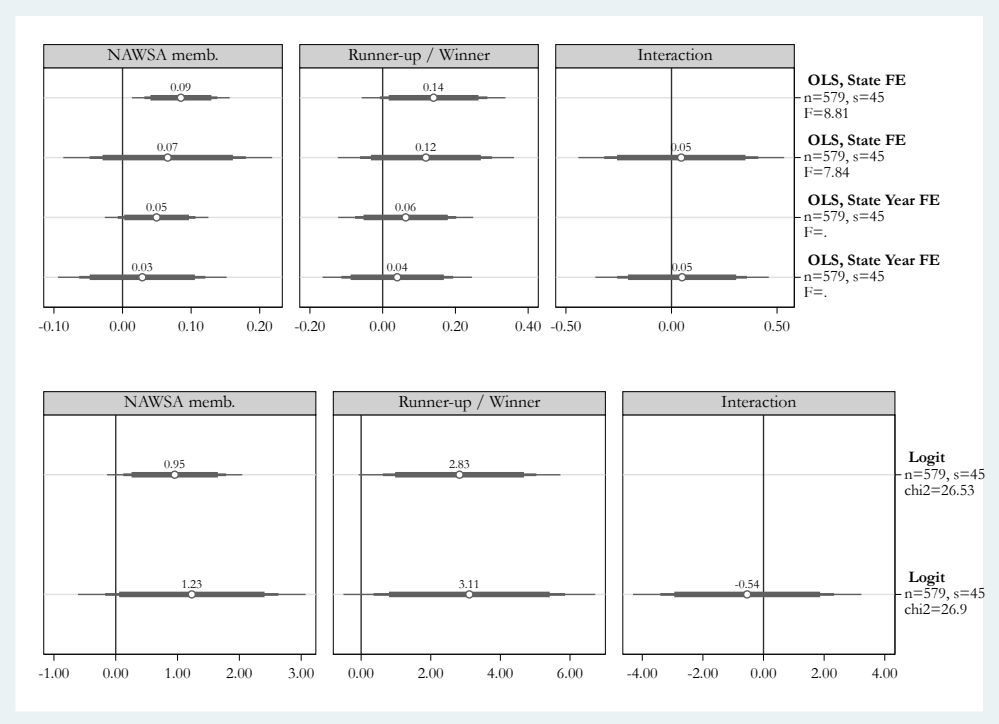


(b) Republican Control

Figure 16: Specification Checks III. The figures show how the "baseline" coefficient estimated for a given competition variable in table 1 in the primary paper changes under different empirical specifications. All standard errors are robust, clustered at state level, and the baseline regressions have a year time trend. Coefficient estimates appear with 90, 95, and 99 percent confidence intervals. Test statistics cannot be computed when there are too few degrees of freedom.



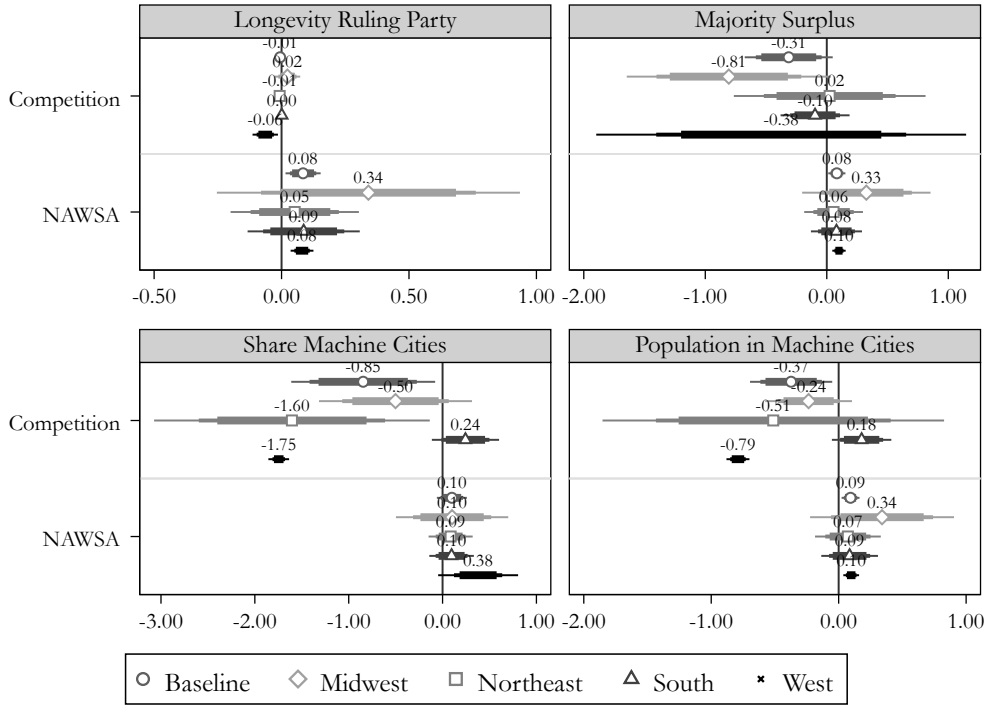
(a) Frac. Third Party



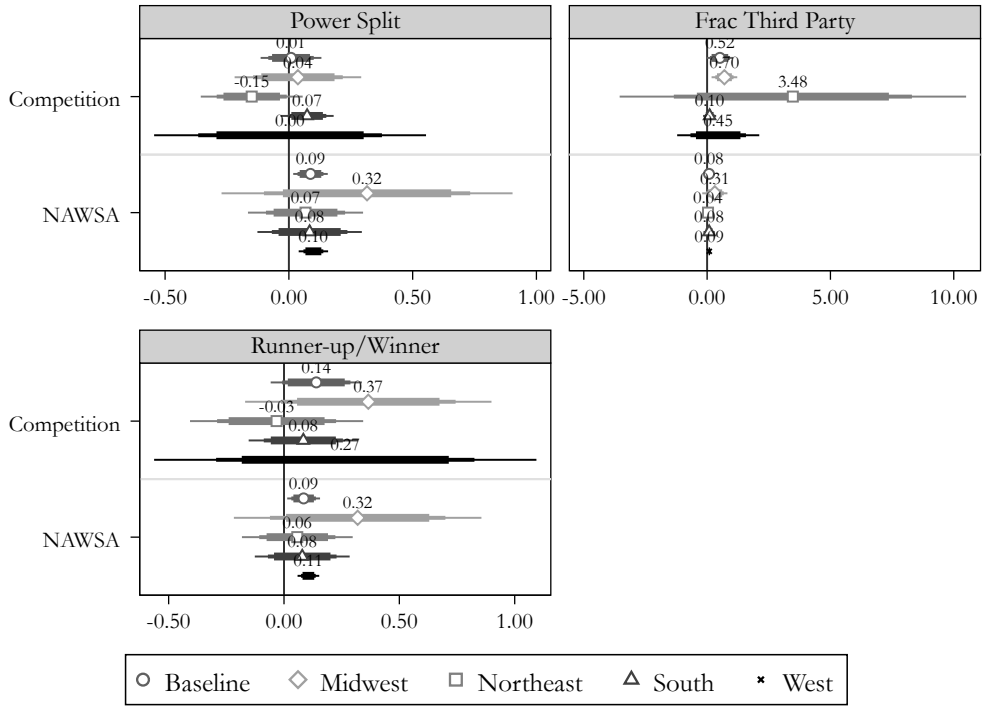
(b) Runner-up-to-Winner

Figure 17: Specification Checks IV. The figures show how the "baseline" coefficient estimated for a given competition variable in table 1 in the primary paper changes under different empirical specifications. All standard errors are robust, clustered at state level, and the baseline regressions have a year time trend. Coefficient estimates appear with 90, 95, and 99 percent confidence intervals. Test statistics cannot be computed when there are too few degrees of freedom.

C.3: Within Region Performance



(a) Low Competition Variables with Negative Expectations



(b) High Competition Variables with Positive Expectations

Figure 18: Within Region Performance. For the explanatory variable that is named at the top of each panel, the figures show how the "baseline" coefficient estimated in table 1 in the primary paper changes when estimated within regions. All standard errors are robust, clustered at state level. Coefficient estimates appear with 90, 95, and 99 percent confidence intervals.

C.4: Model Check Using Event History Analysis

Although logistic regression has been a traditional method for analyzing events in social science, event history models are becoming more common. Current packages that implement event history estimators do not do well with discrete time data nor do they uniformly deal with time-varying covariates (Allison 2010), so the primary analysis in the paper uses a logistic estimator. Here I compare size and significance of the baseline regressions with those generated from event history analysis using both parametric and non-parametric variants of the estimator. An event history model estimates a "hazard rate" – the conditional probability that an event will occur given that it has not already happened. Depending on the nature of the event under study, these estimators can generate coefficients either parametrically or non-parametrically. The primary event history specification models the hazard rate as a function of political competition, the size of the suffrage movement, their interaction, and an intercept, $h_0(t)$, which captures the baseline probability of enfranchising women. The interaction is included to test the proposition strong movements in competitive environments are more likely to succeed. The general form of the Cox proportional hazards model is:

$$h_s(t)=h_0(t) * exp(\delta_1 * competition_{st} + \delta_2 * movement_{st} + \beta_3 * interaction_{st} + \epsilon_s),$$

where s indexes the state and t indexes time and $interaction_{st}$ multiplies the vectors of a given measure of political competition and movement strength. Because diagnostic tests revealed that the baseline hazard (the conditional probability of passing a bill) increases monotonically over time, theoretically the regressions might be better suited parametric estimation using the Weibull distribution (Allison 1984; Box-Steffensmeier and Jones, 2004: ch.6).[4] However the Weibull package in Stata does not allow for time-varying covariates to be specified.

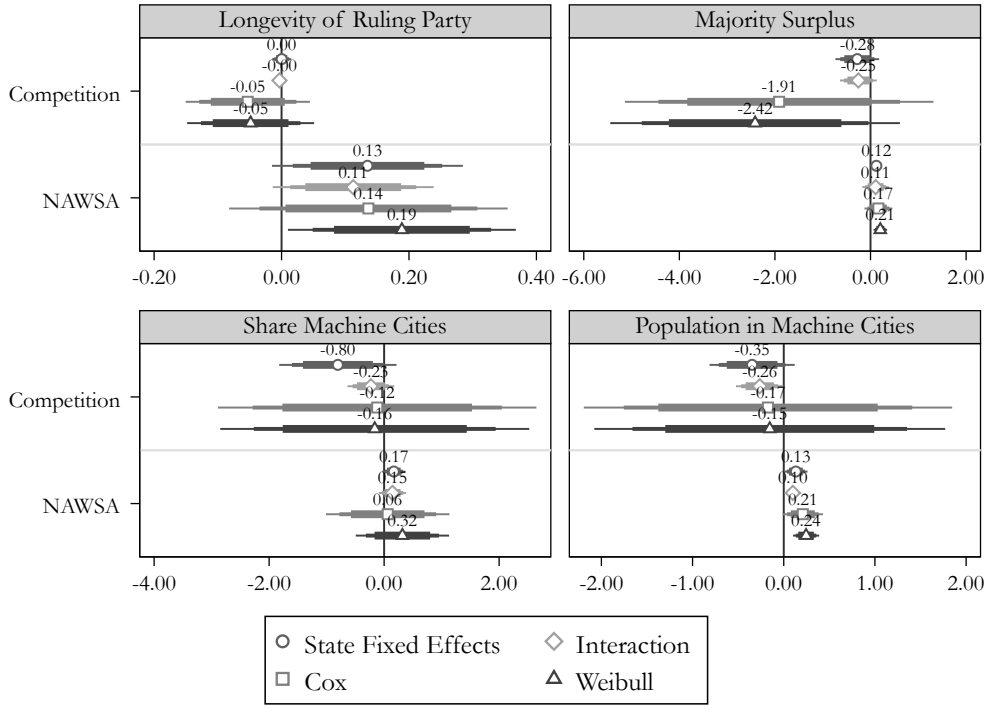
Unlike the Weibull model, the Cox proportional hazards model does not assume any particular distribution of the underlying hazard (i.e. it does not assume that the probability of supporting suffrage in state legislatures rises or falls monotonically over time) and is thus a more flexible specification. It is common to present the more flexible Cox proportional hazards results simultaneously. In Stata, the Cox models allow for time-varying covariates to be specified, however there need to be other regressors inside the equation for the command to execute. For the Cox regressions, then, I used state fixed effects.

Since, in any given state, the random disturbances ϵ_s are likely to be correlated, so all specifications report standard errors clustered at the state level. Assuming, too, that random disturbances across states are not identically distributed, the standard errors reported below the coefficients are robust to heteroskedasticity. For a meaningful comparison of coefficient signs, the tables will present standard coefficients which, when exponentiated, produce a hazard ratio (Hosmer et al.: ch 4). I use Stata 14.0's packages "streg" and "stcox"

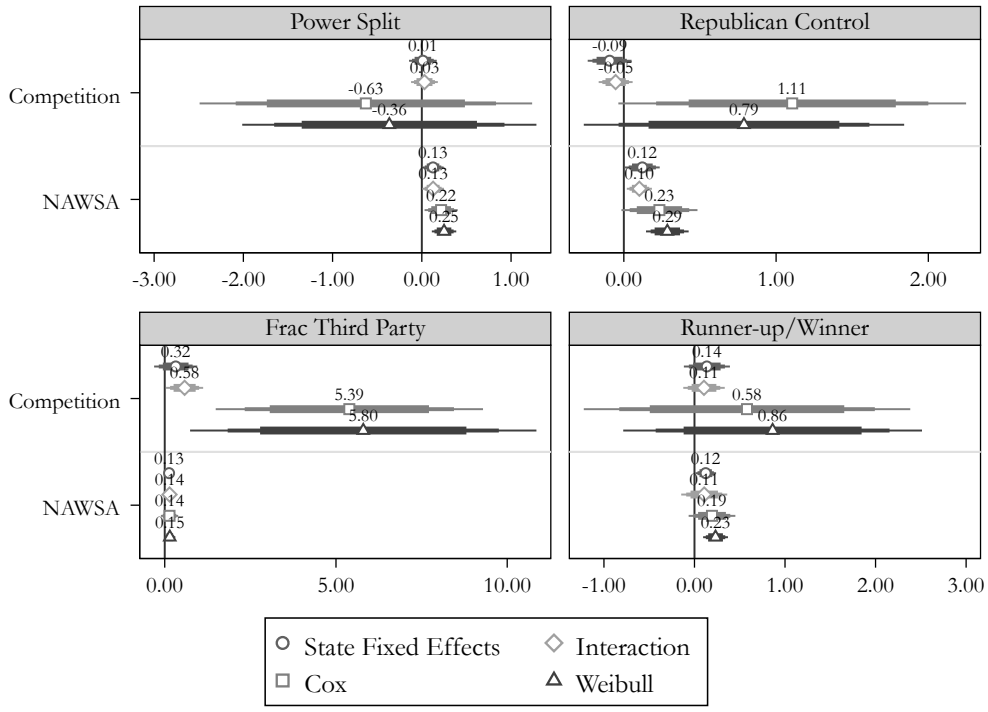
[4]When the analysis is replicated non-parametrically using Cox Proportional Hazards estimation the main substantive results remain the same but the ratio of the runner-up-to-winner is not statistically significant. See Online Appendix D.3.

to estimate the models. The Cox model allows for different methods to be used to to break ties (when two states pass suffrage bills in the same year). In the Cox models I use the "Efron" method to deal with ties as this performs better than the "Breslow" method when the number of failures (i.e. events) is small.

The graphs in figure 19 present the estimated coefficients for the baseline model used in the paper, Cox regressions, and Weibull regressions. The upper panel in figure 19 presents the competition variables that the theory predicts should be negatively correlated with women's suffrage extension. For all of the competition variables the event history models produce a sign that is consistent with the theoretical expectation and with table 1 in the paper. The Weibull estimator generally has the largest confidence intervals, and among the competition variables only majority surplus is statistically significant with this estimator. For the Cox regressions the Efron and breslow methods for estimating ties produce similar substantive findings. The patterns of signs and significance are similar to table 1 although the weighted population in machine cities is not longer significant. The coefficients on NAWSA membership are positive when they are statistically significant, although in three specifications they cannot be differentiated from zero. Neither Allison (1984, 2011) nor Box-Steffensmeier and Jones (2004) discuss the consistency of estimates with fixed effects, so I cannot attest to how reliable these coefficient estimates are.



(a) Low Competition Variables with Negative Expectations



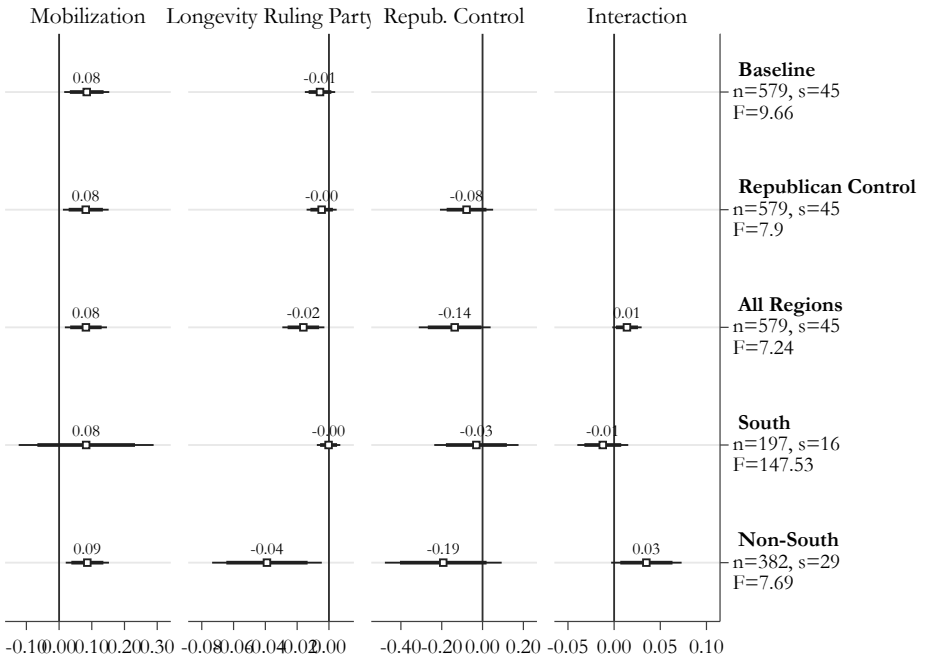
(b) High Competition Variables with Positive Expectations

Figure 19: Modeling Checks. For the explanatory variable that is named at the top of each panel, the figures show how the "baseline" coefficient estimated in table **??** changes under Event History specification such as the Cox and Weibull models.

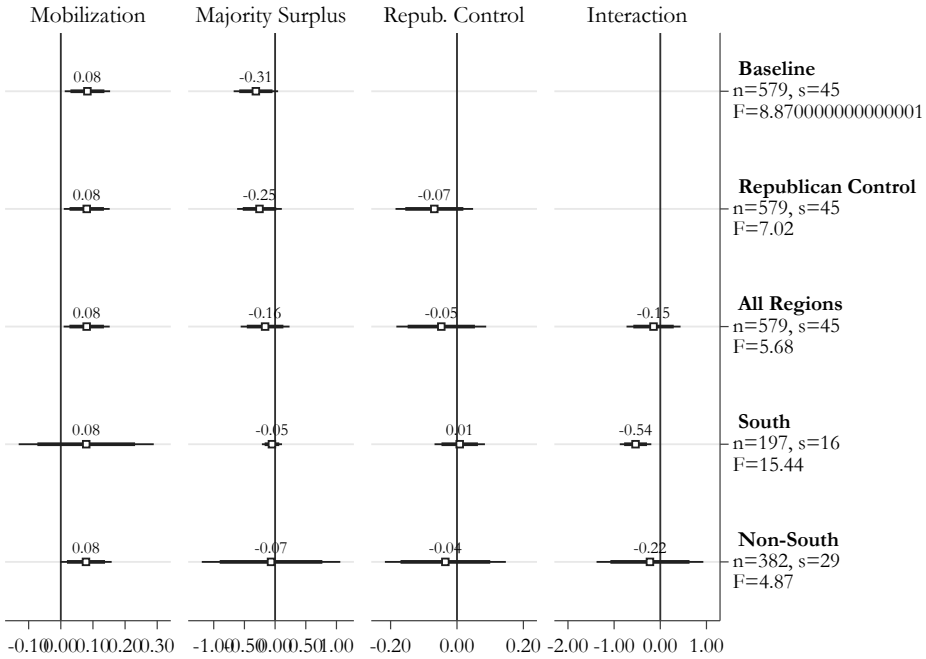
The lower panel in figure 19 presents the competition variables that the theory predicts should be positively correlated with suffrage expansion. Here again there are similar patterns for the signs of all of the competition variables except that Republican control in the Weibull regressions are large, positive, and statistically significant. Again, in terms of NAWSA membership, the coefficients are positive when they are statistically significant, although in three specifications they cannot be differentiated from zero.

Overall, the results from the event history models are consistent with most of the paper's theoretical expectations and the only place the sign differs on the competition variables is in the Republican control regressions, but here it moves in the expected direction.

C.5: A Party Project?

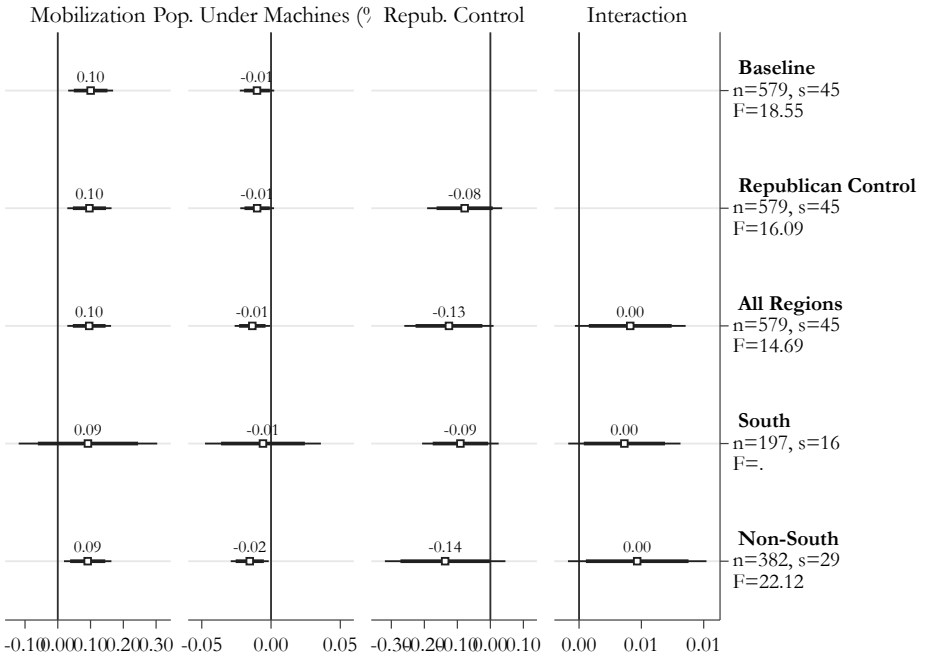


(a) Ruling Party Longevity

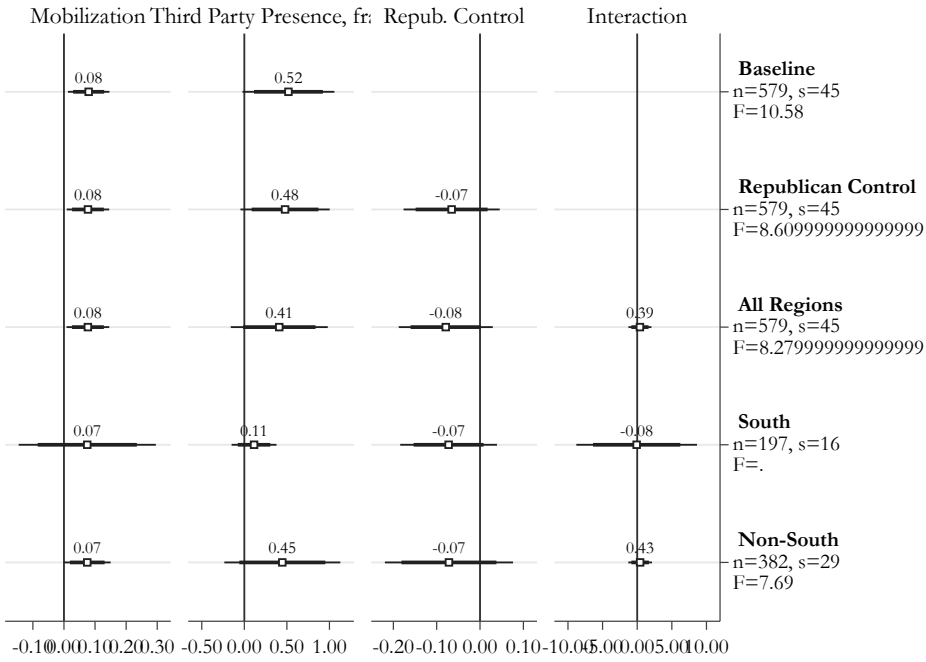


(b) Majority Surplus

Figure 20: Party Checks I. Baseline coefficients from main paper, include Republican Control, then interact Republican control with competition variable of interest. In rows 3-6 interpret Competition coefficient as when Republican control=0 and Republican coefficient as when Competition=0. Lines represent 95th (thick) and 99th (thin) percentile confidence intervals.

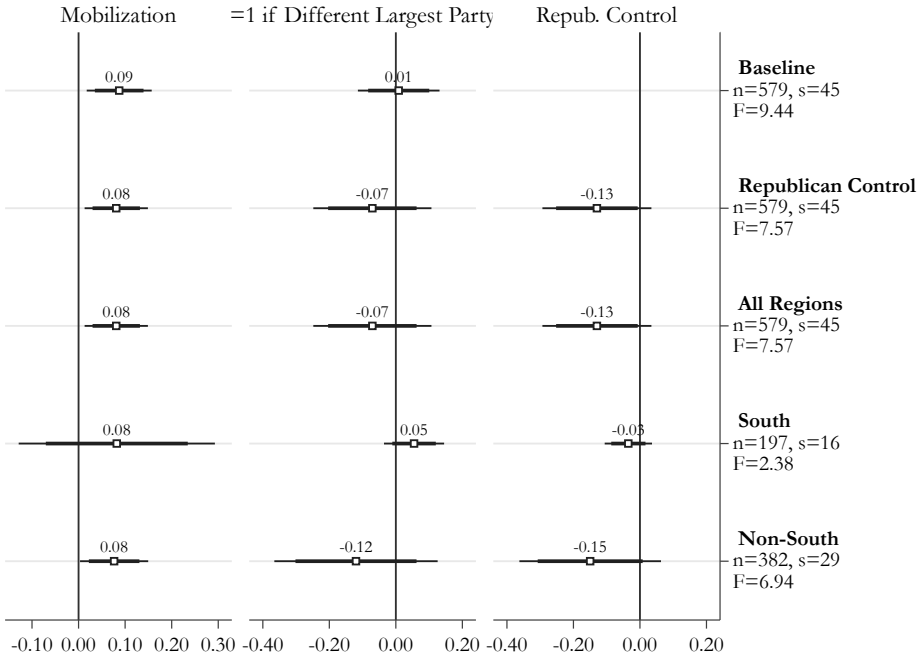


(a) Pop. Under Machine (%)

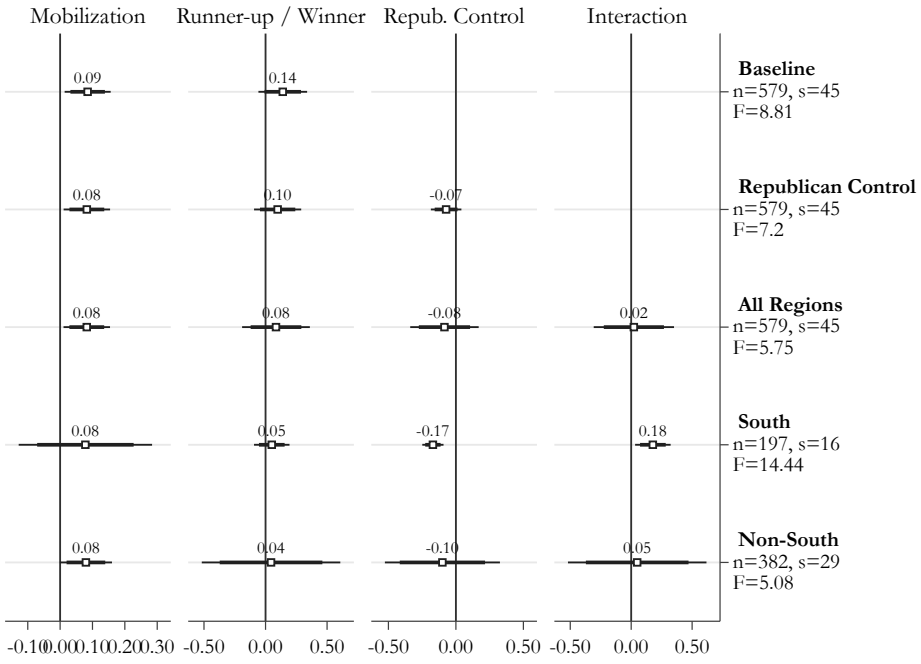


(b) Third Party, Frac.

Figure 21: Party Checks II: Baseline coefficients from main paper, include Republican Control, then interact Republican control with competition variable of interest. In rows 3-6 interpret Competition coefficient as when Republican control=0 and Republican coefficient as when competition=0. Lines represent 95th (thick) and 99th (thin) percentile confidence intervals.



(a) Power Split Across Branches



(b) Runner-up to Winner

Figure 22: Party Checks III: Baseline coefficients from main paper, include Republican Control, then interact Republican control with competition variable of interest. In rows 3-6 interpret Competition coefficient as when Republican control=0 and Republican coefficient as when Competition=0. Lines represent 95th (thick) and 99th (thin) percentile confidence intervals.

Online Appendix D: Measuring Alternative Hypotheses

D.1: Census Classification of Regions (with dates of franchise extension in parentheses):

Northeast: CT, MA, ME, NH, NJ, NY (1917), PA, RI, VT;

Midwest: IA, IL, IN, KS (1912), MI (1918), MN, MO, ND, NE, OH, SD, WI;

West: AZ (1910), CA (1911), CO (1893), ID (1896) MT (1914), NM, NV (1914), OR (1912), UT (1895), WA (1910), WY (1889);

South: AL, AR, DE, FL, GA, KY, LA, MD, MS, NC, OK (1918), SC, TN, TX, VA, WV.

D.2: Measuring Temperance Forces

Citing the role of the Women's Christian and Temperance Union in pursuing both prohibition and suffrage, many scholars have suggested a link between resistance to prohibition policy and resistance to suffrage reform. Since the Western states enfranchised women earlier than others, it is possible that anti-prohibition forces in the other regions saw that temperance policies sprung up after suffrage, and as a result resisted such reform in their own locales. Yet Figure OA23, which plots the fraction of dry counties in states which extended early voting rights to women, along with a vertical line indicating the date of suffrage, does not reveal a consistent pattern of increased temperance after suffrage reform.

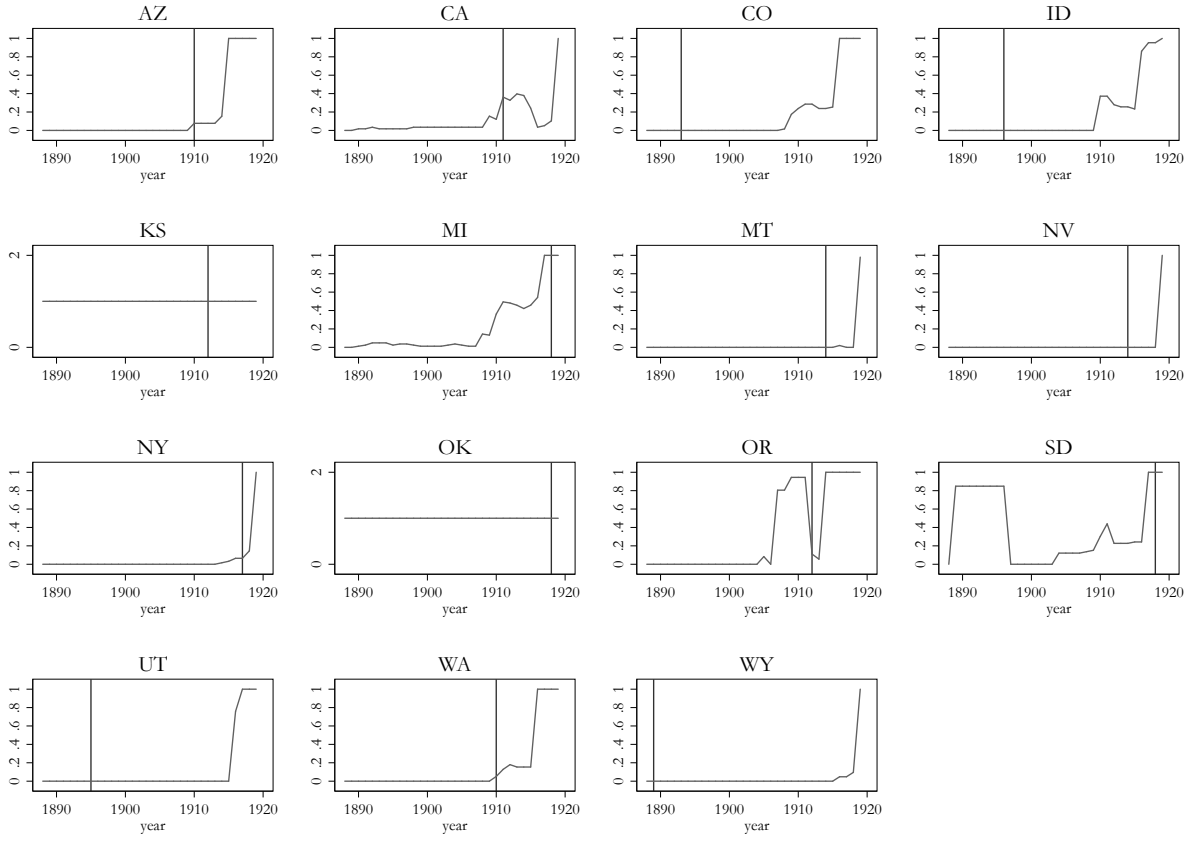


Figure 23: Dry Counties and State Suffrage. The pictured states gave women national voting rights ahead of the Nineteenth Amendment (the suffrage year is indicated by the vertical line). The graphs show the fraction of dry counties in each state before and after franchise extension. Source: Sechrist (2012).

The following is a list of references that were used in the creation of the political machine variables that are not otherwise cited in the main paper.

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