

A Quantitative Investigation of the Extension of the Franchise in the West

Gabriel Lenz
Jonathan Ladd

Department of Politics
Princeton University

Email: glenz@princeton.edu
jladd@princeton.edu

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Introduction

In human history, universal suffrage is a very recent development. As Robert Dahl noted, “if we accept universal suffrage as a requirement of democracy, there would be some persons in practically every democratic country who would be older than their democratic system of government” (1998, 3). For the past twenty-five hundred years, democracy has been moving from an abstract political theory or a few short-lived experiments towards the modern practice of universal suffrage. In this paper, we focus on the final chapter in the long history of the development of democratic government. Why did Western nations move from limited democracy with only a small fraction of the population eligible to vote, to universal suffrage? Researchers have conducted very few quantitative studies of the causes of enfranchisement. While some case studies and formal analysis exist, only a few researchers have systematically tested hypotheses regarding the causes of enfranchisements across many nations, and none has tested one of the primary explanations mentioned in the literature, party competition. This paper examines why, in relatively short time, the nations of Western Europe and North America extended the franchise to the point that we now expect democracies to conform to the norm of universal suffrage.

Party Competition

A number of political scientists have argued that inter-party competition can improve the functioning of democracy. Pluralists like Dahl suggest that intense party competition helps incorporate new groups into the political system. Competitive parties often appear to reach out for the support of unaffiliated groups in society as they compete to build coalitions capable of winning elections and governing. E. E. Schattschneider suggests that party competition can often lead to universal enfranchisement. Viewing the expansion of the electorate as a case study in the “contagiousness of conflict” (1960), he claimed that, in any competitive political system, conflict has a tendency to spread throughout society. The engine for spreading political conflict is party competition. As party competition plays out over time, parties that control the government may enact enfranchisements to improve their electoral position. Writing in 1942, Schattschneider noted, “the only region of the United States in which drastic restrictions on the right to vote remain in effect is the Solid South, a one-party area in which party competition is inoperative” (1942, 48). He saw party competition as aiding enfranchisement in other countries of the world as well. In his view, the extension of the franchise in the West was a natural product of party competition. He explained, “The natural history of parties is a story of continuous expansion and intensification of competition from the caucus in Parliament to a small electorate in the country to a larger and larger electorate” (1942, 47).

Implicit in this theory is the idea that parties will support expansion of the electorate out of their own self-interest. In order to increase their support in competitive elections, parties enfranchise a greater percent of the population when they judge that the newly enfranchised are likely to support them. Of course, parties with majorities or pluralities are far more likely to have the power to enact increases in suffrage, though non-majority and plurality parties may at times gain the leverage to pass enfranchisements. We simplify our theorizing and testing by assuming that, of political parties, those that hold a majority or plurality in their legislatures control electoral laws.

For ease of exposition, we often refer to the largest party in a legislature as the plurality party, even though the largest party may also hold a majority.

Popular Pressure and the Threat of Revolution

In addition to Schattschneider's thesis, others have advanced competing theories to explain the expansion of the electorate. Researchers have proposed that the threat of popular revolution spurred governments to enfranchise their populations. Acemoglu and Robinson (2000) argue that enfranchisements are strategic decisions by the political elite to prevent widespread social unrest and revolution. In their view, rising inequality associated with industrialization leads to greater social unrest. In some cases, they suggest that the threat of revolution forced elites to democratize.

Based on a formal model, they describe three possible outcomes of rising inequality. If a credible threat of revolution appears after inequality has reached a high threshold, then governments must respond with enfranchisement. Only an enfranchisement will appease a revolutionary threat at this stage because only enfranchisement, they assert, ensures future equality. In their view, this describes the cases of Britain, France, and Sweden. If the threat of revolution occurs before inequality exceeds this high threshold, then elites can prevent revolution in the short term by temporary transfers. As an example of this category, they cite Germany. Finally, if elites redistribute incomes so that inequality remains at very low levels, then they face little pressure to democratize, and so democracy is delayed considerably. South Korea and Taiwan may fall into this category.

As evidence for their theory, Acemoglu and Robinson's present a few brief case studies. They illustrate the rising inequality, economic hardships, and civil unrest that precede many enfranchisements. Other scholars have also proposed similar theories (Rueschemeyer, Stephens, and Stephens 1992; Therborn 1977), some have even tested these using data from multiple countries (Freeman and Snidal 1982), and some historians have attributed enfranchisements to the threat of revolution. However, most researchers have not attempted to test systematically this theory cross-nationally.

War

Another possible cause of greater enfranchisement is war. Keyssar (2000) has observed the strong correlation between wars and enfranchisements in the U.S. and suggested some reasons why wars have led to expansions of the franchise. First, political leaders need the population to support a war effort, requiring economic mobilization and military service. In order to increase support, leaders may expand the electorate to include those working in the war effort. Second, war may provide the shock necessary to make long considered changes in the rules of the polity. Finally, war can lead to enfranchisement through defeat when the victor imposes new electoral laws.

Development

The idea that economic development relates to suffrage has a long lineage. Numerous comparative researchers have examined the correlation between capitalist development and democracy (Rueschemeyer et al 1992, 3). Considerable debate has occurred over the explanation for this connection. Some suggest that as economies modernized, the growing middle class and bourgeoisie demanded universal democracy

(Lipset 1959; Moore 1966). Rueschemeyer et al (1992) argue that only the working class consistently supported full democracy. They claim that capitalist development led to democracy by generating a powerful and organized working class that advocated suffrage.

Ideology

Another plausible cause of the expansion of the franchise is the strength of left-wing parties, which tend to appeal to lower-income individuals. The repeal of property requirements or poll taxes would appear to serve the interests of left-wing parties because they would most likely enlarge their base of voters, improving these parties prospects in future elections. For example, Downs (1957) notes that the most left wing parties in the United Kingdom did considerably better in elections after property requirements were abolished. In addition to self-interest, enfranchisement of the poor, women, and others may constitute an important part of their ideology. Thus, in general, we would expect enfranchisements to occur more frequently when left-wing parties have more power in government than when they have less.

Europe

In contrast to earlier work that has tested theories of enfranchisement using case studies or qualitative histories, we test competing theories with data on Western European countries, and, in a separate analysis, on the American states. Measuring the percent enfranchised in Europe proved somewhat problematic. Using census data that is available at different intervals for different countries, we developed models of population growth and used these to predict the population level in each country. Data on the number of individuals eligible to vote comes from Mackie and Rose (1991). For details, see Appendix 2.

Our data permit us to estimate the increase in the size of the electorate through 26 cases of suffrage reform. When enfranchisements occur, countries grant suffrage to 29 additional percent of the adult population on average. The largest enfranchisement occurred in 1919 when Germany expanded its electorate from 20 to 94 percent. The smallest enfranchisement occurred in 1832 when the UK increased its electorate from what we estimate at about half a percent to about two and half percent. Our estimates cover enfranchisements that relax or completely drop property requirements or other restrictions on male suffrage and women's suffrage. In six of our cases, both kinds of enfranchisement occur simultaneously. For instance, in Denmark's 1918 election and Germany's 1919 election, universal male and female enfranchisement occurred. Sweden lifted restrictions on male suffrage and enfranchised women in 1921. To estimate the relationship between these enfranchisements and their size, we regressed enfranchisement size on dummy variables indicating the type of enfranchisement. The average size of enfranchisements that ease restrictions on male suffrage is about 13 percent of the total population. The average size of women's suffrage is about 30 percent. Although one might expect women's suffrage to result in a 50-percent increase, women under 30 were often excluded.

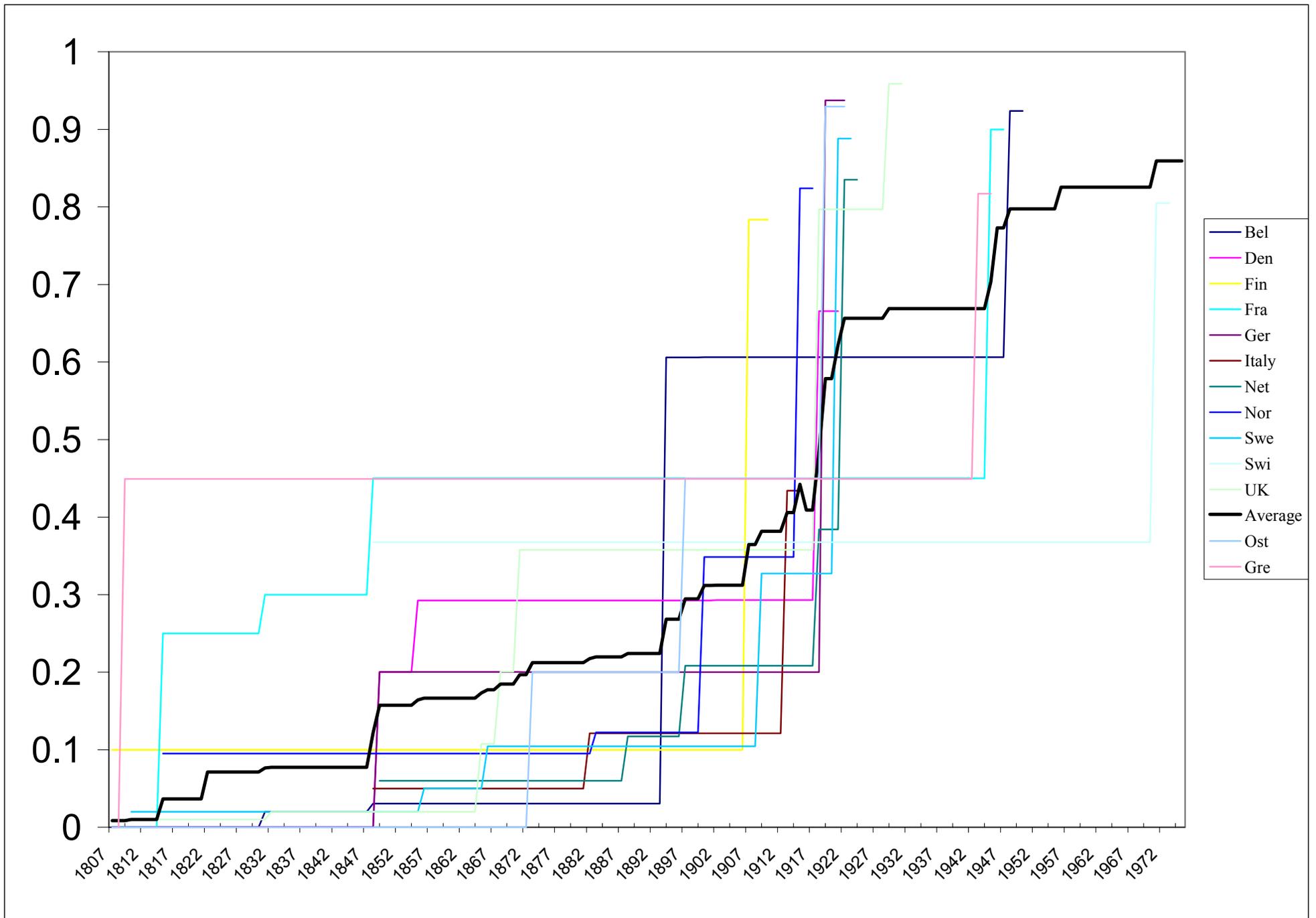


Figure 1: Proportion Enfranchised 1806 to Universal Suffrage

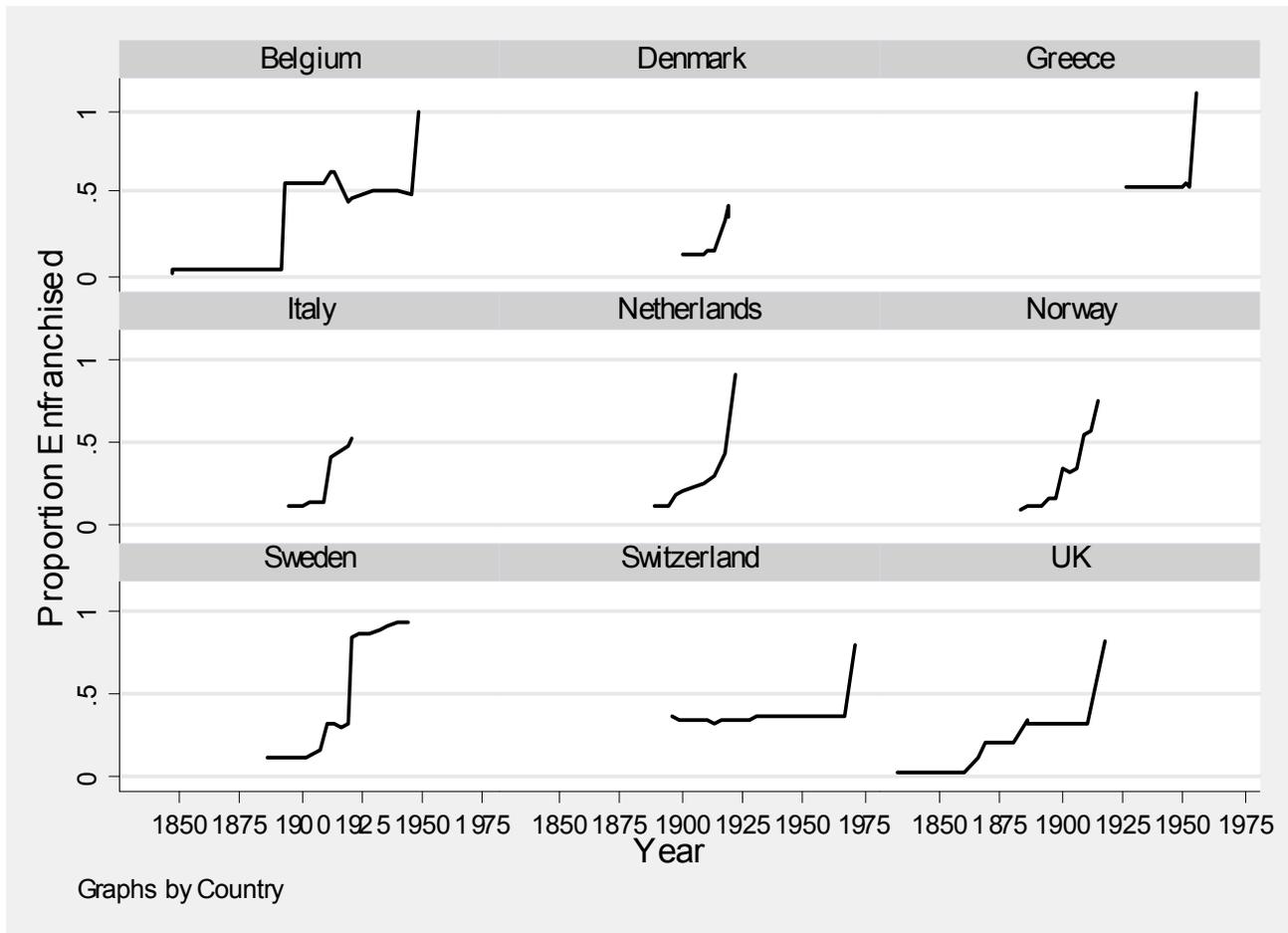


Figure 2: Proportion Enfranchised in the Countries and Periods Included in the Analysis

Figure 1 presents a graph of percent enfranchised by country from 1806 to when they achieved universal suffrage. It excludes later extensions of the franchise that result primarily from lowering the voting age. It also presents the Western European average percent enfranchised for all years in our data set.

Unfortunately, the availability of data necessary to construct our explanatory variables limits our analysis to nine countries and about 17 cases of suffrage reform (see Appendix 2). Figure 2 presents the proportion enfranchised in these nine countries in the period covered in the analysis. Our estimates of suffrage levels show changes in the percent enfranchised, even decreases, in years where their respective governments passed no new laws about enfranchisement. While these changes may arise from measurement error, they may also arise because of the many informal means by which governments can influence eligibility to vote. Thus, we use these free-floating measures in our analysis because the theories we test may help explain this variation. In Figure 1, we eliminated this variation for ease of presentation by setting the value as that of the last enfranchisement.

Testing the Theories

To test the competing explanations of the expansion of the franchise, we constructed a series of explanatory variables that measure party competition, the influence of left wing parties, democratic norms (or popular pressure), economic development, and war. Before describing the variables and reporting our hypothesis testing, we briefly familiarize the reader with our analysis,

the results of which appear in Table 1. It presents the parameter estimates from regression models predicting the proportion of the population eligible to vote in each election. The unit of analysis is elections. The models include country fixed effects except for Column 3, which uses random effects, and all include a lagged dependent variable. The paucity of overlapping time periods prevents us from including year fixed effects. We use panel-corrected standard errors to correct for bias in their estimates from heteroskedasticity.¹

Party Competition

To test theories about the role of party competition in causing enfranchisement we collected data on the party composition of the legislature in Western European countries from Mackie (Mackie and Rose 1991). These data includes every election and the resulting party membership in the legislature for select nations from the advent of popular elections through to the present. In countries with bicameral legislatures, election results and parliamentary seat data are from the lower house of the parliament. Using these data, we construct a number of party competition measures.

Margin of Plurality or Majority and Change in Margin of Plurality

The first measure of party competition that we investigate is the seat margin that the largest party had over the second largest party. While a crude and incomplete measure of electoral threat and competitiveness, it captures part of that concept.² The higher the margin held by the largest party, the less electorally threatened that party should feel. A plurality party with a wide lead over its rivals might be less eager to enact expansions of the electorate in order to advantage itself in party competition. Furthermore, if party competition drives the expansion of the electorate, then nations in which one party holds a very large advantage over others would be relatively less likely to expand the electorate. However, when we included this variable in several different specifications, it never had a large or significant effect. Consequently, we exclude it from the results reported here.

We might better measure electoral threat by the recent change in the plurality or majority party's margin. If the same party holds the plurality for the two elections before the current period, then the margin change variable is simply the change in the margin of the largest party over the second largest party from the first election to the second. If a new party gains the plurality in the second election, we set this variable to zero. In other words, this variable indicates whether the largest party recently lost or gained seats. We measure the change in seat share as the proportion of the entire legislature. If party competition causes enfranchisement, one would expect a negative relationship between the plurality margin change and increases in the franchise.

In contradiction to this prediction the estimates in Table 1 suggest a consistently positive relationship. Without controls, if the plurality party's margin increased ten percent, the electorate will likely expand by an additional 2.4 percent. With controls, the estimated effect increases to about 3.8 percent. With this variable, as with all others, the results remain unchanged with random effects, suggesting that most of the relationships are within country. Thus, electoral expansions tend to occur after the largest party has just gained seats, rather than after it lost seats. Figure 3 presents graphically the relationship between change in the proportion enfranchised and change in the

¹ Tests suggested no evidence of auto-correlation. The analysis was conducted in Stata 8.

² We thought of using the majority margin rather than the plurality margin. But across the countries in our data, one party having a majority of seats in parliament was rare enough that the majority margin was almost always zero. Instead, we use the plurality margin as our measure.

plurality party's margin. While this figure suggests some evidence of the relationship, it also reveals the paucity of cases in our analysis.

The results suggest that parties do not enact electoral reform as a desperate measure to avert further loss at the polls. However, these results are not necessarily incompatible with the competition theory. For example, it may reflect instances of parties successfully running on platforms that include electoral reform. It may also arise because parties are unwilling to introduce reforms for reasons of competition or reasons of popular pressure unless its members feel secure about their popular support.

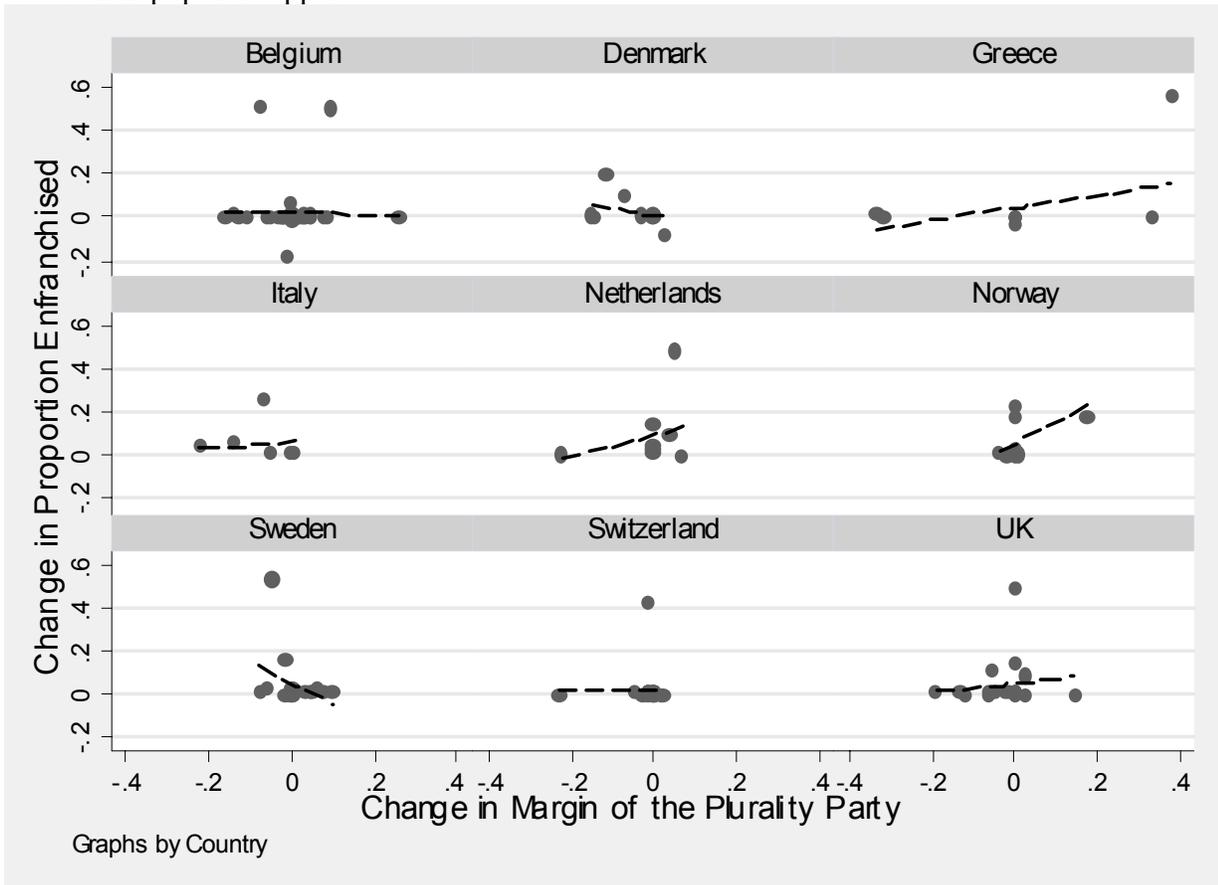


Figure 3: Lagged Change in the Plurality Party's Margin and Enfranchisements.

Table 1: Explaining Changes in the Proportion Enfranchised

Lagged Explanatory Variables	(1) All Years	(2) All Years	(3) All Years	(4) Prior to Women's Suffrage
Proportion Enfranchised	0.718 (0.041)	0.708 (0.041)	0.718 (0.089)	0.404 (0.073)
Change in Plurality (prop. Δ in the plurality party's margin)	0.384 (0.067)	0.370 (0.072)	0.384 (0.137)	0.044 (0.108)
Total Proportion Party Seat Change (last 2 elections)	0.030 (0.007)	0.025 (0.008)	0.030 (0.020)	0.026 (0.010)
Length of Plurality (# of elections the party has held plurality)	0.003 (0.002)	0.004 (0.002)	0.003 (0.004)	0.013 (0.005)
Western Average Proportion Enfranchised	0.165 (0.055)	0.066 (0.058)	0.165 (0.123)	0.825 (0.148)
War	0.002 (0.016)	-0.006 (0.019)	0.002 (0.042)	0.097 (0.034)
Energy Consumption	0.066 (0.017)	0.022 (0.024)	0.066 (0.034)	0.036 (0.024)
Ideology	0.058 (0.019)	0.059 (0.018)	0.058 (0.047)	0.067 (0.035)
Year		0.002 (0.001)		
Constant	-0.636 (0.152)	-4.000 (1.199)	-0.636 (0.313)	-0.626 (0.213)
N	134	134	134	84
Standard Error of Estimate	0.11	0.11		0.10
	Fixed effects	Fixed effects	Random effects	Fixed effects

Robust, country clustered coefficients with panel-adjusted standard errors in parentheses. The dependent variable is the proportion enfranchised. Figure 2 presents the countries and periods included in this table. For descriptive statistics, see Appendix 3.

Average Change in Last Few Elections

In competitive political systems, we might expect the percentage of seats parties held to fluctuate more across elections than in less competitive political systems where one party dominates. Thus, the degree of fluctuation in party strength may in part measure the intensity of party competition, i.e., the greater the instability, the greater the competition. If party competition causes enfranchisement, then we would expect greater instability in party strength in the elections preceding an expansion of the franchise. We operationalize instability in party strength by calculating the change in party strength experienced by each party, measured as the proportion of the entire legislature. We then add these together for the past two elections to produce a total party change score, which we log because of its skewed distribution. The relationship is positive and distinguishable from zero. A move from the minimum to the maximum level of instability corresponds with an enfranchisement of about 13.5 percent. Figure 4 presents the relationship by country. Almost all the countries for which we have more than one case of enfranchisement reveal some evidence of this positive relationship.

These results are consistent with the party competition theory, but they are also consistent with several other possible explanations. For instance, the fact that instability in partisan strength tends to precede expansions of the electorate is also consistent with the hypothesis that wars lead to both instability and enfranchisement.

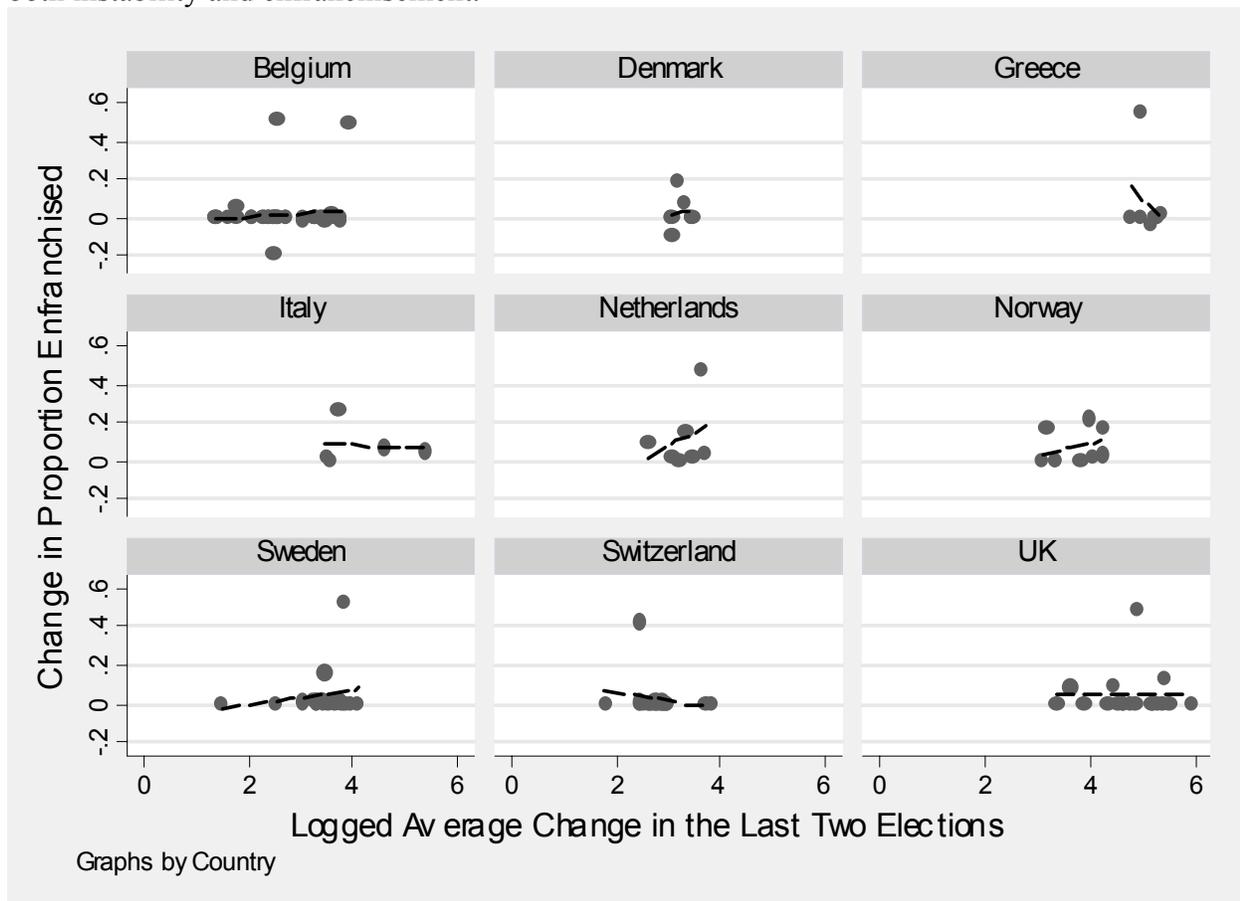


Figure 4: Change in Proportion Enfranchised by Logged Average Change in Party Seats over the Prior Two Elections.

Length of Plurality

A final potential measure of party competition is the length of time a party has held a majority or a plurality. If the majority or plurality party frequently changes, then this may suggest a degree of competitiveness in the political arena of that country. In contrast, if one party maintains a majority or plurality for many elections, then this may indicate a lack of competitiveness. Of course, the length of time a party has held a majority or plurality does not necessarily measure competitiveness. For instance, parties only rule for short periods in Switzerland and Italy, but neither is considered politically competitive in the post WWII era. However, one-party domination versus frequent change may measure in general a lack of competitiveness. If party competition leads to enfranchisements, then we might expect that frequent change and less one party control would correspond with enfranchisements. Therefore, the competitiveness theory of enfranchisement predicts that length of rule should be negatively associated with enfranchisement.

However, the estimated relationship between the number of elections the largest party has retained its status and the expansion of the electorate is always small and positive, and rarely significantly different from zero. As evident in Figure 5, few enfranchisements occur after one party

as held the plurality for many elections. Thus, we conclude that the number of election cycles that the current party has held the plurality does not reliably relate to the expansion of the electorate in our sample.

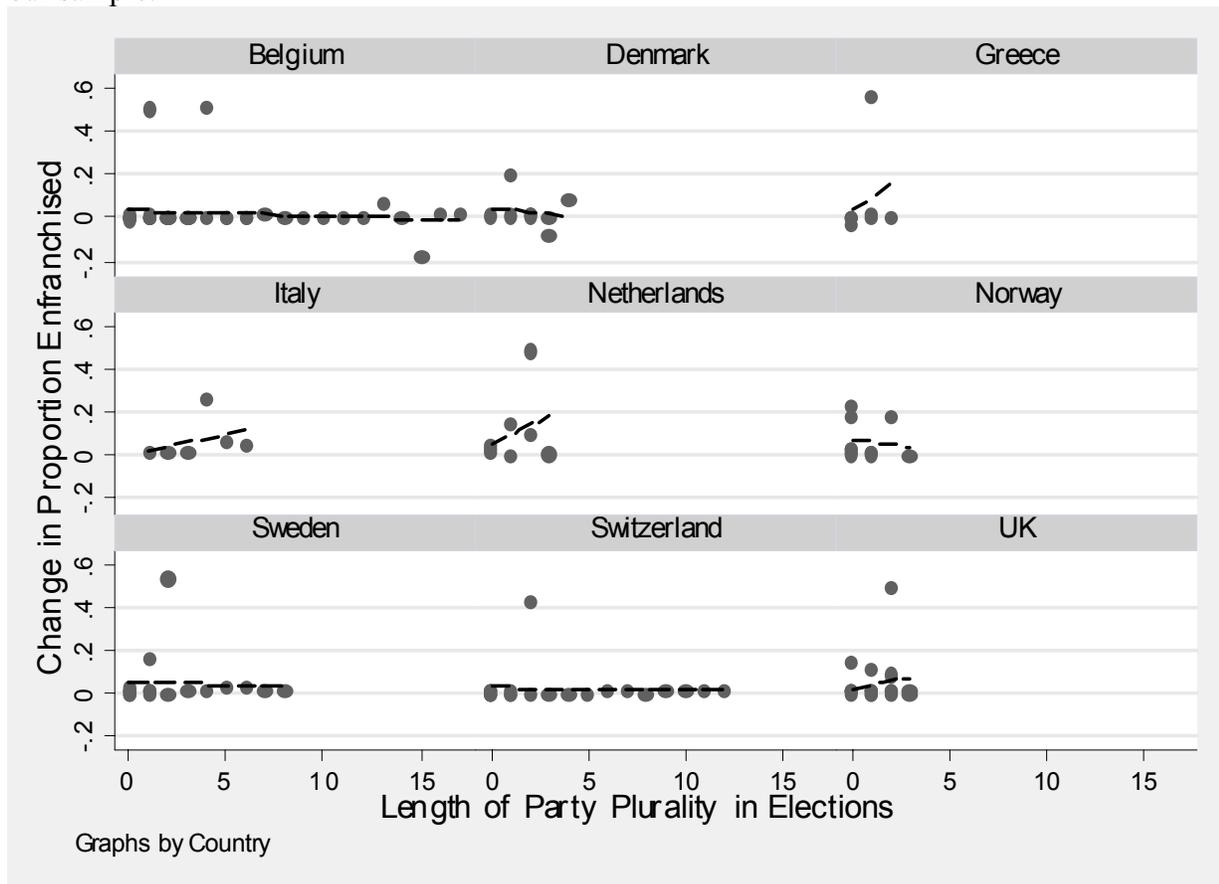


Figure 5: Enfranchisement's and the Number of Elections the Plurality Party Has Remained Largest Party

The results of testing the party competition hypothesis with these four measures of competition are mixed. If the measures of party competition were valid and reliable, we would expect them to correlate. However, they are barely correlated, with a Cronbach's alpha statistic below .3. To better test the competition hypothesis, we need to develop better measures of party competition.

War

We obtained data on interstate war for European countries from the Correlates of War project.³ We created a variable that equals one in elections during or preceded by a war, which occurs in 10 cases in our sample. However, our analysis in Table 1 provides little support for the hypothesized relationship between war and the expansion of the franchise. During or immediately after a war, countries tend to expand their electorates by approximately 7.5 percent, and by about 3.5 percent in periods not preceded by war. However, this difference diminishes with the inclusion of other explanatory variables, with the exception of the model that excludes women's

³ The data set is entitled "Correlates of War Inter-State War Data, 1816-1997." The web site for the Correlates of War project is located at <http://www.umich.edu/~cowproj/>. The web site for the dataset we use is <http://pss.la.psu.edu/ISWarFormat.htm>

enfranchisement. The fact that many European countries enacted suffrage reform after World War I often gives rise to the connection between war and suffrage reform. However, Scandinavian countries and Switzerland remained neutral in this war and yet enacted enfranchisements after its conclusion. This leaves us with only modest support for a causal connection between War and the expansion of the electorate in our sample, which tends to be dominated by neutral countries.

Economic Development

To control for the relationship between economic development and the expansion of the electorate, we collected data on economic development.⁴ We follow Hegre et al's (2001) lead in using energy production, measured in tons of coal, as an indicator of industrial development. Because energy production has a skewed distribution, we use its natural logarithm.

The results provide support for previous claims of a relationship between economic development and the expansion of democracy (see Rueschemeyer et al 1992, 3). Without controls, there is a positive relationship such that for every one-percent increase in energy consumption, countries tend to have 7.5-percent more of their populations eligible to vote. With controls, the relationship only slightly diminishes, suggesting that a one-percent increase in energy consumption raises the percentage of the population eligible to vote by 6.2 percent. We have some reservations about our estimate of economic development because it becomes statistically indistinguishable from zero when the calendar year is included as a control.⁵ We have no theoretical reason to suspect that the calendar year itself would cause the expansion of the electorate. Thus, it is incorrect to include it as an explanatory variable in our model. However, the fact that the relationship between these variables and enfranchisement disappears when controlling for year suggests that their coefficient estimates may be biased upwards by the exclusion of an omitted explanatory variable that is also highly related to year. As we do not know of such a variable, our best estimate is that economic development does effect enfranchisement, but we continue to have some reservations about this inference.

Left Wing Parties

To test the hypothesis that nations expanded their electorates when left wing parties gained influence in government, we constructed a measure of the ideology of the largest party. Based on information provided by Caramani (2000), we coded this variable to zero if the largest party is right wing, .5 if the largest party is centrist, and 1 if the largest party is liberal. This variable does not measure absolute ideological positions, but those indicate the ideological position of the party relative to the other parties in each country. We would prefer a weighted measure of the parties in coalition governments, but we lack the necessary data. If parties with lower class constituencies are more likely to enact enfranchisements, then we should expect a positive relationship between our ideology measure and the proportion of the electorate enfranchised.

The results in Table 1 show mixed support for this hypothesis. Without controls, there is no relationship between the ideology of the largest party and the expansion of the franchise. However, when we control for other relevant explanatory variables, a consistently positive relationship emerges. According to our estimate, having a left wing party rather than a right wing party as the largest party in the legislature increases the expected proportion of the population eligible to vote by

⁴ The Correlates of War 2 web site is <http://cow2.la.psu.edu/>. The particular data set we used was titled "National Material Capabilities, Version 2.1" and located at <http://cow2.la.psu.edu/COW2%20Data/Capabilities/nmcdesc.htm>.

⁵ To a lesser extent, this occurs with the western European average as well.

about six percent. This lends support to the idea that left wing parties played a key role in enfranchisement in Europe.

Western European Average

To some extent, countries probably expanded their electorates because other countries expanded their electorates. The growth of democracy in other countries probably emboldened local reformers and unenfranchised segments of the population to seek the right to vote. The spread of the norm of universal suffrage may have influenced both elites and the mass public by changing expectations about legitimate forms of government. A variable that might best test the social pressure hypothesis would be the average level of enfranchisement across all of Western Europe. We would expect greater pressure to enfranchise as this average increases. We lag the average level of enfranchisement so that it equals the Western European average at the time of the county's last election.

Table 1 shows that there is a relationship between the Western European average proportion of the electorate eligible to vote and the tendency of countries to expand their own electorates. However, the relationship is modest in size. Without controls, a ten percent increase in the average suffrage across Europe is associated with a 3.1 percent increase in a particular county's suffrage rate. With controls, the relationship drops somewhat: a ten percent increase in the European average is associated with about a 1.8 percent increase.⁶ In sum, the overall level of enfranchisement in Western Europe does appear to increase the prospect of future expansions of the electorate, but the size of the effect appears to be moderate.

Change in Margin of Plurality and Majority after Enfranchisements

To support their argument against the competition theory of enfranchisements, Acemoglu and Robinson (2000, 1187) point to cases where ruling parties lost their majorities after enacting enfranchisements. They cite the Conservative party loss in the 1868 British election, immediately after having passed an extension, as did the Liberal party in 1885 after it had enacted an enfranchisement. While these cases may support Acemoglu and Robinson's argument, this section systematically tests whether parties tend to fair better or worse following enfranchisement. The results appear to contradict Acemoglu and Robinson's contention.

If a threat of revolution forces the majority or plurality party to enact electoral reform, then we might expect such a party to fair less well in the following election than they would have fared otherwise. Why? Ruling parties that enfranchise part of the population for strategic advantage would presumably fair well or at least not fair worse than average. However, if a party's hand is forced, it seems more likely that the party will fair poorly among new voters. Thus, the competition theory suggests that parties should benefit from enfranchisements while the popular pressure theory suggests that parties may fair worse than average. Other hypothesized causes of enfranchisement, such as war and economic development, do not have clear implications for the fortunes of major parties after nations enact enfranchisements.

In our data, parties that hold a plurality lose on average 8.7 percent of the total seats in their legislature, e.g. from 60 percent of the total seats to 51.3 percent. In the cases of enfranchisements that eased property or other restrictions on male suffrage, measured with a dummy variable, the regression results suggest that plurality parties fared about 8% (of the total seats) better than in

⁶ As noted above, even this effect is attenuated if one adds the calendar year as a control variable, although it does not disappear, as it does with economic development. However, the attenuation of the effect with the inclusions of the calendar year should be treated with only mild concern for the reasons described above.

elections not preceded by enfranchisements (see Table 2, Columns 1 and 2). Thus, on average, plurality parties experience little to no loss of seats in the election following enfranchisements. This result is robust to changes in specification. The easing of suffrage restrictions coefficient is always positive and of similar size, though it becomes somewhat larger when a dummy variable for women's enfranchisement is included, suggesting that the latter does not exhibit this trend.

These results cast some doubt on the theory that enfranchisements occurred because revolutionary threats force governing parties' hands. However, if we look at individual cases, it is evident that a great deal of variation exists. Among elections that followed enfranchisement, the change in plurality varied from -22 percent (Netherlands 1897) to 14.8 percent (Belgium 1848). This suggests that while enfranchisements benefited parties in many cases, some parties fared terribly. Where parties fared better than average, electoral competition may have driven enfranchisements. Where they fared worse, popular pressure may have primarily caused the extension of suffrage. With this in mind, we attempted to retest the hypothesis explored above separately on those cases where parties fared better than average and on those where they fared worse. Unfortunately, the split sample left us with too few cases on which to draw inferences.

The competition theory may provide a more subtle prediction. If a ruling party enacts enfranchisements to gain a competitive advantage, then we might expect that larger enfranchisements would correspond with greater than average gains. This would result because leading parties may enact larger enfranchisements when they calculate that they will benefit from them. If a ruling party considers that enfranchising a greater percent of the population will be to its benefit, then larger enfranchisements may correspond with above average gains. Thus, the competition theory could predict that larger enfranchisements would tend to cause the leading parties to fair better than average in the following election.

In contrast, the threat of revolution hypothesis might lead to the opposite prediction. If parties are forced to enfranchise, then we would expect that the larger the enfranchisement, the larger the loss.

To test these hypotheses, we regress the change in seats experienced by the plurality or majority party after enfranchisement against the size of each enfranchisement. Columns 3 and 4 of Table 2 present these results. The coefficient for size of enfranchisement, measured with a dummy variable, is positive and statistically significant, suggesting that larger enfranchisements correspond with less loss. It implies that, given a male enfranchisement of an average size, about 13 percent, we would expect the plurality party to fair about 4.5 percent better than average. This coefficient appears less stable than the dummy variable for restrictions, though it is always positive and at least marginally significant, varying in magnitude from about 0.2 to 0.5, and becoming larger when we include the dummy variable for women's suffrage.

To be fair, the threat of revolution hypothesis might predict a similar result. If parties enact electoral reform because of a threat of revolution, they may tend to enact smaller enfranchisements. If smaller enfranchisements are more often forced than are larger enfranchisements, then we might expect smaller enfranchisements to correspond to greater loss. In contrast, if larger enfranchisements result from competition, then these should correspond to less loss in the following election. While the results above are consistent with this idea, we can further test this by restricting the analysis to only those cases where enfranchisements occurred. We find a strong positive relationship between the size of enfranchisement and change in seats experienced by the leading party. Table 2, column 5, presents this result. The coefficient for size of enfranchisements is positive and suggests that an average size enfranchisement other than women's suffrage, about 13 percent of the population, corresponds to a gain of 2.8 percent of the seats by plurality parties following enfranchisements compared to average. Although the coefficient is only marginally significant, this appears to arise primarily because of a lack of degrees of freedom, for dropping any

one of the control variables causes the coefficient to become statistically significant at conventional levels.

In sum, the results of this section support the theory that party competition lies behind enfranchisements in the majority of cases. However, the results are also consistent with the claim that popular pressure may lie behind some enfranchisements.

Table 2: Change in Margin of Plurality or Majority and Enfranchisement

Change in Margin of Plurality or Majority	1	2	3	4	When Enf>0 5
Easing restrictions on male suffrage.	0.0825 (0.0383)	0.0811 (0.0385)			
Size of Enfranchisement			0.3448 (0.0832)	0.3593 (0.1004)	0.2234 (0.1435)
Women's Suffrage	-0.0054 (0.0334)	0.0000 (0.0003)	-0.1116 (0.0425)	-0.1024 (0.0465)	-0.0076 (0.0597)
Year	0.0004 (0.0002)	-0.1200 (0.0447)	0.0004 (0.0002)	-0.0002 (0.0003)	-0.0019 (0.0006)
War	-0.1018 (0.0392)	0.0050 (0.0044)	-0.0846 (0.0268)	-0.1028 (0.0326)	-0.0726 (0.0406)
Length of Plurality (in elections)	0.0052 (0.0033)	-0.3198 (0.0828)	0.0053 (0.0032)	0.0052 (0.0046)	-0.0381 (0.0159)
Margin of Plurality in Previous Election	-0.2846 (0.0989)	-0.0510 (0.0185)	-0.2860 (0.0978)	-0.3195 (0.0834)	-0.2457 (0.0896)
Constant	-0.8510 (0.4506)	0.0607 (0.5488)	-0.7228 (0.4488)	0.3604 (0.5499)	3.6197 (1.0446)
Standard Error of Estimate	.140	.139	.141	.138	.087
Adjusted R ²	.180	.232	.189	.243	.664
N	162	162	162	162	20
		State Effects		State Effects	

Robust Standard Errors with Country Clustering in Parenthesis. This table includes data from some enfranchisements at the beginning of each countries electoral history that are excluded from Table 1 because Table 1 includes variables that requires two prior elections to calculate.

The American States

To see if the patterns we observed in our European data are present elsewhere, we conducted a similar analysis in the American states. We collected data on the percentage of the population eligible to vote by state for each presidential election year and collected comparable measures of all the explanatory variables tested in Europe.⁷

To test the hypotheses about party competition and left wing parties, we gathered data on the partisan composition of state legislatures.⁸ Using this data, we constructed measures of party competition in the American states comparable to those we used in our analysis of Europe. To see if one party was more likely than another to expand the electorate, we included a variable measuring the proportion of the state's lower has affiliated with the Democratic Party. This allows us to use a comparable measure for the entire period under study because the Democratic Party was the left

⁷ We have not included a measure of the Average enfranchisement in Western Europe because enfranchisements in the US largely preceded enfranchisement in other nations.

⁸ ICPSR study No. 16. The data was acquired from the ICPSR website at <http://www.icpsr.umich.edu/>. This dataset begins in 1834. So while our analysis covers years from 1800 to 1921, prior to 1834 the percent Democrat variable is set to zero and we include a missing case dummy variable to indicate years prior to 1834 and any other years where seat data are missing.

leaning party in most states throughout our dataset, while the right leaning party changed for the Whig to the Republican Party.

To measure the effect of wars, we constructed a variable that equals one for states when presidential elections occur during or following declared U.S. wars (international and civil). The wars in the period covered by the data include the Mexican-American War, the American Civil War, The Spanish-American War, and World War I.⁹

Our collection of data on economic development in the American states is more complicated than it was for Europe. We used state per capita income¹⁰ to measure economic development across states. Lee et al (1957) provides state level state per capita income data for 1920, 1900, and 1880. Finally, Easterlin (1960) contains state level data for 1840. We then use this data to approximate the state per capita income for every year back to 1830. Where the state data contains 10, 11, 20, or 40-year gaps, we estimated income for the intervening years using a linear approximation. For example, we estimated each state's per capita income for the years between 1880 and 1900 by assuming each state's per capita income changed in a linear way between those years.¹¹

Data on the percent of the population eligible to vote in each state are from Rusk (2001). He provides the percentage of each state's population that was eligible to vote for each presidential election, except for 1792, for which the state was part of the union. Figure 6 graphs the proportion eligible to vote by year from each state's entry into the union to 1920.

To our surprise, this figure suggests little within state variation in the percent eligible to vote, with the exception of changes that occur during three clearly distinguishable points in time. Many Southern states exhibited a sharp increase in the percentage eligible to vote in the 1860's, which resulted from the adoption fifteenth amendment to the constitution that forbade laws restricting suffrage based on race. About the same time, many northern and Western states experienced a small decrease in the percentage eligible to vote that most likely resulted from new restrictions on immigrants (Keyssar 2000). States also exhibit an even larger increase in the 1910s that corresponds with the adoption of the nineteenth amendment to the constitution that prohibited laws restricting suffrage based on sex. Besides these discontinuities, the data show very little within state variation over time.

This lack of variation seems to contradict many histories of U.S. suffrage. For instance, Keyssar's recent (2000) history of U.S. electoral law gives the clear impression that there is much over-time within state variation in enfranchisement levels. He writes that state electoral laws often change as the result of "contingencies of timing and politics" and there were "numerous occasions on which particular groups lost the political rights that they once possessed" (318). However, despite the fact the Rusk himself presents detailed list of state election law changes, the data shows little of this idiosyncrasy. Figure 6 paints a picture of remarkable stability punctuated by two distinct spurts of change.

⁹ Only those years of World War I when the United States was a declared participant are included as war years in the data.

¹⁰ All per capita income data is measured in inflation adjusted 2002 dollars. Prior to 1830, the percent per capita income is set to zero and we include a missing case dummy variable to indicate years prior to 1830 and any other years where data are missing.

¹¹ This technique does not work for estimating per capita income between 1830 and 1840 because 1840 is the earliest date when state income data is available. To estimate the data for this decade, for each state we calculated a linear trend between the state's per capita income in 1840 and zero per capita income in 1800. We use these linear estimates to approximate per capita income data from 1830 to 1840. This has the effect of preserving the 1840 hierarchy of the states in levels of economic development back through the 1830's and causing those states with the higher incomes in 1840 to have incomes increasing faster in the 1830's than those states with lower incomes.

There are two possible explanations for why our data diverges from Keyssar's historical description. One possibility is that while the states made many changes to their electoral laws, they represent very small changes in the total percentage of the population eligible to vote. In only a few instances did changes in the electoral laws affect large portions of the electorate. A second, more troubling explanation is that the data fails to represent accurately the true consequences of electoral laws. In many cases, such as property restrictions and literacy tests, Rusk (2001) had to estimate the change using imprecise historical data, and he may have underestimated the effects of the frequent suffrage law changes.¹²

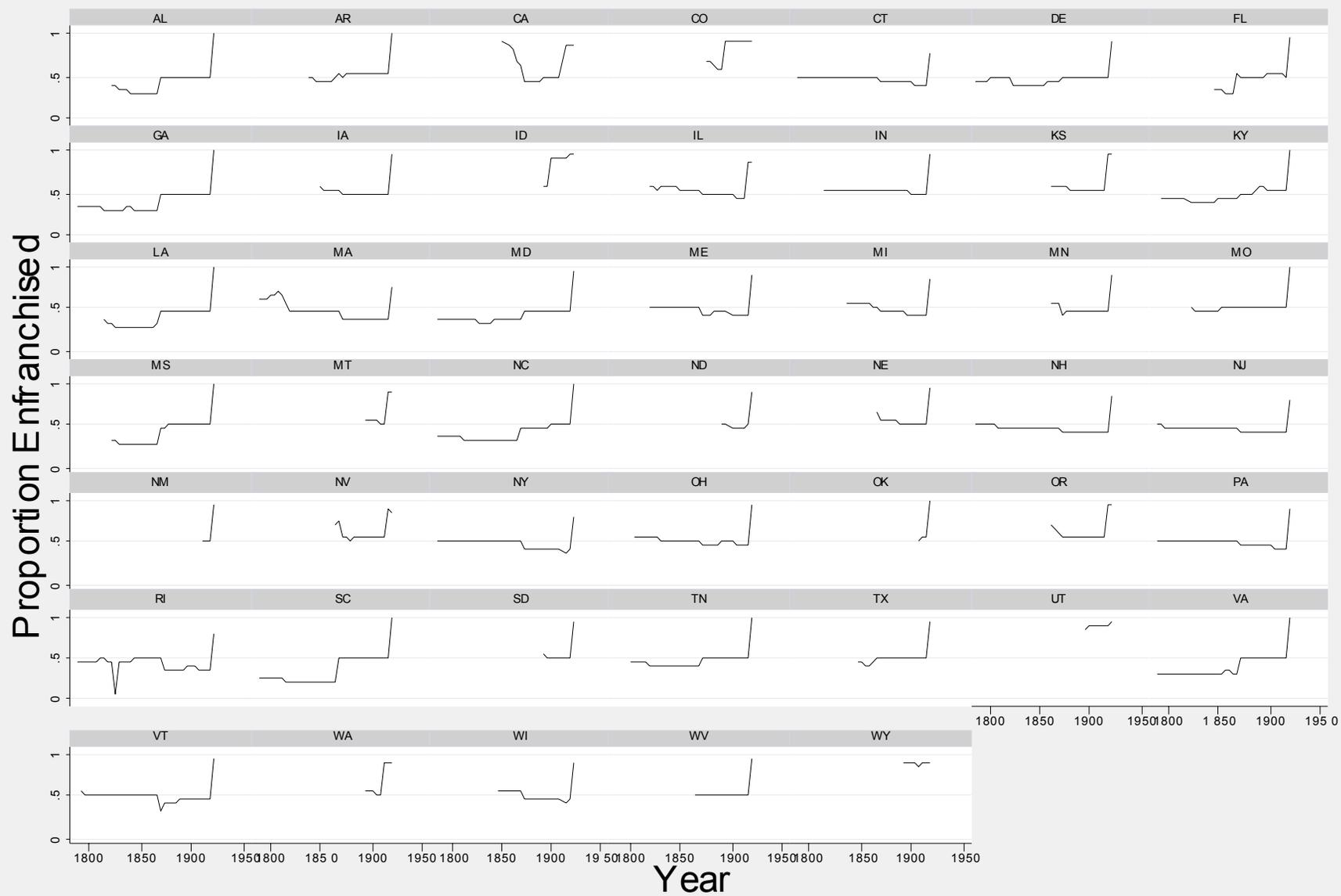
Having noted the lack of variation over time that appears in Figure 6, we tested the hypotheses outlined above on U.S. enfranchisements. Table 3 presents the results of our analysis. However, we present these results with great hesitation. The lack of variation in the data is particularly evident in Column 5 of Table 3. It estimates the effect of our explanatory variables on enfranchisement before the American Civil War. In this period, none of the explanatory variables has an estimated effect on enfranchisement distinguishable from zero because of the lack of variation.

However, if we examine a longer period, some relationships emerge, probably because they correspond with the three discontinuities mentioned above. Columns 1 through 3 estimate the model for all years through women's suffrage, varying slightly the specification. The results are quite robust across these specifications. Controlling for year or estimating with fixed or random effects alters the results in only minimal ways.

In these models, the only party competition variable with an effect distinguishable from zero is party instability. We find a negative relationship between party instability and the expansion of the electorate. This is the opposite of what we would expect if intense party competition led to enfranchisement, and the opposite of that found in the European sample. A likely explanation of this result is evident from Column 5, which suggests that this relationship disappears when we exclude women's suffrage. Western states enfranchised women earlier and have unstable party systems, probably giving rise to this association.

As we would expect based on Figure 6, war does have a strong positive relationship with enfranchisement. Based on Column 1 of Table 3, states tend to expand their electorates by 6.9 percent each election year during or immediately after a war. This seems to reflect the proximity of enfranchisements to the Civil War and World War I. Per capita income is also associated with expanded suffrage. However, when we exclude women's suffrage, the effect of income switches signs, suggesting that economic development corresponds positively with women's suffrage. It relates negatively to other expansions of the electorate, or, more appropriately, relates positively to contractions of the electorate. On a cautionary note, the process by which we estimated income for years with missing data may bias these coefficient estimates.

¹² Our analysis would be easier if Rusk (2001) included a discussion of the accuracy of his estimates of the percentage of the population enfranchised. However while his book includes a chapter titled "The Accuracy and Inaccuracy of Election Data," this chapter focuses exclusively on election return data and the book contains no extended discussion of the accuracy of its voter eligibility data.



Graphs by state

Figure 6: Proportion in Franchise in the American States, 1796-1920

Lastly, the percentage of Democrats in the lower house of the state legislature relates positively to expansion of the electorate, but the size of the relationship is small. If the percentage of Democrats increases by forty percent, the percent enfranchised tends to increase by 1.0 percent according to the fixed effects model and 1.6 percent according to the random effects model. This estimated effect size may result from increasing Democratic strength in states that experience less retrenchment in the post-Civil War period. Keyssar (2000) observed that voting rights were restricted somewhat in all states after the Civil War. Figure 6 supports his claim and suggest that these reversions were less likely to occur after Democrats gained support. This positive relationship between Democratic strength and enfranchisement contradicted our prior understanding of the role of the Democratic Party in the post-Civil War South. However, these data fail to show a drop in eligibility in Southern states in the Post reconstruction period, probably because most restrictions were informal, preventing Rusk (2001) from incorporating them.¹³ In Column 4, we restrict the model to Southern (Confederate) states and find a negative relationship between Democratic strength and voting rights. Surprisingly, this finding matches our expectations despite the known problems with the data.

To check whether these relationships held in the original 13 states before women's suffrage, we estimated the model in Column 6. The only explanatory variable whose effect remains similar when the sample is restricted is the percent Democratic, consistent with our interpretation above.

Table 3: Explaining Changes in the Proportion Enfranchised in the American States

	(1)	(2)	(3)	(4)	(5)	(6)
Lagged Explanatory Variables	All to 1922	All to 1922	All to 1922	South to 1922	All to 1861	Orgnl. 13 to 1910
Proportion Enfranchised	0.824 (0.056)	0.817 (0.058)	0.834 (0.026)	0.896 (0.067)	0.434 (0.068)	0.799 (0.057)
Change in Plurality (prop. Δ in the plurality party's margin)	0.013 (0.018)	0.013 (0.019)	0.005 (0.022)	0.062 (0.021)	0.005 (0.009)	0.010 (0.017)
Total Prop. Seat Δ For All Parties (logged)	-0.031 (0.012)	-0.031 (0.012)	-0.035 (0.012)	-0.010 (0.014)	-0.003 (0.005)	0.007 (0.011)
Length of Plurality (# of elections the party has held plurality)	0.035 (0.033)	0.027 (0.032)	0.043 (0.039)	-0.002 (0.085)	0.006 (0.053)	-0.014 (0.042)
War (0 or 1)	0.069 (0.007)	0.069 (0.007)	0.070 (0.006)	0.078 (0.010)	0.003 (0.003)	0.006 (0.006)
Per Capita Income (logged)	6.643 (0.554)	6.059 (1.072)	5.604 (0.466)	11.238 (1.234)	0.406 (0.443)	-1.251 (0.627)
Loss of Plurality (0 or 1)	0.014 (0.008)	0.014 (0.008)	0.013 (0.007)	-0.002 (0.009)	-0.001 (0.004)	-0.008 (0.006)
Proportion Democrat in Lower House of State Legislature	0.026 (0.015)	0.025 (0.014)	0.041 (0.011)	-0.042 (0.018)	-0.003 (0.007)	0.026 (0.017)
Year		1.863e-4 (2.712e-4)				
Constant	-0.307 (0.084)	-0.613 (0.452)	-0.320 (0.032)	-0.644 (0.070)	0.208 (0.042)	0.146 (0.044)
N	984	984	984	288	372	377
Standard Error of Estimate	0.08	0.08		0.08	0.03	0.04
	State Effects	State Effects	Random Effects	State Effects	State Effects	State Effects

Robust, state clustered coefficients with panel adjusted standard errors in parentheses, except for the random effects column. Missing cases are included by setting them to zero and including dummy variables that indicate missingness (not shown). For descriptive statistics, see Appendix 3.

¹³ For the same reason, the Rusk data also fails to show evidence of suffrage restrictions on African Americans in Southern states in the twentieth century. Because of this limitation, we restrict all out analysis of the American states to years prior to 1921.

Discussion and Conclusion

We have presented findings from two datasets in an attempt to test systematically a series of hypothesized causes of the expansion of the electorate in Western Europe and the United States. While the results fail to support unequivocally any particular explanation as the primary cause of the expansion of voting rights, we do find some notable patterns.

We found some support for the competition theory in the analysis of how the largest parties fared in the election following an enfranchisement. To our surprise, parties with majorities or pluralities fared considerably better than average in elections following enfranchisements. Support for the competition theory also came from the finding in the European data that party instability corresponds with larger enfranchisements. When party strength in the legislature is more volatile, the legislature is more likely to extend suffrage. However, the small effect size, sensitive coefficient and our finding of the opposite relationship in the U.S. renders this support questionable.

While these findings supported the party competition explanation, other findings contradicted it and sometimes provided support for other theories. Plurality or majority parties were more likely to enact enfranchisements when their margin over the second largest party increased. This suggests that parties tend to support enfranchisement when they have just experienced electoral success and their leadership is probably feeling more secure. This finding seems to contradict the party competition explanation that reform tends to come from parties that are experiencing less competitive stress. However, it may also be consistent with the party competition if the increased support by voters results from a mandate for reform.

One of this paper's problems is with the measures of party competition. If the measures of party competition were valid and reliable, we would expect them to correlate. However, they are barely correlated, with a Cronbach's alpha statistic under .3. To properly test the competition hypothesis, we will have to find better measures of party competition.

As one might expect, these results suggest that enfranchisements sometimes resulted from party competition and sometimes other causes, such as party ideology or economic development. The challenge is to predict which process is at work. In future analyses, we intend to investigate whether there are certain conditions under which one is more likely to lead to enfranchisement. As we reported, we have attempted such analysis but have struggled because of the few cases available.

A second consistent result is that party ideology seems to matter. While the effect sizes are often small, the relationship between the ideology of the largest party and the expansion of the electorate is robust and in the expected direction across many specifications in both datasets. In Europe and in American states outside the South, electorates tend to expand more or contract less when left wing parties are dominant in the legislature. In the American South, where the Democratic Party upheld racial oppression, Republican Party strength related positively to enfranchisement.

Third, our results confirm the correlation between capitalist development and democracy noted by many previous researchers. In both the United States and Europe, we generally find positive relationships between the proportion of the population eligible to vote and our measures of economic development.

Finally, we must acknowledge some limitations. This paper would benefit from better data in at least two areas. In the case of Western Europe, our plurality party measure is a crude indicator of party influence. A better measure would take into account party roles in coalition governments. In the case of the United States, Rusk's measure of enfranchisement may underestimate the effects of formal and informal election practices. In generating better European data and evaluating the quality of Rusk's data, more detailed histories of suffrage in individual countries could improve the

analysis. Keyssar provides a valuable reference on the history of voting rights in the United States. We had difficulty finding comparable work on other counties in our sample.

While our results are varied, we hope this paper will be the beginning of more research attempting to test quantitatively various explanations for the expansion of the franchise in the West. We attempted to find relevant theory, but the lack of well-developed theory made it difficult to develop precise tests. Further theoretical refinement with more explicit predictions would greatly aid future research. We have tried to improve on existing literature by operationalizing and quantifying explanatory variables that have been prominent in the literature. Our measures and models are far from perfect, but we hope they offer a first step.

Appendices

Appendix 1: Party Name Problems

While conducting preliminary analysis of our European data, we found that parties appeared to lose a greater percentage of their seats in elections with newly enfranchised voters than in other elections. Although this would have been an interesting finding, further work revealed problems with the coding of party names in the *Elections Almanac* that lead to this finding. We corrected the coding of party names using additional sources that we explain in Appendix 1.

When parties change names, the *Elections Almanac* dataset codes them as different parties. To correct for this problem, we looked for outliers in the variable that measures the percentage of seats the plurality or majority party gained or lost in each election. We then checked each case where a 19% (a low threshold) or greater change occurred. If a plurality or majority party disappeared, we then checked to see whether the *Almanac* listed any new parties in that election. Using the *Encyclopedia Britannica (EB)*, we attempted to learn whether a party did change its name, split, or shut down. Most of the changes in plurality margin appeared to us as legitimate loses. However, a number appeared suspect. Based on this research, we made changes the following changes.

- *Greece*. In the 1956 election, the majority Greek Rally Party vanishes and the National Radical Union Party appears. In 1955, the Prime Minister and leader of the Greek Rally Party died. In his place, the King appointed a man named Karamanlis. A leadership dispute arose with the Greek Rally Party and Karamanlis founded a new party in 1956 called the National Radical Union. It seems likely that the 1956 election was in part a referendum on the incumbent PM, who switched from the Greek Rally Party to his new party. Thus, we think coding these two parties as the same more accurately captures voters thinking about parties.
- *Italy*. Italy did not hold elections between 1921-1946. Thus, we set dependent variables in 1946 to missing.
- *Sweden*. The majority party vanished in 1899. *EB* provided no information so we dropped this case from the analysis.
- *United Kingdom*. According to the *Elections Almanac*, the Liberal Party vanishes in 1918. This results from the Liberal Party's split into two factions. Those allied with the King in the war effort and those against. The Conservative Party did not contest the seats of Liberal Party members who allied themselves with the King. The *Almanac* codes these as two new parties. Since this appears to exaggerate the loss to the liberals associated with enfranchisement, we have coded the larger Lloyd George Liberals as part of the Liberal Party for the years 1918 and 1922.

Appendix 2: Estimates of Percent Eligible to Vote in Europe

To measure the percentage of each country's population eligible to vote, we attempted to establish the percent of the adult population that could vote under the various electoral laws that were in place at some point in each country's history. Unless noted otherwise, Mackie and Rose (1991) provide the data on the size of the electorate, our numerator. Mitchell (1998) provides data on the population by age group and by sex from national census of Western European countries. Although the age categories vary to some extent from country to country and year to year, we could always calculate the number of people 20 years and over in each census. Thus, due to our data source, we defined the adult or voting age population as those over 20 years of age. Because censuses usually occur once every ten years, we estimate the voting age population in non-census years by using a linear trend estimated over the available censuses.

To construct the Western European average enfranchised variable we had to make some assumptions about the sizes of enfranchisement that occurred prior to our data on the electorate. This section summarizes those assumptions. It also briefly summarizes the timing and nature of each enfranchisement during this period. In constructing the Western European average, we used countries and data that we excluded from the analysis in Table 1 because we were missing data on the explanatory variables for these cases.

Austria. Before 1873, the region that came to be known as Austria appeared to have no suffrage. In 1873, it introduced a limited and unequal male franchise. Lacking data on the size of the electorate, we guess that this enfranchised about 20 percent of the voting age population. In 1897, Austria introduced a still unequal but universal male suffrage for those twenty-four years or older. We estimated the franchise in this period as 45 percent. In 1907, equal suffrage for males was introduced. In 1919, Austria introduced universal suffrage for males and females. Our first data point on the electorate is for 1919.

Belgium. Belgium introduced restricted unequal suffrage in 1831. Our data series begins in 1847 when the government slightly relaxed property restrictions. Using the 1846 census and a linear trend to estimate the voting population in 1848, we estimate that these reforms enfranchised 3.1 percent of the voting age population. In 1894, Belgium eliminated property restrictions, though it maintained some unequal voting rules. In 1948, Belgium enfranchised women.

Denmark. Denmark introduced restricted and limited enfranchisement in 1849. It then eliminated some restrictions in 1855. Our data series on the electorate begins with the election of 1901. Although the government introduced secret balloting then, it introduced no other changes from 1855 to 1918. Thus, using the census and electorate data in 1901, we can estimate the enfranchisement between 1855 and 1918. In 1901, we estimate that 29.3 percent of the population could vote and we use this figure for 1855 to 1918. In the prior period, 1849-1855, we somewhat arbitrarily set the percentage at twenty.

Finland. Finland maintained a restricted and unequal male suffrage from 1809-1906. We somewhat arbitrarily estimate the percent enfranchised during this period at about 10 percent. In 1907, Finland introduced universal and equal suffrage for those 24 years and older. Based on electoral data from that year and an estimate of the voting age population from a linear trend between the 1910 and 1921 census, we put the percentage enfranchised in 1907 at 78. As above, the percentage probably increased as the government granted suffrage to lower and lower age groups.

France. We excluded France from our sample because we lack's seats data prior to any of its enfranchisement. Unfortunately, we have limited data on early enfranchisement in France. From 1815 to 1830, France had a limited and unequal male suffrage that we estimate at 25 percent. From 1931 to 1847, the government expanded suffrage somewhat by lowering property taxes, we estimate the percent enfranchised at 30. From 1847 to 1944, France maintained universal and equal male

suffrage for those 21 years and older. In 1945, the government enfranchised women. In this period, we estimate the percent enfranchised at 90.

Germany. We excluded Germany from our sample because the federal German government lacked control over the percentage enfranchised in this period. Future analysis could expand this analysis to the regional level. Germany restricted male suffrage from 1849 to 1919. Based on 1870s data on electorate and voting age population, we estimate that the percent enfranchised was 20 percent between 1848 and 1919. Germany introduced universal male and female suffrage in 1919.

Greece. Greece introduced universal male suffrage in 1822, though elections remained indirect. Our data series begins in 1926, where, based on electorate and census data, we estimate the percentage enfranchised as 45. We thus use this estimate from 1822 to women's suffrage in 1956.

Italy. Italy enacted an equal but restricted suffrage in 1848. In 1859, the government eased some restrictions on education levels. In 1882, Italy again eased restrictions. Our data series begins in 1895 and since the laws remained unchanged between 1882 and 1913, we can estimate the percent enfranchised as 12 percent based on the 1895 election data. Since the 1848 to 1892 period most likely lies between 0 and 12 percent, we set it at 5 percent. In 1913, Italy introduced universal suffrage for men (30 and over in most cases).

Netherlands. From 1815 to 1849, citizens of the Netherlands could vote only for City Councils. The Netherlands introduced equal and secret but restricted suffrage for men. The government eased these restrictions slightly in 1888, when our data starts. Based on 1889 census data, we estimate that about 12 percent of the population could vote in 1888. This puts a limit on the earlier more limited enfranchisements, which we set at six percent. In 1897, the government further eased restrictions. In 1918, the Netherlands introduced universal male enfranchisement. Three years later, women's suffrage came about.

Norway. In 1815, Norway introduced limited suffrage to men 25 years old and over. Our data set begins in 1882 three years before the electoral reform of 1885 that eased restrictions. Because the laws remained unchanged between 1815 and 1885, we can estimate the percentage enfranchised based on the 1882 election data and an estimate of the voting population based on a linear trend. We estimate the suffrage during this period at 9.5 percent. In 1900, Norway introduced universal suffrage for men. In 1913, Norway introduced universal enfranchisement.

Sweden. Between 1810 and 1855, Sweden had a highly restrictive, unequal and mostly indirect electoral system. In 1856, the ruling powers expanded the electorate to a limited extent. In 1866, Sweden enacted equal but restricted suffrage for men 25 years of age or older, a system that persisted until 1909. The data series for Sweden begins in 1887 so we can estimate the percent enfranchised for this period. Using electorate and census data from 1890, we estimate that about 10 percent of the population could vote between 1866 and 1909. This most likely sets an upper limit on the percent enfranchised before 1866. Thus, we somewhat arbitrarily guess that five percent could vote between 1856 and 1866, and 2 percent between 1810 and 1856. In 1909, the government introduced universal male suffrage through direct elections but continued to condition it on the payment of taxes owed and military service. In 1921, Sweden introduced women's suffrage, and further eased restrictions by eliminating poverty and bankruptcy restrictions in 1944.

Switzerland. In 1848, Switzerland introduced universal and equal male suffrage for those 20 years and older. With data beginning in 1896, we estimate that about 37 percent of the population could vote during this period. In 1971, women finally gained the right to vote.

United Kingdom. In 1429, the UK first introduced a highly restricted suffrage. In 1832, this suffrage expanded slightly because of less restrictive property requirements. We estimate based on 1832 data that about 2 percent of the voting age population could vote from 1832 until 1864. Reforms of 1871 further enlarged the electorate, as did reforms in 1885. In 1918, the UK introduced

universal suffrage at age 21 for men and 30 for women. In 1928, the government lowered the age requirement for women to 21.

Appendix 3

Table 4: Descriptive Statistics for Europe

	Mean	Std. Dev.	Min	Max
Proportion Enfranchised	0.303366	0.225804	0.02	0.924291
Change in Plurality (prop. Δ in the plurality party's margin)	-0.01566	0.080241	-0.33392	0.381473
Total Proportion Party Seat Change (last 2 elections)	3.412081	0.984869	1.386294	5.920237
Length of Plurality (# of elections the party has held plurality)	2.917293	3.761941	0	17
Western Average Proportion Enfranchised	0.400338	0.215194	0.077	0.826
War	0.075188	0.264691	0	1
Energy Consumption	9.156791	1.272833	6.418365	12.12825
Ideology	0.454887	0.410371	0	1
Year	1906.929	28.29687	1841	1971

Table 5: Descriptive Statistics for the American States

	Mean	Std. Dev.	Min	Max
Proportion Enfranchised	0.472131	0.113645	0.043	0.962
Change in Plurality (prop. Δ in the plurality party's margin)	-0.01028	0.13038	-0.905	0.434
Total Prop. Seat Δ For All Parties (logged)	0.206689	0.255058	0	1.9185
Length of Plurality (# of elections the party has held plurality)	0.05561	0.085549	0	0.61
War (0 or 1)	0.253049	0.43498	0	1
Per Capita Income (logged)	0.377725	0.312481	0	1
Loss of Plurality (0 or 1)	0.05691	0.027622	0	0.087502
Proportion Democrat in Lower House of State Legislature	0.003455	0.004758	0	0.01
Year	1870.935	34.50053	1796	1920

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