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Abstract: *»Parteienwettbewerb und Frauenwahlrecht in den Vereinigten Staaten von Amerika«*. Though women's suffrage was federally mandated in the United States by the nineteenth amendment in 1920, many states had granted suffrage to women prior to that and most of these early suffrage states were clustered in the west. I revisit some of the popular conjectures that have been put forward to explain why these states moved first to give women the vote and offer a hypothesis of partisan competition leading to suffrage extension. Using event history analysis, I find strong evidence that early enfranchisement of women in the western states was driven by the intensity of competition between Republicans and Democrats, as well as by adverse female-male ratios and greater concentration of the population in urban areas. Moreover, as might be expected from the geographic concentration of the suffrage states, I find evidence that suffrage adoption was strongly and positively related to whether a neighboring state had women's suffrage. Also, the 'risk' of suffrage enactments was increasing over time foreshadowing the success of the nineteenth amendment.

Keywords: Women's suffrage in the United States, Event History Analysis, Partisan competition and suffrage, Voting rights for women, Political competition and voting rights.

1. Introduction

> Good morning, sister. You taught us and trained us in the way we should go. You gave us money from your hard earnings, and helped us to get a start in the world. You are interested infinitely more in good government and understand politics a thousand times better than we, but it is election day and we leave you at home with the idiots and Indians, incapables, paupers, lunatics, criminals and the other women that the authorities in this nation do not deem it proper to trust with the ballot; while we lordly men, march to the polls and express our opinions in a way that counts.
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> From Belle Kearney, A Slaveholder's Daughter (St. Louis: The St. Louis Christian Advocate Press, 1900), pp 111-112.

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Women in many of the states of the USA did not enjoy the same voting rights as men until 1920 when the Nineteenth Amendment to the Constitution granted women's suffrage. Passed by Congress on June 4, 1919, and ratified on August 18, 1920, the nineteenth amendment granted women the right to vote with the following stipulation:

> The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of sex.
>
> Congress shall have power to enforce this article by appropriate legislation.

Some thirty years previously, however, Wyoming entered the Union with a constitution granting women full voting rights (1890). Several other states also gave women the vote before 1920. A timeline of granting full suffrage to women is given in Table 1[1].

Table 1: Timeline of full suffrage for women

State	Year
Wyoming	1890
Colorado	1893
Idaho	1896
Utah	1896
Washington	1910
California	1911
Oregon	1912
Kansas	1912
Arizona	1912
Montana	1914
Nevada	1914
Nebraska	1917
New York	1917
Michigan	1918
South Dakota	1918
Oklahoma	1918

[1] Some of these states had granted suffrage earlier while they were territories. For example, Wyoming granted women's suffrage as a union territory in 1869 and it was still in place with statehood in 1890. Utah had women's suffrage as a territory since 1870 which was annulled by Congress in 1887, but by referendum was put back in the constitution when Utah was admitted to statehood in 1896. Washington had woman suffrage twice by the enactment of territorial legislature but lost it by court decisions. Also, Arizona's suffrage enactment in 1910 came into effect with statehood in 1912. And Montana granted women's suffrage way back in 1887 as a territory. So the table lists states where full suffrage was granted to women (and not repealed) before 1920.

The first states to grant suffrage were the Mountain states of Wyoming, Colorado, Idaho and Utah followed by the Pacific states (Washington, Oregon, California). In this paper we want to study systematically the causes that might have led these states to enact women suffrage earlier than others, prior to 1920.

Many theories have been put forward to explain early suffrage in the western states. One of the popularly held beliefs regarding early suffrage in the western states is the adverse female- male sex ratio in those states. During the 1880's the west was largely populated by young males and the idea was that suffrage rights would make those states sufficiently attractive for young women to come and settle in. On the other hand, Keyssar (2000) attributes suffrage to "the unusual political circumstances" that prevailed in the handful of states (Wyoming, Colorado, Idaho, and Utah) where suffrage was achieved. He talks about the strength of the People's Party being crucial to the 1893 success of women's suffrage in Colorado. In Utah, also, he says that the enfranchisement of women was probably linked to politics of the Mormon territory with a tradition of polygamy (see Keyssar (2000), for example). Strength of suffrage organizations and suffrage movements were also believed to be important in bringing about suffrage rights early to the west (see McCammon & Campbell (2001), for example).

Other scholars have held that demographic factors can explain early western suffrage. Western states, for instance, had few blacks so that extending suffrage to women did not raise the racial issues that it did in other states, like demands for enfranchisement of the blacks following women's suffrage (see Keyssar (2000), for example). Still others have argued that changing of gender roles to be the most crucial factor in bringing about suffrage (see McCammon & Campbell (2001), for example). The idea in this case was that in the western states with harsh frontier conditions of life, women were required to participate on an equal footing with men in many activities and hence the gradual degeneration of traditional gender roles paved the way for suffrage laws.

Despite the large literature on women's suffrage, the quantitative analysis to date has been inconclusive (see Miller (2008), for example). This paper attempts to fill in this gap by hypothesizing and testing certain factors that might have led to suffrage enactment. I propose a new hypothesis that partisan competition between the Republicans and the Democrats in the western states contributed significantly to early suffrage in those states. These western states were characterized by 'close' two-party competition (in the sense that each party had many partisan supporters) which led me to hypothesize that partisan competition, appropriately captured, might explain part of the early suffrage in these states. More precisely, my hypothesis (based on a related theoretical chapter on democratization in my doctoral dissertation, see Munshi (2009)) is that states where Democrats and Republicans were very closely balanced were the ones most likely to enact suffrage while the states in which one of the parties was a stronghold were least likely to enact suffrage.

The intuition is that in the face of stiff partisan competition, and part of the electorate wanting extension (like young males trying to attract women to the tardily female-populated states of the west, or progressives trying to find supporters in women for their causes like prohibition and anti-child labor legislation), one or both the parties extend franchise to please part of the electorate wanting extension thereby increasing their chances of winning.

Hence I test my hypothesis along with some of the ones previously put forward. I do so within an event history analysis framework. I find that partisan competition indeed played an important role in early enfranchisement of women in the west. I also find that some of the popularly believed factors like adverse female-male sex-ratio, and higher percentage of urban population (possibly capturing the percentage of educated professional and progressive middle classes) contribute significantly and positively towards suffrage enactment (as required by a related theoretical paper, see Munshi (2009)). I also find significant 'diffusion' of suffrage enactment in the western states which seems plausible given the geographic clustering of the states in one particular region. There is also evidence of significant positive duration dependence.

1.1. Related Literature

This work builds on and contributes to both the theoretical and the empirical literature on suffrage extension.

Along the first strand, there is a huge body of literature that looks at suffrage extension in general, but relatively few that look at the extension of suffrage to women in particular. One theory models enfranchisement as a result of threats imposed by the disenfranchised group, especially when the interests of the two groups conflict a lot (see Acemoglu (2000), (2001), (2005) and Conley & Temimi (2001)). The threats could be in the form of civil disobedience or popular unrest. The theory predicts that if the threats are too costly (implying that the disenfranchised group is very strong and it is more costly for the elites to curb the upheaval than to grant the agitators political rights), franchise is likely to be granted. This might well be true in some contexts but the problem in applying this to the variation in the timing of women's suffrage in American states is that there is not much evidence in favor of widely varying strengths of the suffragists across states that could result in some states granting suffrage but not others.

For example, an organized suffrage movement was almost absent in Wyoming, the first state to enact full suffrage for women. There was no suffrage in Connecticut where the first women's suffrage organization was established prior to the 19th amendment. There was almost equal suffrage organization membership in the west and the south (which are regions respectively where suffrage laws seem to be most and least successful). The movement mobilized early in the eastern states but enactment did not follow. King, Cornwall &

Dahlin (2005) find that the strength of the suffrage movement increased the likelihood of bill introduction but not bill passage (see Miller (2008) and King, Cornwall & Dahlin (2005) for some of these ideas).

A second category visualizes enfranchisement due to threats from outside like war, which need mass mobilization of armies (see Ticchi & Vindigni (2005)). Ticchi and Vindigni's argument is that with the threat of war, mass armies are required; to induce them to fight harder to prevent a loss, their stakes from loss have to be raised through monetary redistribution; but this cannot always be done credibly and so political rights are granted as a commitment to favorable future income distribution. Again, this theory cannot explain granting of voting rights to women only in the western states since there was no threat of war only for those states. However World War I and women participation in substituting the male workforce at home is often thought to be the plausible reason for universal women's suffrage in 1920.

Bertocchi (2007) proposes, and empirically tests, a theory specifically addressing the extension of franchise to women. Theoretically, she looks at enfranchisement of women under the following assumptions: (1) men are richer than women, in the sense that both have equal amounts of mental endowments while men have higher physical endowments (and both are required for production), (2) women display a higher preference for public goods (and hence the economy will have higher taxes if women were allowed vote, given public good is financed through taxation) and (3) women's disenfranchisement carries a societal cost. The theory predicts that over time, as the society industrializes, returns to mental labor increase relative to returns to physical labor, so that relative wages of women increase, until the time when, for the male median voter, the cost of women's disenfranchisement is higher than the cost of accepting the median voter's choice under universal suffrage. The male median voter is therefore better off extending franchise to women. As expected, the model also predicts that franchise is more likely the lower is the gender wage gap (that is, the higher the level of industrialization that increases the return to mental labor), the lower the gap between preferences for public goods, and the larger the cost of disenfranchisement.

Empirically, she proxies for the cost of disenfranchisement with the presence of Catholicism, which is associated with a more traditional view of women's role and thus a lower cost. Higher preference for public goods is proxied by the availability of divorce, which implies marital instability and a more vulnerable economic position for women, leading to higher demands for Government provisions. The gender wage gap is proxied by the level of per capita income (higher income being associated with more industrialization and therefore less gap). Hence the model predicts that women's suffrage is positively affected by per capita income and negatively by the presence of Catholicism (or traditional religious values) and the availability of divorce (indicating greater marital insecurity). These predictions are then empirically tested using

cross-country data for sixty years. She finds that all the three main determinants turn out to be significant with the expected signs.

Some predictions of the model, can be tailored to fit the experience of the western states in America, especially those pertaining to the social atmosphere in those states at that time. For example, as noted before, the harsh frontier life in the west did require women to do more than just traditional household chores, thereby increasing the societal cost of disenfranchisement, bringing enfranchisement earlier in those states. (I capture the societal aspect of suffrage extension using figures for women employment, please see section 3.2 for details). However, the main thrust in my model is to highlight the influence of partisan competition, which I explicitly include (along with other popular conjectures) and which is not considered in this model.

The results of other empirical investigations pertaining to early suffrage in the western states have been most inconclusive (see Miller (2008)). The only robust finding seems to be the positive effect of percentage of women working in non-agricultural activities (see King, Cornwall & Dahlin (2005)). The closest to my work is perhaps that of McCammon & Campbell (2001), who study the same question of early suffrage in the western states, using event history analysis, and find that mobilization of suffrage movements in the west, and 'political' and 'gendered' opportunities in those states, play the most important roles for suffrage enactment. Here they capture 'political' opportunities by dummies for endorsements from Republican/Democratic parties or Third parties, and categorical variables for procedural ease[2]. To capture 'gendered' opportunities, they include proportion of lawyers and physicians who were women, percentage of all college and university students who were women, and the number of women's organization.

From the point of view of methodology, they differ (which might explain differences in some of the results) in that they run separate regressions with different sets of variables (like one with only political variables, one with only demographic variables and so on) and then run the final regression with the variables that turn out to be significant in the separate (sub-) regressions. How-

[2] This matters for them because their data starts in 1866 when many states were actually territories, with much less complex reform procedures. However only 3 of the 12 states that were territories, during the suffrage years passed women's suffrages during their territorial years (Utah, Washington and Wyoming) while the others did as states, indicating that procedural ease may not have been that vital, to begin with. Even then this issue is avoided here by starting the window in 1880 and following full suffrage enactments in states only. Again, there were procedural differences within states but little evidence that this was important for laws. For example, Delaware did not require referendum vote on women's suffrage (all other states did), yet did not have full suffrage. Similarly, Michigan required only one legislative vote prior to a referendum, but had suffrage much later in 1918. In any case, I believe that unless the force of political competition was playing a role in the background, procedural simplicity alone would not let reforms pass, and similarly, with strong competition, procedural difficulty would be little hindrance to passing laws.

ever, while running separate regressions, variables that are being left out are not really being controlled for, so that significance of a political variable, for example, when only two other political variables are considered might well not be there if other demographic variables (of another regression) are included. Hence in my analysis, all relevant variables are included for all specifications.

The rest of the paper is organized as follows: the next section presents my partisan competition hypothesis and the resultant empirical predictions. Section 3 presents other plausible hypotheses. Section 4 introduces the empirical methods. Section 5 discusses the data. Section 6 presents analysis and results. Section 7 checks for robustness using alternative measures of competition. Section 8 concludes. Section 9 contains an appendix.

2. Partisan Competition and Suffrage Extension

> A stable democracy requires the manifestation of conflict or cleavage so that there will be struggle over ruling positions, challenges to parties in power, and shifts of parties in office.
>
> "The Political Man: The Social Bases of Politics" (1960) by Seymour Martin Lipset

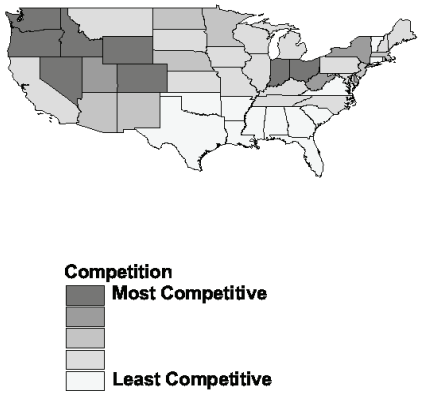
In the post Civil war period most districts in the West were closely balanced between the parties. The Rocky Mountain West is characterized by intense two-party partisan competition and power seems to be closely balanced. The reason for this balance seems to be resulting from and reflecting the preferential divide of the electorate itself. These regions were sparsely populated at the time of the Civil War and most settlers trickled in subsequent decades – among the migrants were the Southerners, many of them ex-Confederates trying to start from the drawing board, and perhaps their preferences leaned towards the Democrats; while the those moving into these states from the Union base were likely to be Republican supporters. In fact, the proportion of mixing of the Northerners and Southerners is reflected in the pattern of the Republican and Democratic representation in these states as well. For example, the Republican strength seems to be highest in the Canadian borders (where Northerners presumably settled in greater proportions than the Southerners) and falls gradually downwards while that of the Democrats seems to increase towards the South (see Keyssar (2000), for a lively description of these ideas).

There have been various attempts at measuring the degree of inter-party competition at the state levels (see Golembiewski (1958), Schlesinger (1955), Ranney & Kendall (1954), and Jewell (1962), for example). Some authors (Ranney and Kendall (1954)) look at competition by looking at percentages of votes won by the two parties in elections for three offices – President of the United States, United States senator, and governor from 1914 to 1952. Some authors (like Schlesinger (1955)) have added another dimension to counting votes – that of how long an incumbent keeps office, or alternatively how often

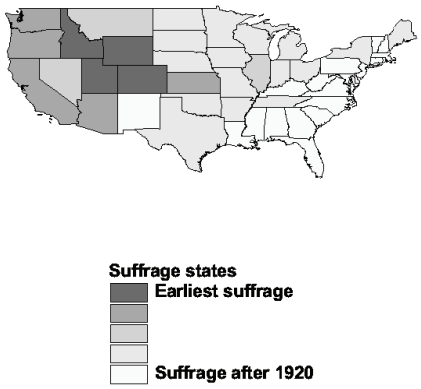
does power change and have then classified inter-party competition in various states taking both dimensions into account. He considers election results from 1872 to 1950 for both gubernatorial and presidential elections. Another approach (suggested by Malcolm Jewell (1962), see Munger (1966)) focuses on interaction of the executive and legislature in policy making[3]. No matter what the measures have been, the conclusions have been very similar:

> The Western Mountain States thus appear to have a higher degree of political volatility than is to be found elsewhere (Schlesinger (1955)).

And a picture (figure I) marking the competitive states (according to Schlesinger (1955)) and the suffrage states makes the story even more convincing.



[3] My measure of competition (please see section 4, titled 'Empirical Methods' for details of the construction) is quite different from Ranney and Kendall's, primarily because I don't just want to capture state-level party competition but that which arises from and reflects the partisan preferences of the voters when voting for state level politicians. Hence their approach seems inappropriate since they add votes for Presidential and state offices, whereas people often have different partisan biases while voting for the President. Like Schlesinger, I have captured dynamic aspects of competition using changes in the majority party in both the houses (please see section 7.2 titled 'Dynamic Measures'). Jewell's focus on interaction of executive and legislature in policymaking brings us back to procedural ease of McCammon and Campbell (2001) and as explained before (please see section 1.1 titled 'Related Literature' for a discussion), is not considered important for the purpose at hand.



Moreover the progressive movement at that time also seems to have gathered substantial momentum in the western states. Keyssar (2000) in fact talks about the strength of the People's party being crucial to the 1893 success of women's suffrage in Colorado. He says the following:

> What seems to have tipped the balance in a handful of western states … was a combination of several additional ingredients. One was a more fluid pattern of party competition, due in part to the strength of the insurgent Farmers' Alliance and shortly later, the People's Party.

The Populist Party gradually called the Peoples' Party was born as the Farmers' Alliance out of agrarian revolt that rose out of falling agricultural prices after the panic of 1873. The Alliance also developed political agenda besides economic goals, primarily the demand for silver coinage to counter the gold standard, believed to be causing deflation in agricultural prices. The Populists' were the first political party to actively include women in their affairs. Hence given this political background in the western states, we now turn to the partisan competition hypothesis capturing the incentives for extension of franchise in the face of close partisan competition and part of the population (young males, progressives) wanting such extension.

2.1. Partisan Competition Hypothesis

In the related theoretical model (see Munshi (2009)), enfranchisement is modeled as a response to political incentives within the economy. It is a two-period model of elections where in the first period the issue to be decided is whether or not to extend franchise, whereas in the second period some other policy is under consideration. In period 1, only part of the population is enfranchised. However, they may decide to extend the franchise before policy decision is made in the next period. There are two parties, A and B. Each proposes an

enfranchisement platform; then the voters vote on the one prefer. After that, there is a new election in the next period, period 2, where policy is decided.

Consider extension by the parties under close competition (which means both the parties have lots of partisans) in equilibrium. Here, to begin with, policies that parties propose are expected to be close to their favorites but not exactly their favorites, because not being strongholds, they also have to pay attention to what the other party is proposing and what the electorate is wanting. The electorate understands this, being forward looking rational voters, and part of the electorate (progressives, for example) wants to influence the future policy proposals of the parties to get the possible equilibrium outcome as close to their own favorites as possible.

Extension of the electorate helps them do this. For example, extension of suffrage to women would have helped (male) progressives get closer to their favorite (future) outcomes like prohibition and anti-child labor laws. And to please this part of the electorate and increase their current probabilities of winning (which is also important to the parties given high rents from office), parties propose extension, even if that means moving away from their favorite platforms in future. In our case, this means that even the Democrats (who were less pro-suffrage than the Republicans) would propose suffrage extension. Republicans also propose extension, but they're not hurt since they move towards their favorite policy outcome by extension (they were pro-suffrage).

Now consider when each of the parties has a stronghold (like the Democrats in the South or the Republicans in the North). In this case, irrespective of the affiliation of the stronghold party, all the incentives described above break down, and no extension arises in equilibrium. The stronger party announces its favorite policy (and wins for sure almost), in which case, the best response of the smaller party is also to announce its favorite (even though it will most probably never be implemented). Hence the 'progressive-minded' electorate knows that they have no hope of influencing any future policy outcomes. And the parties have no incentives to please the current electorate either to win, since winner is determined by overwhelming partisan support alone, irrespective of policy proposals.

Hence the empirical predictions of this theoretical model would be very high chances of suffrage when there is close competition and very small chances of suffrage when either party is a stronghold.

2.2. Testing Empirical Predictions of the Hypothesis

Of course, it is difficult to determine the distribution of partisans in the population so we take the representation of the parties in state legislatures to reflect the preferential divide of the electorate. However, notice that this confounds the two different kinds of preferences that an individual might have for a party – partisan preference and the preference for the policy being decided. (See the

section on checking robustness to find how 'stability' of the legislature can be used to infer about the kind of underlying preferences the electorate might have.)

So drawing from both literature and theory we come up with the following political hypothesis[4]:

1) The probability of suffrage increases when the seat shares of the Republicans and the Democrats are close (in both the houses).

Since the legislature consists of two houses, 'closeness' of seat shares in both the houses perhaps would imply overall competition. Hence, though the theoretical model does not distinguish between upper and lower houses, 'an even distribution of partisans in the population' would perhaps translate into 'close seat shares of the Republicans and the Democrats in both houses of the legislature' (this is more elaborately justified in the 'Data' section of the chapter where the exact specification of the 'closeness' variable is proposed).

3. Other Hypotheses

Now let me revisit some previous works and ideas in order to formulate some testable hypotheses.

3.1. Demographic Factors

> I think there's just one kind of folks. Folks.
>
> "To Kill a Mockingbird" by Harper Lee

Even though the west was exceptionally receptive of women's suffrage, the rest of the country seemed sluggish to come to grips with it. In the South, the

[4] One of the discernible political features of the Western states is the dominance of the federal authority – firstly large proportion of land was owned by the government which could therefore be used for extracting minerals, using timber, grasses etc. under federal permit, and secondly, most of the Rocky Mountain states were poor and heavy federal investment was required for any major public works undertaking, like irrigation for agriculture, generation of hydroelectric power etc. Thus federal action constitutes an important part of political life. This probably contributes to large 'rents from office' in the western states. Shefter (1983), writes regarding characteristics of politics in Western states, "*in efforts to gain office and remain in power, politicians could draw on the resources of 'the company' – the railroad or mining corporation that overshadowed all other local institutions"*. High rents from office also play an important role in the theoretical model. So another hypothesis to test would be 1. *The higher the rents from office, the higher the probability.* But we leave this for future work. Also, the progressives were more prominent in the west that in the rest of the country so we could test a hypothesis like 2. *The higher the vote share of the 'third' party, the higher the probability.* In fact, we did include the share of the 'third' party in empirical tests, while checking for robustness later on in this paper but never did it turn out to be significant.

demographics seemed to have aided such aversion. Firstly, the predominantly agricultural rural social structure delayed the expansion of the urban, educated, professional middle-class – the class most supportive of women's suffrage.

Secondly, the southerners feared that allowing franchise to women would inevitably lead to demands of franchise for the blacks, something imperceptible and to be resisted with all might. (Moreover the Democrats in the South were repellent to the idea of a national amendment, and perceived it to be yet another federal infringement on states' rights and hence their opposition to women's suffrage.)

Since the western states were among the first to grant suffrage and many of them were mining states with an unfavorable female-male ratio, a reason, often cited is that suffrage was granted to attract women to those states (see Keyssar (2000) for a description of all these ideas). Keyssar (2000, 196) notes:

> Western states tended to be dominated by land-owning farm families yet included a highly visible number of working-class transients who labored in mining, railroading, and agriculture. Since the latter group consisted overwhelmingly of single males, the enfranchisement of women offered discernible political benefits to the settler population.

Thus we have the following hypotheses:

1) The larger the proportion of blacks, the smaller the probability (of women's suffrage).
2) The larger the urban population, the higher the probability. (This also appears as one of the social hypotheses in the next subsection.)
3) The lower the female-male sex ratio, the higher the probability.

3.2. Social and Economic Factors

> I hate to think I've got to grow up, and be Miss March, and wear long gowns, and look as prim as a China-aster! It's bad enough to be a girl, anyway, when I like boys' games and work and manners! I can't get over my disappointment in not being a boy; and it's worse than ever now, for I'm dying to go and fight with papa, and I can only stay at home and knit, like a poky old woman!
>
> "Little Women" (1868) by Louisa May Alcott

As Jo rues in 'Little Women', we all become conscious of times when the geography of life was strictly gendered and trespassing into the opposite territory was neither welcome nor dared. Among other things in life, participation in politics in general, and voting, in particular, were strictly considered belonging to the male domain. We will not delve deep here into how the seeds of change bore fruit in the minds of people so that the boundary got blurred and women came to be on an equal footing with men, but that history is also worth exploring (see Scott & Scott (1982) for example).

In the decades following the civil war (1865-1869), the mental and psychological matrix of the society was undergoing a transformation. The antislavery

movement, no doubt, laid the groundwork for such shifting paradigm, to some extent. Demand for gender equality followed demands for racial equality closely. These decades also witnessed a rise in the urban and quasi-urban middle-class, more receptive towards expansion of civil and economic rights. It is possible that these social changes were aided by certain technological innovations, furthering the image of women away from just a family member to a more active participant in society. Development of gas lighting, municipal water systems, domestic plumbing, canning, commercial production of ice, improvement of furnaces, stoves etc., helped many women escape from everyday domestic chores to some extent. College and professional women were increasing on one hand, while unskilled immigrant women joined as cooks and nursemaids in large numbers, on the other. The number of women in paid labor force, increased considerably.

Some of the earlier empirical works like McCammon & Campbell (2001) also find change in 'gendered opportunities' playing a significant role in bringing about suffrage. They measure 'gendered opportunities' with three variables that were supposed to capture women's inroads to traditionally male arenas of activity (McCammon & Campbell (2001)). These are the number of women who were physicians and lawyers, percentage of all college and university students who were female and the number of prominent women's organization in states. In fact King, Cornwall & Dahlin (2005), find percentage of women working in nonagricultural activities as the only robust variable correlated with suffrage. Hence it seems reasonable to include some measure of women working in my empirical work.

So the possible hypotheses emanating from the social developments at that time are as follows[5]:

[5] The issues of temperance and prohibition were also significant during this time. Prohibition movement had it's origins in the 1840's, mainly spearheaded by pietistic religious denominations like (Lutheranians and Methodists) and it gathered momentum around the late 1880's with the rise of Woman's Christian Temperance Union. Now, though the issues of temperance and prohibition, and suffrage are quite distinct (the former pertaining to personal abstinence, espousing traditional family values, while the latter was part of a more radical feminist movement), women suffrage was invariably perceived as adding 'dry votes' to the electorate. One of the reasons for this may have been support of the temperance leaders of the suffrage issue (suffrage as a means of restricting the social wrongs of men by imposing governmental restrictions etc.).
The effect of this identification of suffrage with temperance was ambiguous as far as suffrage was concerned. On one hand, it could be that the population who espoused temperance might espouse suffrage (the Methodists, Lutheranians etc.), and on the other, they might not (given the temperance was based more on traditional family kind of appeal). In fact, McDonagh and Price (1984) find that powerful German opposition to prohibition (both German Catholics and Protestants) spilled over as strong opposition to suffrage as well while Methodist and Presbyterian support for prohibition does not convert into support for suffrage. For sure however, the suffrage movement incurred the opposition of the liquor

1) The larger the proportion of urban population (which is likely to capture the educated, professional, progressive-minded middle class people), the higher the probability.
2) The larger the proportion of working women (especially in the non-agricultural occupations), the higher the probability.

3.3. Diffusion

> No longer do we speak about "here or there"; in the quantum world we speak about "here and there"…The most perplexing phenomenon in the bizarre world of the quantum is the effect of entanglement. Two particles... are mysteriously linked together. Whatever happens to one of them... causes a change in the other one.
>
> "Entanglement" by Amir D. Aczel

What is true of particles in the world of quantum physics (world of small particles) seems to be equally true for something as different as behavior of states with respect to adopting decisions. Only instead of 'entanglement' it is called 'diffusion'. The idea simply is that one state tends to behave like its neighbors when it comes to adopting policies, ceteris paribus. With clustering of states in the west, one would naturally be interested in suffrage diffusion. The idea of diffusion is that states adopt a particular policy not only as a response to it's internal determinants (demographics, politics etc.), but also by the adoption decisions of neighboring states. In the suffrage context, this happens either because, policy-makers learn by seeing the experiences of its neighbors, or because they fear a 'setback' for their states (lose women to other states) if they don't catch-up, or both.

Moreover there are many empirical papers that study the issue of policy adoption and diffusion. For example, Rincke (2007) finds evidence of significant policy diffusion and emulation in the case of establishment of charter schools among California school districts. Fishback & Kantor (1998) also finds positive 'contagion' effect of adoption of workers' compensation laws in states

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and business interests of the states (the former fearing prohibition, the latter apprehending unfavorable child labor laws etc.).

On the whole however, it seems this identification with prohibition hurt suffrage more than it helped - it has been found empirically that prohibition is negatively related to suffrage turnout (see McDonagh and Price (1984)). However, ideally we would like to test what impact temperance movement would have on the probability of suffrage i.e. whether greater proportions of such religious people (that would have helped temperance movement) aided or abated suffrage. So possible hypotheses might be: 1. *The greater the strengths of prohibition and temperance movements, the smaller(?) the probability. 2. The greater the proportion of foreign-born immigrants (especially German and Irish), the smaller the probability.*

However, in this study we have not incorporated these hypotheses and leave it for future work.

of the USA. On the other hand, Doyle (2006) finds no evidence of any significant diffusion of merit-based student grant programs in states using event history analysis.

Given the concentration of states in the west, there is possibility of diffusion in suffrage enactments and hence I hypothesize the following:

1) States with neighbors having women's suffrage had higher probability of granting women's suffrage.

4. Empirical Methods

To test the above hypotheses, I do an event history analysis of states granting full suffrage to women[6]. The entry time for all states is taken to be the year 1880 in which all the states were in the risk-set (none of them had any women's suffrage)[7] and we follow each state till 1919 when the data get censored because women's suffrage gets federally mandated in 1920. Obviously, states that did not enact full suffrage by 1919, never left the risk set and therefore have forty years of observations (1880-1919) while those that enacted suffrage within this period left the risk set at the year of enactment and appear in the data until that point. For example, a state like Alabama will have observations for all the forty years while California will have them for thirty one years (1880-1911) having enacted full suffrage for women in 1911.

Here we look at discrete-time methods of event history analysis. First of all, only sixteen states (out of forty eight) had granted full suffrage over a span of thirty years, with ties (more than one state adopting women's suffrage in a given year) occurring on five occasions, so that the nature of the data has a discrete flavor. Secondly, though a legislature can presumably adopt a policy

[6] Notice that in case a state had rescinded suffrage and then granted at a later date (but before the nineteenth amendment), we include the latest date for that state. In duration analysis terminology, we include the date at which the subject (state) leaves the risk set (by adopting suffrage) and does not enter the risk set again. For example, in Utah, suffrage, that existed from 1870 was annulled in 1887 which was again reinstated in 1896. So for this model, we include the date 1896 at which Utah leaves the risk set and doesn't enter again. (I hope to include spells of risk later.)

[7] Some of the territories had granted women's suffrage prior to 1880 and these were included in the data set only after attainment of statehood. For example, Wyoming had enacted full suffrage for women in 1869 as a territory. It became a state in 1890 and had retained full women's suffrage. Hence Wyoming, as a state, enters the risk set in 1890 but exits immediately having women's suffrage already, so that Wyoming appears for only one year 1890. Other jurisdictions in this category are Utah (which became a state in 1896 but had women's suffrage as a territory from 1870). Other places like Idaho, became a state in 1890 and granted women's suffrage as a state in 1896. Hence for Idaho, the window starts in 1890 and it has 7 observations (1890-1896). Likewise the other jurisdictions whose windows start later than 1880 (because they become states later) are Montana, North Dakota, South Dakota, Washington and Oklahoma.

anytime within a legislative session, the issue of interest to us is not knowing exactly when adoption occurred within a legislative session, but rather when adoption occurred relative to other states. In such analysis, the year in which a policy was adopted is sufficient to mark the occurrence of an event. Hence while policy-adoption may be a continuous process in principle (and we could easily discern exactly when change occurred from vote recordings in state legislatures), a discrete-time model is possibly better suited for our topic.

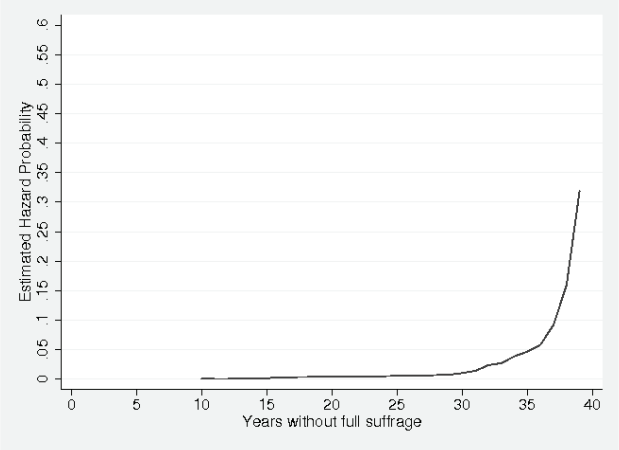
Given this, we use the complementary logarithmic function to estimate the coefficients. The reason for this is that firstly, it is the discrete-time analog of the continuous-time Cox proportional hazards model, for which no parameterization of the baseline hazard is required (i.e. no duration dependency needs to be specified). And secondly, this function is asymmetric (unlike logit and probit) with fatter tail towards 0 and hence is more suitable for rare event discrete-time EHA, like in our case. This function looks like follows:

$$\lambda_{i,t} = 1 - e^{-e^{x_{i,t}^{'}\beta}}$$

where $\lambda_{i,t}$ is the probability that state *i* grants full women's suffrage in time *t* (and doesn't annul it before 1920) and $x_{i,t}^{'}$ are the covariates.

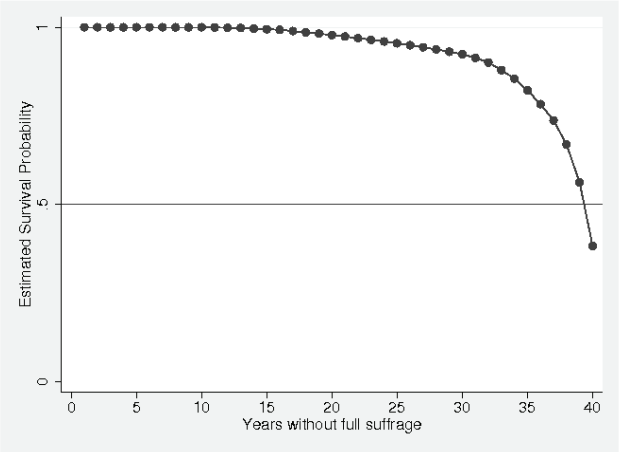
4.1. Hazard and Survival:

Before including covariates in our analysis, it is helpful to look at the probability of a state granting full suffrage merely as a function of time.



As the graph of the hazard probabilities shows, during the forty years under consideration (1880-1919), the probability of full suffrage never reached even 0.5. There was no hazard for the first ten years (1880-1890) with no state having any suffrage during this time. And it was very low for the next twenty years (till 1910) with only four states granting suffrage in first thirty years. From 1910 onwards however there is a rise in the probability that increases sharply towards 1917 (with five states granting suffrage in 1917 and 1918 alone).

So, as is evident from the graph, duration dependence seems to be highly non-linear, nearly exponential in this case. A similar picture arises with survival probabilities (probabilities of not enacting full suffrage) as well with survival being very strong till about 1910, then gradually falling for sometimes and then rapidly falling.



So it seems, that even without considering any other factor, the probability of granting suffrage began increasing with the passage of time. Hence it might be insightful to include duration dependence in our analysis.

Correcting the standard errors

Models like logit, probit, or complementary logarithmic functions like the one I use here, require the assumption that observations are independent across time and space which is clearly not the case for policy adoption in states. Several internal determinants of suffrage like political competition, composition and nature of the population etc., are likely to be highly correlated among neighboring states, having similar geographic, climatic, historical and cultural environments. In fact ‘similarity’ is also cited as a reason for ‘diffusion’ of policies among neighboring states.

The most familiar remedy to this problem is the use of clustered standard errors, an extension of robust variance estimation. Robust variance estimation allows for the relaxation of the assumption that the error terms are identically distributed, and clustering allows the further relaxation of the assumption of independence between observations in the data. To use clustering, we need to partition the data into groups such that observations are correlated within groups but not across them.

In each of the empirical models therefore, I use the most natural clustering that is clustering by each state (which assumes that the observations of each state is correlated across the years but that this correlation does not persist across states).

5. Data

There are two sources from which I have collected the data. The demographic variables have been constructed using the data available at Inter-University Consortium for Political and Social Research (ICPSR) at the website <http://www.icpsr.umich.edu/>. Specifically I have used "Historical, demographic, economic, and social data: the United States, 1790-2000" (study # 2896), especially parts 15-24 (containing censuses from 1880-1920). The sources for the ICPSR data are the published volumes of the decennial censuses of the U.S. Bureau of the Census, beginning with the Tenth Decennial Census of the United States (for the year 1880) up to the Fourteenth Decennial Census (for the year 1920).

The composition of the state legislatures is also from ICPSR, available under "Partisan Division of American State Governments, 1834-1985" (study # 16). This data provides information on the number of seats held by the major and minor parties in both houses of the state legislatures (as well as the party identification of the state's governor during the term of each legislature in the United States in the period 1834-1985, which is not used for my present purpose). Data are presented annually and biennially for every legislature. The data from 1834 to 1868 were collected by W. Dean Burnham, Massachusetts Institute of Technology. Data for subsequent years were added by the ICPSR staff.

To check test the hypotheses, I include the following variables in my analysis. The dependent variable is a binary variable that equals 1 for state i in year t if state i has enacted full suffrage for women in year t. It is 0 otherwise. Now consider the independent variables. Let us first consider capturing the political factors. We have the following time-varying political covariates aimed at capturing partisan distributions and competition: percentage of Republican seats in the upper house; percentage of Democratic seats in the upper house; percentage of Republican seats in the lower house; and percentage of Democratic seats in

the lower house. Now let closeness of seat shares in one of the houses, say upper house, be defined as follows:

$$\text{closeness in upper house} = 1 - \frac{\text{absolute (\% of Rep seat - \% of Dem seat)}}{\text{\% of Rep seat +\% of Dem seat}}$$

Hence, closeness is a fraction that becomes 0 (there is no closeness) when the sum and the difference of the seat shares of the two parties are the same (so that the ratio is 1) which happens when one of the parties has no seat share at all (and the other has a stronghold). As the difference in seat shares falls, the ratio falls and closeness rises, with the maximum being reached when the seat shares are exactly equal so that the ratio vanishes and closeness equals 1 (seat shares are very close). Similarly, we define closeness for the lower house. Now competition would be really close in a legislature when the seat shares in both the houses would be close. Hence to capture this overall competition in the simplest possible way, we define 'competition' as an indicator variable as follows:

$$\text{Competition} = \begin{cases} \text{1 if closeness in both upper and lower houses} > .89 \\ \text{0 otherwise} \end{cases}$$

Justification of the competition measure: One can presumably come up with various measures to capture 'competition'. As suggested by the political science literature, these could be 'static' in the sense of capturing competition at every point in time, or 'dynamic' in the sense of capturing competitiveness over time, or a combination of the two. For example, static measures might look at distribution of seat shares (among the major and third parties) in one or both the houses or the legislature as a whole while dynamic measures may try to capture the stability or otherwise of one or both houses in the legislature to infer about competition. I study some of these alternative formulations in 'Checking the Robustness' section. For the main analysis however, I have used the static measure of competition as formulated above and hence it requires some justification.

At the outset, I need to justify such a measure on the basis of its correspondence with my theoretical notion of partisan competition. On a more technical level, there are three things pertaining to the construction of my measure of competition that need to be justified - first, why not use the underlying continuous index (called closeness) as a measure of competition instead of constructing a dummy based on it; second, why the threshold .89 for the index

instead of any other; and third, why consider both the houses (and not any one or the legislature as a whole). Below I provide reasons for my choices:

Correspondence with the theoretical measure of competition: The notion of the distribution of partisanships in the electorate becoming more and more even, is theoretically captured by the height of the distribution becoming smaller and smaller. This entails more and more masses towards the tails of the distribution and less towards the centre. If the centre represents preferences which are 'neutral' (not biased towards one or the other part) and the tails represent partisan preferences for one or the other party, then the distribution becomes such that people are more and more partisans and less and less neutral.

Assuming the composition of the legislature reflects the preferential divide of the electorate, an electorate that is evenly divided among the two parties according to their partisan preferences, is probably captured by even split in the seats of the legislature (in both the houses). (Please refer to section 7 titled 'Checking for Robustness' to see the nuances of such an argument.)

Why an indicator variable: Let us start with an illustration of the problem. Consider any one of the houses and suppose the split of 100 seats is 98-2 (yielding a closeness index of .04). And consider the smaller party gaining two more seats. In that case, the split becomes 96-4 (and closeness becomes .08). However, there has not been any significant threat to the majority party and the policies they espouse, in this case. On the other hand, consider the split 52-48 (closeness is .96). Here, if the smaller party gains two seats the balance of power is enormously affected (and so is the probability of enactment of suffrage, for example). Here closeness becomes 1 (changes by .04, like before). Hence it is likely that for the same change in the continuous variable, the probability changes very discontinuously and non-linearly. Now, in our chosen model (which is a non-linear model), change in probability is different for different values of the independent variable (and hence changes non-linearly) but we can show that the change is essentially bounded and hence not suitable for capturing the possibly large discontinuous jumps in suffrage probabilities.
More rigorously, for small changes in x (assume just one independent variable for expositional ease), changes in the probability of suffrage ($\frac{\partial \lambda}{\partial x}$), is bounded (the latter not only contains a constant slope parameter but also some non-linear transformation of x that is bounded). Hence change in probability is smooth and bounded, unsuitable to capture the kind of story that we have in mind. Hence the discrete jumps in probability can better be captured by defining a dummy so that probability can suddenly increase when the dummy turns from 0 to 1 (competition increases beyond a threshold for the parties to feel the pressure).

Why .89: To define the indicator variable I use the cut-off .89 (for both the houses), which corresponds to the 90th percentile of the index of competition

for the Lower House in the sample. This translates to about 4 to 5 seats (on average) out of 35 (on average) in the upper house (the data show most upper houses having about 35 total seats) and about 12 to 13 seats on average out of 120 in the lower house (again, most lower houses having about 120 total seats). So we are looking at a split of about 25-20 in the upper house and a split of about 66-54 in the lower house.

The 90th percentile for the competition index of the Upper House is about .85. First of all, a difference of 15 seats out of 100 may not be reflecting a close balance of power. Moreover, though a higher threshold would have corresponded with higher and higher percentile for both the houses, it would leave out more and more data points. So I settled for the higher competition index corresponding to the lower percentile, in order to capture maximum possible competition for the largest number of states[8]. (It is implicit in the above argument that I wanted to choose the same threshold for both the houses so as to not bias the measure for or against one of the houses.)

Why both the houses: Consider a simple but extreme example for illustration. Suppose each of the houses has 100 seats and out of the two parties, one party holds all the seats in one of the houses, while the other holds all the seats in the other house. Then out of 200 total seats in the legislature, each party has 100, but of course, there will be no competition in the sense of close balance of power between the parties, since in each house one of the parties is a clear majority. However if the parties were split 50-50 in each house, then again, the total would be a split of 100-100 and would also imply close competition since power would be really balanced.

Hence, close competition in both the houses individually is sufficient for overall close competition but overall close competition is not so. Therefore, I look at each house separately to be sure that I capture close balance in each of the houses (implying close balance overall). Continuing with data description, there were about 30% missing observations for the political variables, namely the seat shares of the two parties in the two houses. This however confounds missing data i.e. no data for years in which the legislature did meet, and years in which the legislature did not meet. Moreover most of the missing data were in the early years of our window (around 1880's). So I tried running the analyses in three ways to better understand how big this problem of missing data was. Either I used the values of the last available year to substitute a missing value or I linearly interpolated between the two nearest available values or I dropped all the missing observations altogether, while estimating the models.

It turns out that the results of the first two methods (keeping the last available value and linearly interpolating between nearest values), yield very similar results. And dropping all the missing values improves the results in terms of

[8] Notice that since the Upper House is a much smaller house (about 35 seats on average), changing the threshold from .85 to .89 will mean a difference of about 1 or 2 seats.

log-likelihood and p-values of estimates (please refer to the Appendix for the results).

The proper way to do this of course, would be to figure out which are the missing data and which are simply years in which the legislature did not meet. A state is only 'at risk' to extend suffrage in a year in which the legislature met. So one method would be to include only those years in the dataset. But it is likely that the data has observations on the composition of legislatures for years when the legislature did not meet, so that this would mean dropping many other observations.

Again, linear interpolation could influence the composition of the legislature by either making it reach the cut-off of .89 (the value that is relevant for our measure) too soon or too slowly. In any case, therefore, the results presented here (which are very close to the results with linearly interpolated data and somewhat close to those with the data where missing values are dropped) are those where missing observations have been substituted with the last available ones.

Next I have a set of demographic time-varying covariates like percentage of urban population, sex-ratio (expressed in percentage to make it compatible with the unit of measurement of the other variables) and percentage of blacks, corresponding to our hypotheses. (Notice that some variables are highly correlated with one another like percentage of blacks highly positively correlated with the percentage of illiterate and the percentage of urban people highly positively correlated with percentage in non-agricultural population.) In the results presented, I just include the only variable that has been found robust in women's suffrage studies so far, namely, percentage of women working in non-agricultural occupations.

Since the data for these variables come from decennial censuses and hence are available every ten years, in this case I linearly interpolate the values of the variables for all the intermediate years.

I capture 'diffusion', in the simplest way, by defining a dummy which takes the value 1 for a state in a given year, if at least one of its neighbors (the states that share a geographic boundary with this state) had adopted suffrage prior to that year. It is 0 otherwise.

I also include duration dependence linearly by including the number of years from the beginning of the statehood or the beginning of the window (1880), whichever is later, that a state has not enacted suffrage.

6. Analysis and Results

Before presenting the regression results, it will be helpful to have a look at the descriptive statistics of the chosen variables.

Table 2: Descriptive Statistics

Variable	Mean	Standard Deviation
Closeness of seat shares (Upper House)	.4162	.3000
Closeness of seat shares (Lower House)	.4636	.3066
Competition dummy	.0234	.1513
Sex-ratio (female/male) in %	92.5668	10.0997
% of urban population	31.8544	21.4824
% of black population	10.7270	16.1619
% of female working	14.6087	6.0971
Diffusion dummy	.1471	.3544
Duration dependence	19.5946	11.3462
Number of observations	1665	

Coming to the regression analysis, I estimate three different models. First of all, standard errors in all the models are 'clustered' by states, since errors are very likely to be correlated within a state and over time. Given clustered errors in all models, model (1) is the basic model which does not include the diffusion dummy, nor considers duration dependence. Model (2) adds the diffusion dummy to model (1). Model (3) adds possible duration dependence to model (2). The main regression results are summarized in the following three tables as follows:

Table 3: Basic Model

Model 1	Coeffi-cient	Robust Standard Error	*p*-value	Marginal Effect
Competition dummy	1.2151	1.1561	.293	.0069
Sex-ratio (female/male)***	-.0624	.0154	.000	-.0002
% urban population*	.0466	.0244	.056	.0001
% black population	-.0906	.0577	.116	-.0003
% female working	-.1040	.0836	.214	-.0003
Constant	.9519	1.2383	.442	
Log-likelihood	-78.8032			
Number of observtions	1665			

*, **, and *** indicate significance at 90 %, 95 % and 99 % respectively. The marginal effect of a continuous variable, x, on the dependent variable, y, is computed as the slope

$$\frac{\partial y}{\partial x}$$

, at the sample mean of x and holding all the other variables constant at either their sample means (or other specific values). The marginal effects of the dummy variables are based on switches from zero to one, holding all else constant at sample means (or other specific values). The probability of suffrage for model (1) was computed at the sample means of all the variables and it is about .003. Marginal effects are also calculated at this probability.

Table 4: Model with 'diffusion'

Model 2	Coeffi-cient	Robust Standard Error	*p*-value	Marginal Effect
Competition dummy	1.8526	1.1488	.107	.0171
Sex-ratio (female/male) ***	-.0559	.0204	.006	-.0002
% urban population***	.0847	.0231	.000	.0003
% black population	-.0526	.0557	.345	-.0002
% female working**	-.1998	.0982	.042	-.0007
'Diffusion' dummy***	2.8210	.5460	.000	.0142
Constant	-1.0820	2.0234	.593	
Log-likelihood	-66.8806			
Number of observations	1665			

*, **, and *** indicate significance at 90%, 95% and 99% respectively. To facilitate comparison across models, the same probability of about .003 (at which the marginal effects would be calculated) was computed for model (2) by letting the 'diffusion dummy' equal .463 (not equal to its sample mean of .147) and holding others at their sample means.

Table 5: Model with 'diffusion' and 'duration dependence'

Model 3	Coeffi-cient	Robust Standard Error	*p*-value	Marginal Effect
Competition dummy*	2.2270	1.2755	.081	.0228
Sex-ratio (female/male)***	-.1059	.0339	.002	-.0003
% urban population***	.1277	.0295	.000	.0004
% black population*	-.1704	.1036	.100	-.0005
% female working***	-.4792	.1559	.002	-.0014
'Diffusion' dummy***	2.0900	.6606	.002	.0151
Duration dependence**	.1215	.0524	.020	.0004
Constant	3.2771	2.9755	.271	
Log-likelihood	-61.5141			
Number of observations	1665			

*, **, and *** indicate significance at 90%, 95% and 99% respectively. To facilitate comparison across models, the same probability, like in model (1) of about .003 (at which the marginal effects would be calculated) was computed for model (3) by letting 'duration dependence' equal 42 (not equal to its sample mean of 19.5946) and holding others at their sample means.

The marginal effect is measured by $\frac{dy}{dx}$ where y is the dependent variable and x is the continuous independent variable, at the sample mean of x, and all the other variables are held constant at their sample means. The marginal effects of the dummy variables are based on switches from zero to one, holding all else constant at sample means (or other specific values). Before analyzing the results, notice that for continuous variables, the marginal effects seem to be very small relative to those of the dummies. It is likely that the marginal effects of

the continuous variables are downward biased compared to those of the dummies since, for the former type of variable, the marginal effects measure change in probability for infinitesimal change in the variable, while for the latter, the marginal effects capture the change in probability for (relatively) large discrete jumps in the underlying variable. Hence to create a comparable ground for the effects of the two types of variables, we present the elasticities for the continuous variables. Recall elasticity in this case will measure the percentage change in probability (y) for a 1% change in the value of the continuous variable (x). Mathematically, it measures the percentage change in y relative to that in x, i.e. $\frac{\frac{dy}{y}}{\frac{dx}{x}}$ or $\frac{dy}{dx} * \frac{x}{y}$ or $\frac{d(\ln y)}{d(\ln x)}$. In table 6, the elasticities of the continuous variables are presented.

Table 6: Comparing elasticities of continuous variables

Elasticities	Model 1	Model 2	Model 3
Sex-ratio (female/male) in %	-5.7720	-5.1671	-9.7911
% of urban population	1.4826	2.6939	4.0612
% of black population	-.9703	-.5628	-1.8257
% of female working	-1.5166	-2.9144	-6.9897

To facilitate comparison across models, the elasticities were computed for the same probability of about .003 in all the models by choosing the 'diffusion' and 'duration dependence' variables in models (2) and (3) suitably, as described in the footnotes of tables 4 and 5.

Political Findings:

All the models suggest significant roles of the political players. Even in the basic model, competition, which means close seat shares between the Republicans and the Democrats in both the houses, seems to be affecting suffrage positively. And given the legislature is assumed to be representative of the electoral divide, it means that close partisan distributions in the population would have proven conducive to suffrage enactments.

Looking at the coefficient of competition in the three models, it increases as diffusion is added (from model (1) to (2)), which suggests that not only is competition robust to inclusion of diffusion, but also its influence becomes more prominent when other factors affecting suffrage are factored out. And in fact, in model (3), when possible duration dependence is added, the coefficient of competition not only increases in magnitude (from that in model (2)), but also becomes significant at 90%.

Consider the column of 'Marginal Effect' in all the three tables. Since competition is a dummy variable, the marginal effect (or the economic impact) measures the change in probability of full suffrage when competition changes

from 0 to 1, i.e., when closeness of seats shares in both the houses crosses the threshold .89, and other variables are held constant at their means. Consider model (1) first. Here we find that probability is likely to increase by .69 percentage points when competition changes from 0 to 1.

Comparing the marginal effects across models, notice that for a given probability of suffrage (like that in model (1)), the marginal effect of competition increases (as suggested by the regression result) as diffusion and duration dependence are added. More specifically, the marginal effect of competition is likely to be about 1.7 percentage points when only diffusion is added (model (2)) and about 2.3 percentage points when both diffusion and duration dependence are added.

An intuitive explanation for this might be as follows: It is possible that some states were enacting women's suffrage just because some of their neighbors were enacting it (diffusion), even when competition was low. In the absence, of a diffusion variable, this could weaken the strength of the competition variable (since it would seem that women's suffrage can happen even without strong competition). However, once the effect of diffusion is taken care of, the effect of competition only stands out more clearly.

For example, once diffusion is included (model (2)), one finds that the economic impact of competition is 1.7 percentage points, compared to .02 percentage points of sex-ratio, 1.4 percentage points of 'diffusion', .03 percentage points of percentage of urban population, .02 percentage points of percentage of black population and .07 percentage points of the percentage of women working in non-agricultural occupations.

The result is similar for model (3) where competition affects probability of suffrage by 2.3 percentage points (which is higher than the impacts of the other included variables).

Demographic and Social Findings:

Among our other findings, sex-ratio and percentage of urbanization turn out to be consistently significant and in the popularly believed way. That is, the coefficient of sex-ratio (female/male) is negative implying the worse the ratio (like in the western states) the higher the probability of suffrage while that of percentage of urban population is positive implying the higher urban population conducive to suffrage. Of course, percentage of urban population is representative of other social and demographic phenomena like larger middle-class, larger professionals who have typically been found to espouse suffrage.

Percentage of blacks doesn't turn out to be significant in the first two models but once both diffusion and duration dependence are allowed (as in model (3)), the coefficient becomes significant and in the expected way by negatively affecting full suffrage enactments. What is a little surprising is that percentage of women working in non-agricultural occupations turn out to be significant from model (2) onwards but in a way opposite to that expected. The coefficient

is negative. However the sign does seem plausible given the low percentage of working women in the western states, the part where suffrage was granted earliest.

To see the effect of these variables on the probability of suffrage, we look at their elasticities. Recall elasticity in this case will measure the percentage change in probability (y) for a 1% change in the value of the continuous variable (x). Using this we find the following for model (1): for a 1% worsening of sex-ratio, the probability of suffrage is likely to increase by about 5.8%; for a 1% increase in the percentage of urban population, the probability of suffrage goes up by about 1.5%; for a 1% worsening of percentage in black population, the probability of suffrage increases by about .97%; and for a 1% decrease in percentage of female working in non-agricultural population, the probability of suffrage is likely to go up by 1.5%.

Hence it seems that the probability of suffrage was very responsive to worsening of the sex-ratio (very elastic), somewhat responsive (elasticity is slightly greater than 1) to increases in urbanization and worsening of female participation in non-agricultural occupations, and not quite responsive to changes in the black population (elasticity less than 1).

The nature of the marginal effects and elasticities of these demographic and social variables are qualitatively similar for models (2) and (3) – sex-ratio has the highest effect on the probability of full suffrage among the others.

Comparing across models, however, one finds that for a given probability of suffrage, the elasticity (and marginal effect) of sex-ratio falls when diffusion is added (thereby comparing between models (1) and (2)). This could mean that the effect that was being captured by sex-ratio was in fact partly being caused by diffusion. Hence inclusion of diffusion as a separate variable takes away that part of sex-ratio that was confounded with diffusion, and the effect of the former falls.

For example, it could be that some states were enacting women's suffrage just because some of their neighbors were enacting it (diffusion), and not because their sex-ratio was not in favor of women. In the absence of a diffusion variable, this could strengthen the sex-ratio variable (since it would seem that adverse sex-ratio was driving women's suffrage enactments, even though it was just emulation of neighbors). However, once the effect of diffusion is taken care of, the effect of sex-ratio only stands out more clearly (falls in this case).

However when both diffusion and duration dependence are added (model (3)), the elasticity and marginal effect of sex-ratio rises again and is larger than in both the other models. It is possible that some states without adverse sex-ratio were enacting women's suffrage just because they thought it was inevitable with the passage of time (duration dependence). In the absence, of a duration dependence variable, this could weaken the strength of the sex-ratio variable (since it would seem that women's suffrage can happen even without adverse sex-ratio, just with time). However, once the effect of duration depend-

ence is taken care of, the effect of sex-ratio stands out more clearly (rises in this case).

The marginal effect of percentage blacks also work in a similar pattern (like sex-ratio) across the models, and presumably can be interpreted in the same way. However, the marginal effects of the percentage of urban population and percentage of female working in non-agricultural occupations, increase as diffusion and duration dependence are added, which can be explained as above.

Time and Diffusion:

From the regression results, both diffusion and duration dependence seem to have played very positive and significant roles in bringing about full suffrage. Hence states were more likely to enact suffrage if neighbors had done so and if it had been a long while without suffrage. The marginal effect of diffusion is 1.4 percentage points (model (2)) while that of the number of years without suffrage is about .04 (model (3)).

Neighbors' decisions could have affected policy-makers because states might have learned by seeing the experiences of its neighbors, or because they feared a 'setback' for their states if they don't catch-up, or both. In the women's suffrage context, especially in the west which was sparsely-female-populated, such laws could be the result of 'catching-up' with the neighbors that already had such suffrage laws. The idea would be to make their own states equally attractive for women to come and settle in and not fall behind in this respect to their neighbors.

Also the probability of suffrage went up (although slightly), the longer a state remained without such laws. This could be because of a sense of ultimate inevitability of passage of such laws in the face of widespread gender equality movements, leading to enactment. This sense most likely went up with the passage of time, during which possibly more and more countries and other American states would have enacted women's suffrage. And hence positive duration dependence could very well have foreshadowed the nineteenth amendment that federally mandated women's suffrage.

Comparing the marginal effect of diffusion across models (2) and (3), one finds that it increases (from 1.4 to about 1.5 percentage points) when duration dependence is added. This could be because states could be enacting women's suffrage even without having neighboring states that had already enacted it, just out of the sense that it was going to happen sooner or later. This could lead to weakening of the impact of 'diffusion' (since it would seem that states without 'diffusion' still had women's suffrage). However, once 'duration dependence' is taken care of, the effect of 'diffusion' only stands out more clearly (rises in this case).

7. Checking for Robustness

In this section I consider other plausible measures of competition (always in model (3) that includes diffusion and duration dependence), some drawn from related literature, and some proposed independently. Let us first consider those that are based on composition of the legislature at every point in time (and hence are called the 'static measures') and then we will consider measures that consider the change in the composition of the legislature over time (and hence are called the 'dynamic measures').

7.1. Static Measures

Majority Surplus: Smith & Fridkin (2008) have used the notion of 'majority surplus' to capture interparty competition in the legislature. The measure basically pools the seat shares of the parties in both the houses of the legislature and for the party who has the majority (share > 50%), it measures the 'surplus' or the number of seats exceeding 50%. And then lower is the 'surplus', the greater is the 'competition'. I included such a variable in my regressions but it was never significant. Moreover the marginal effect is very small.

Table 7: Model with 'majority surplus'

Model 3 with Majority Surplus	Coeffi-cient	Robust Standard Error	*p*-value	Marginal Effect
Majority surplus	.0055	.0148	.711	1.87*10^(-5)
Sex-ratio (female/male)***	-.0982	.0346	.004	-.0003
% urban population***	.1238	.0294	.000	.0004
% black population*	-.1678	.0991	.090	-.0006
% female working***	.4626	.1450	.001	-.0016
'Diffusion' dummy***	1.9290	.6261	.002	.0149
Duration dependence**	.1144	.0506	.024	.0004
Constant	2.8016	2.6030	.282	
Log-likelihood	-62.7033			
Number of observations	1665			

*, **, and *** indicate significance at 90%, 95% and 99% respectively. To facilitate comparison across models, the same probability of about .003 (at which the marginal effects would be calculated) was computed for this model by letting 'duration dependence' equal 42 (not equal to its sample mean of 19.5946) and holding others at their sample means.

Notice that this measure suffers from the usual drawback of a continuous measure trying to capture the pressure of competition. For example, according to this measure, 20% seats above 50% (i.e. 70% seat share) for the majority party would mean more competition than 30% seats above 50% (i.e. 80% seat share) of the majority party, though both would be situations of very less threat from the opposition and hence almost no competition at all.

Moreover, the measure pools the seat share of both the houses and hence confounds close seat share of each of the houses (that would mean competition) with closeness of seats in the overall legislature (which does not necessarily mean competition).

Third Party: Smith & Fridkin (2008) also include (overall) seat share of the third party in the legislature. Like in their case of delegation of direct democracy in the western states, in the case of women's suffrage too, many believed that the presence of third party, which was mostly the Progressive Party, was crucial in passing reforms like voting rights for women. Hence I included the seat share of the third party in the regression (for each house). Though the sign of the coefficients is as expected (positive), they are not significant[9]. Moreover the marginal effects are very small.

Table 8: Model with 'third party'

Model 3 with Third Party	Coeffi-cient	Robust Standard Error	*p*-value	Marginal Effect
Third Party in the Upper House	.0222	.0209	.288	.0001
Third Party in the Lower House	.0075	.0060	.212	2.1*10^(-5)
Sex-ratio (female/male)***	-.0969	.0367	.008	-.0003
% urban population***	.1424	.0328	.000	.0004
% black population*	-.2650	.1398	.058	-.0007
% female working***	-.5206	.1580	.001	-.0015
'Diffusion' dummy***	1.9415	.5800	.001	.0126
Duration dependence**	.1272	.0492	.010	.0004
Constant	2.0378	3.3545	.544	
Log-likelihood	-61.3492			
Number of observations	1665			

*, **, and *** indicate significance at 90%, 95% and 99% respectively. To facilitate comparison across models, the same probability of about .003 (at which the marginal effects would be calculated) was computed for this model by letting 'duration dependence' equal 46 (not equal to its sample mean of 19.5946) and holding others at their sample means.

Split Legislature: Often competition is perceived to be strong when the legislature is split between the parties (that is, one of the parties has a majority in one of the houses, and the other party has it in the other). However, a dummy of identifying split legislatures does not turn out to be significant[10]. And the marginal effect is about .8 percentage points.

[9] I included third party presence along with my original competition dummy but still there has been no change in the significance of the third party.

[10] If, this dummy of the other hand is interacted with the dummy of competition (close seat shares in each of the houses), the interaction term drops out of the regression for predicting failure perfectly. So it does seem to be the case that a split legislature where the parties are

Notice that among the static measures, the marginal effect of a 'split legislature' is much higher (about .9 percentage points) than those of 'majority surplus' and 'third party' (whose marginal effects are almost 0).

Table 9: Model with 'split legislature'

Model 3 with a Split Legislature	Coeffi-cient	Robust Standard Error	*p*-value	Marginal Effect
Split Legislature	1.3230	1.3459	.326	.0087
Sex-ratio (female/male)**	-.0948	.0391	.015	-.0003
% urban population***	.1277	.0331	.000	.0004
% black population	-.2068	.1407	.142	-.0007
% female working***	-.4827	.1567	.002	-.0016
'Diffusion' dummy***	1.9780	.6115	.001	.0151
Duration dependence**	.1226	.0498	.014	.0004
Constant	2.5409	3.0258		
Log-likelihood	-62.2331			
Number of observations	1665			

*, **, and *** indicate significance at 90%, 95% and 99% respectively. To facilitate comparison across models, the same probability of about .003 (at which the marginal effects would be calculated) was computed for this model by letting 'duration dependence' equal 44 (not equal to its sample mean of 19.5946) and holding others at their sample means.

7.2. Dynamic Measures

Dynamic measures are aimed to capture the stability or otherwise of a legislature over time. The following will help to motivate such a measure for the question of women's suffrage.

Empirical motivation for 'stability': The suffragists (or progressives, maybe) tried to woo politicians for their cause. Now instead of trying and persuading all the people of both the parties, the suffragists were likely to try and persuade the people of the party in power. In case of a stronghold party, the party in power is unambiguous. But in case of close seat shares (like in the western states), a party is likely to be considered powerful, if it has held majority for most of the times.

In case, majority has flipped, there is greater political instability and the suffragists must have found it hard to find supporters of their cause or even get the bill introduced. They wouldn't know who to try and convince because they

close would be very likely to grant women's suffrage. And this is also very plausible since competition would not be perceived to be strong in case a legislature is split, but the party holding the majority in one of the houses is very large. On the other hand, close seat shares alone indicates strong competition, even when the legislature is not split (that is, the same party has a majority in both the houses), as indicated by the regression results earlier where split was not considered.

wouldn't know who would be the majority next time. Hence what would be most conducive to suffrage in the long run is a 'stable' house, in the sense that there is not much flipping going on, so that suffragists would exactly know whose support to try and win. Hence I check whether 'stability' mattered for women's suffrage. Here I define 'stability' as a dummy which is 1 if the majority has not flipped even once in the Upper or the Lower House in the last 3 years.

However, results indicate that only 'stability' would not have mattered significantly. So we turn to the following conjecture.

Table 10: Model with 'stability'

Model 3 with Stability	Coeffi-cient	Robust Standard Error	*p*-value	Marginal Effect
Stability	-.2149	.6120	.725	-.0007
Sex-ratio (female/male)***	-.0972	.0373	.009	-.0003
% urban population***	.1271	.0313	.000	.0004
% black population	-.1952	.1267	.123	-.0006
% female working***	-.4741	.1497	.002	-.0016
'Diffusion' dummy***	1.9729	.5981	.001	.0151
Duration dependence**	.1170	.0524	.025	.0004
Constant	2.9710	2.8137	.291	
Log-likelihood	-62.6803			
Number of observations	1665			

*, **, and *** indicate significance at 90%, 95% and 99% respectively. To facilitate comparison across models, the same probability of about .003 (at which the marginal effects would be calculated) was computed for this model by letting `duration dependence' equal 44 (not equal to its sample mean of 19.5946) and holding others at their sample means.

Empirical motivation for 'stability' and 'closeness': A further complication to this idea of 'stability' would be that not only should 'flipping' be low, but the seat shares should be close as well, for the party in turn to pay attention to the suffragists' demands, knowing that their power is closely contested. Otherwise, like in case of a stronghold party (which is likely to entail low 'flipping' also), there will be no incentives to pay any heed to the suffragists' demands and the suffragists would also have had a hard time convincing an overwhelming majority (and there was no point convincing the rudimentary opposition).

Hence apparently two contradictory forces of competition must have mattered for suffrage. On the one hand, close seat shares would be conducive, while on the rather, certain degree of stability as to who had the majority, would also be helpful. A theoretical motivation of how this idea of both 'stability' and 'closeness' corresponds with my idea of evenly balanced partisan distributions in the electorate, is provided below.

Theoretical motivation for 'stability' and 'closeness': What I assume when I only consider close seat share to capture the partisan preference in the electorate is that an ex-post 50-50 division of seats in the legislature implies that 50% of the voters had been Democratic partisans and the rest 50% Republican partisans. This could be, but is not necessarily true. Ex-post close seat share in the legislature in itself may not reflect an equally balanced (distributed) partisan preference of the electorate.

For example, this could be the result of ex-ante say 50% of the voters being partisans, 25% in favor of each of the parties while the remaining 50% are the non-partisans or neutrals (those who don't have strong party biases). Suppose these neutrals toss coins to decide the party to vote for (assuming similar policy platforms of the parties which is true in our case, so that policy-wise they are equally better-off voting for each of the parties). In that case the resulting vote share might just be split almost 50-50, even when all of the electorate does not have strong partisan preferences.

However what can distinguish the first mechanism (which is what my theory has and the informal suffrage literature stresses – that of many partisans on either side) from the second is 'flipping'. Majorities would be likely to 'flip' often with less partisans (coin-tossing can go either way), while 'flipping' should be rare, given strong partisanships. Hence a more accurate empirical analog of my theoretical 'evenly balanced partisan preference in the electorate' would be 'close seat shares and less flipping' or 'close seat shares and more stability'.

In the following regression, I test whether, this hypothesis is true. In particular I test whether stability and close seat shares were important. 'Stability' is defined as before and 'closeness' is taken to be the original measure of competition. And the variable 'stability and closeness' is the product of the two which captures stability in both houses of the legislature as well as close seat shares in both of them. The latter turns out to be very significant.

It seems that 'stability and closeness' together had a very significant and large effect on women's suffrage enactments. Its marginal effect at about 7.6 percentage points is greater than that of all the other variables. However the marginal effect of only stability is small (about .07). Hence the results seem to support the story of both, close seat shares as well as a certain degree of stability, proving to be conducive to suffrage extensions to women.

Moreover the results of the last regression also lend support to role of some 'lobbying'-type mechanism at work behind women's suffrage. I do not have explicit lobbying in my theoretical model because preferences of the voters are known a priori by the parties from their position in the voter spectrum. And parties extend voting rights today because part of the current electorate (men) wants extension. Hence both the parties increase their chances of winning today by proposing extension and pleasing part of the men who want extension (like the progressive-minded middle-class), even if that means moving away

from their favorite policy platform in future. Now in the theoretical model, which of the voters would want extension is determined by their position in the voter spectrum and hence the 'want' is trivially conveyed to the parties, without requiring 'lobbying'. However, in real life, the only way for parties to know voter preferences might be to listen to them, requiring some 'lobbying'-type mechanism. In short, parties must know voter preferences before extending. In the theoretical model the mechanism was obvious. In real life, maybe it was 'lobbying'.

Table 11: Model with 'stability and closeness'

Model 3 with Stability and Closeness	Coeffi-cient	Robust Standard Error	*p*-value	Marginal Effect
Stability and closeness***	3.3801	1.3096	.010	.0764
Sex-ratio (female/male)***	-.1113	.0354	.002	-.0003
% urban population***	.1277	.0281	.000	.0004
% black population	-.1592	.1034	.124	-.0005
% female working***	-.4711	.1467	.001	-.0014
'Diffusion' dummy***	2.0511	.6518	.002	.0142
Duration dependence**	.1262	.0550	.022	.0004
Constant	3.4758	2.9163	.233	
Log-likelihood	-60.5183			
Number of observations	1665			

*, **, and *** indicate significance at 90%, 95% and 99% respectively. To facilitate comparison across models, the same probability of about .003 (at which the marginal effects would be calculated) was computed for this model by letting 'duration dependence' equal 41 (not equal to its sample mean of 19.5946) and holding others at their sample means.

To conclude this section we find that none of the static measures to capture competition ('majority surplus', 'third party', and 'split legislature') as well as only 'stability', among the dynamic measures, turn out to be significant and the marginal effects are 0. Notice that none of these capture the notion of pressure of partisan competition that I have in my theory. Moreover, though my theory does not include lobbying, the regression results that support stability and closeness, make a very strong case for it and hence I would like to include it explicitly in future theoretical extensions of my model.

8. Conclusion

In this paper, my mission is two-fold: Firstly, I propose a hypothesis for explaining early suffrage in the western states and secondly, I revisit some of the existing hypotheses (along with the proposed one), within a discrete-time event history framework. I find that partisan competition contributes positively towards suffrage enactment, along with other demographic variables like adverse

female-male sex-ratio and higher percentage of urbanization. There is also evidence of significant diffusion effects and duration dependence.

This paper lends support to the predictions of the related theoretical paper, and therefore suggests an important variable to be considered in empirical models of suffrage extension. Since there is nothing specific in the theoretical model for extension of suffrage to imply extension of suffrage to women only, the predictions can be applied to other extensions as well. However, since the theoretical model does not use tools of redistribution (like taxes and transfers) for extension to occur in equilibrium, (which most of the other theoretical papers in the literature use) my model is general enough to incorporate cases of extension where redistributive repercussions may not have been of paramount concern, like the case of women's suffrage.

9. Appendix

Results by dropping missing data

As noted in the paper, about 30% of the data on competition (% of Democratic seats in Upper and Lower houses and % of Republican seats in Upper and Lower houses) are absent. They are either missing or are absent because there was no legislative session in that year for that state. Either way, it might be helpful to get a sense of what the results would be if only the available observations were included in the data i.e. for the results in this appendix, all the absent observations were dropped (not interpolated or kept at the last available value). We re-estimate the three basic models with this new data.

Table A-1: Basic Model

Model 1	Coeffi-cient	Robust Standard Error	*p*-value	Marginal Effect
Competition dummy	1.3490	1.1325	.234	.0120
Sex-ratio (female/male)***	-.0683	.0162	.000	-.0003
% urban population	.0329	.0231	.154	.0001
% black population	-.0838	.0520	.108	-.0004
% female working	-.0775	.0676	.251	-.0003
Constant	1.8153	1.3692	.185	
Log-likelihood	-60.2183			
Number of observations	1052			

*, **, and *** indicate significance at 90%, 95% and 99% respectively. The marginal effect of a continuous variable, x, on the dependent variable, y, is computed as the slope

$$\frac{\partial y}{\partial x}$$

at the sample mean of x and holding all the other variables constant at either their sample means (or other specific values). The marginal effects of the dummy variables are based on

switches from zero to one, holding all else constant at sample means (or other specific values). The probability of suffrage for model (1) was computed at the sample means of all the variables and it is about .004. Marginal effects are also calculated at this probability.

Table A-2: Model with 'diffusion'

Model 2	Coeffi-cient	Robust Standard Error	*p*-value	Marginal Effect
Competition dummy	1.7048	1.0937	.119	.0188
Sex-ratio (female/male)***	-.0628	.0191	.001	-.0003
% urban population***	.0692	.0190	.000	.0003
% black population	-.0606	.0523	.247	-.0003
% female working*	-.1659	.0735	.024	-.0007
'Diffusion' dummy***	2.3814	.5038	.000	.0158
Constant	-.1535	1.9848	.938	
Log-likelihood	-53.2788			
Number of observations	1052			

*, **, and *** indicate significance at 90\%, 95\% and 99\% respectively. To facilitate comparison across models, the same probability of about .004 (at which the marginal effects would be calculated) was computed for model (2) by letting the 'diffusion dummy' equal .42 (not equal to its sample mean of .147) and holding others at their sample means.

Table A-3: Model with 'diffusion' and 'duration dependence

Model 3	Coeffi-cient	Robust Standard Error	*p*-value	Marginal Effect
Competition dummy*	2.3168	1.3215	.080	.0370
Sex-ratio (female/male)***	-.1285	.0323	.000	-.0006
% urban population***	.1197	.0327	.000	.0005
% black population*	-.1977	.1152	.086	-.0009
% female working***	-.4782	.1607	.003	-.0021
'Diffusion' dummy**	1.444	.5980	.016	.0113
Duration dependence***	.1518	.0510	.003	.0007
Constant*	5.1845	3.0020	.084	
Log-likelihood	-46.8384			
Number of observations	1052			

*, **, and *** indicate significance at 90%, 95% and 99% respectively. To facilitate comparison across models, the same probability, like in model (1) of about .004 (at which the marginal effects would be calculated) was computed for model (3) by letting 'duration dependence' equal 42 (not equal to its sample mean of 19.5946) and holding others at their sample means.

Compared to the results where missing observations were not dropped, we can make the following observations:

1) The number of observations is 1052 (from 1665), so the additional ones were interpolated.

2) The number of non-zero outcomes (of full suffrage dummy) is now 13 (from 16), so three of them were corresponding to missing values of the competition data.
3) The p-value of the competition dummy variable has increased and so has the size of its coefficient.
4) The log-likelihood has greatly increased in all the models (they were around -80 to -70 previously).
5) However the number of clusters has reduced to 47 (from 48). That's because of Utah. It is there in the data set for just one year- 1896. It enters statehood in 1896 and gives women's suffrage the same year. But the competition variable values are missing for that year. So now (with the new data set) Utah is no longer there. Previously (with interpolated competition variable values) I had competition values interpolated from previous years and had Utah in the data set for one year.

Comparing the elasticities of the continuous variables across the models, we get the following:

Table A-4: Comparing elasticities of continuous variables

Elasticities	Model 1	Model 2	Model 3
Sex-ratio (female/male) in %	-6.3512	-5.8447	-11.9599
% of urban population	1.1736	2.4680	4.2716
% of black population	-.8635	-.6248	-2.0387
% of female working	-1.2152	-2.6014	-7.4993

To facilitate comparison across models, the elasticities were computed for the same probability of about .004 in all the models by choosing the 'diffusion' and 'duration dependence' variables in models (2) and (3) suitably, as described in the footnotes of tables A-2 and A-3.

References

Acemoglu, Daron, and James A. Robinson. 2000. Why did the West Extend the Franchise? Democracy, Inequality, and Growth in Historical Perspective. *The Quarterly Journal of Economics* 115: 1167-1199.

Acemoglu, Daron, and James A. Robinson. 2001. A Theory of Political Transitions. *The American Economic Review 91*: 938-963.

Acemoglu, Daron, and James A. Robinson. 2005. *Economic Origins of Dictatorship and Democracy*. Cambridge University Press.

Bertocchi, Graziella. 2007. The Enfranchisement of Women and the Welfare State. C. E. P. R Discussion Paper.

Conley, John P., and Akram Temimi. 2001. Endogenous Enfranchisement When Groups' Preferences Conflict. *Journal of Political Economy* 109: 79-102.

Doyle, William R.. 2006. Adoption of Merit-Based Student Grant Programs: An Event History Analysis. *Educational Evaluation and Policy Analysis* 28: 259-285.

Fishback, Price V., and Shawn Everett Kantor. 1998. The Adoption of Workers' Compensation in the United States 1900-1930. *Journal of Law and Economics* XLI: 305-341.

Golembiewski, Robert T.. 1958. A Taxonomic Approach to State Political Party Strength. *Western Political Quarterly*: 494-513.

Jewell, Malcolm E.. 1962. *The State Legislature: Politics and Practice*. New York: Random House Studies in Political Science.

Keyssar, A.. 2000. *The Right to Vote: The Contested History of Democracy in the United States*. Basic Books.

King, Brayden G., Marie Cornwall, and Eric C. Dahlin. 2005. Winning Woman Suffrage One Step at a Time: Social Movements and the Logic of the Legislative Process. *Social Forces* 83: 1211-1234.

McCammon, Holly J., and Karen E. Campbell. 2001. Winning the Vote in the West: The Political Successes of the Women's Suffrage Movements, 1866-1919. *Gender and Society* 15: 55-82.

McDonagh, Eileen L., and Douglas H. Price. 1984. Woman Suffrage in the Progressive Era: Patterns of Opposition and Support in Referenda Voting, 1910-1918. *The American Political Science Review* 79: 415-435.

Miller, Grant. 2008. *Women's Suffrage, Political Responsiveness, and Child Survival in American History*. preprint.

Munger, Frank, (Ed). 1966. *American State Politics: Readings for Comparative Analysis*. New York: Thomas Y. Crowell Company.

Munshi, Soumyanetra. 2009. Essays on Democratization and Taxation. Doctoral Dissertation. Rutgers University.

Ranney, Austin, and Willmoore Kendall. 1954. The American Party Systems. *American Political Science Review*: 477-485.

Rincke, Johannes. 2007. Policy Diffusion in space and time: The case of charter schools in California school districts. *Regional Science and Urban Economics* 37: 526-541.

Schlesinger, Joseph A.. 1955. A Two-Dimensional Scheme for Classifying the States According to Degree of Inter-party Competition. *American Political Science Review*: 1120-1128.

Scott, Anne Firor, and Andrew Mackay Scott. 1982. *One Half the People: The Fight for Woman Suffrage*. University of Illinois Press.

Shefter, Martin. 1983. Regional Receptivity to Reform: The Legacy of the Progressive Era. *Political Science Quarterly* 98: 459-483.

Smith, Daniel A., and Dustin Fridkin. 2008. Delegating Direct Democracy: Interparty Legislative Competition and the Adoption of the Initiative in the American States. *American Political Science Review* 3: 333-350.

Ticchi, Davide, and Andrea Vindigni. 2005. *On Wars and Political Development. The Role of International Conflicts in the Democratization of the West*. preprint.