

Endogenous Institutions: The Origins of Compulsory Voting Laws*

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ABSTRACT

Between 1862 and 1998, 18 democracies adopted compulsory voting laws, the majority in Western Europe and Latin America. Although there is a broad literature on the effects of compulsory voting on voter turnout, far less is known about when and why compulsory voting has been adopted. Using an original cross-national dataset on compulsory voting laws, we find evidence that strategic considerations – whether governing parties believe they will benefit or be harmed electorally under compulsory voting rules – shape the decisions to adopt such laws. More generally, our paper aims to contribute to the emerging literature on the adoption of electoral systems by examining the degree to which electoral institutions are the result of party strategy and, thus, are endogenous to party competition.

The perennial question posed by electoral reforms is why incumbents who win under one set of rules, adopt another. Consider compulsory voting (CV) laws, which legally obligate citizens to go to the polls and cast their votes. Such laws exist in roughly a quarter of all democracies around the world today, ranging from Western Europe and Australia to Latin America and Asia (Birch 2009). Scholars have established that CV increases voter turnout (Powell 1986; Jackman 1987; Jackman and Miller 1995; Franklin 1999; Kato 2007; 2008; Birch 2009; but also see Crepaz 1990; Norris 2002) and affirmed that obligatory voting rules generally lower the costs to parties for mobilizing their constituents (Franklin 1999; Lijphart 1997; Birch 2009). Informed by these findings, debates among scholars and policy makers alike continue to rage over the effects of CV on political knowledge, partisan identification, and democratic legitimacy (cf. Birch 2009).

Yet, to date, systematic explanations of the origins of CV – why, when and which parties have embraced CV laws – remain in short supply. This article aims to fill that gap by building on the common view that parties choose electoral rules to maximize votes (cf. Benoit 2004). Our core idea is straightforward: parties compare the likelihood of their own voters versus their competitors' supporters turning out under two possible states of the world: the status quo, in which voting is optional, and compulsory voting, in which voting is mandatory. Parties have little interest in making voting compulsory if they believe that their opponent's supporters are less likely than their own supporters to turn out under the status quo. Conversely, parties that fear that their own voters are more likely than their opponents' to abstain under the status quo are more likely to push for CV.

In making this argument, we offer a theory that effectively unites the known consequences of CV – increased voter turnout and reduced costs of mobilization – with the causes of CV. From an historical perspective, our approach helps to reconcile one of the great puzzles of 20th century political history: why conservatives tended to champion the adoption of CV, whereas today most contemporary supporters of CV are on the Left. As we show below, our account is consistent with case studies from Western Europe and Latin America (e.g. McAllister 1986; Devoto and DiTella 1997; Malkopoulou 2007; Pilet 2007),

while providing an overarching general logic of the adoption of CV that is borne out across time and space.

Our paper dovetails with the recent turn in political science to understand the origins of electoral institutions from a strategic perspective (see Benoit 2004). Whereas most of this literature has concentrated almost exclusively on explaining the shift from majoritarianism to PR (see Rokkan 1970; Boix 1999; Grofman and Lijphart 2003; Andrews and Jackman 2005; Cusack, Iversen, and Soskice 2007; Calvo 2009), we contend that a similar vote maximization logic in the context of electoral flux applies to compulsory voting laws. In the conclusion, we note preliminary evidence showing that, at least in the short run, CV adopters were not "strategic fools;" that is, incumbents that adopted compulsory voting laws tended to benefit from them. In addition, we use our theoretical framework to begin to address the related question of why compulsory voting laws have subsequently been overturned.

In the next section, we present out our theory of the strategic origins of compulsory voting and use it to derive several testable hypotheses. We then present a series of alternative hypotheses drawn from various strands in the literature. The second part of the paper turns to empirics. We evaluate our approach against others using an original cross-national dataset on voting rules, which we constructed. Unlike other studies, which tend to draw inferences about the sources of CV by looking only at countries with CV, our research design builds in variation on the dependent variable by also considering countries without CV. Descriptive and multivariate analyses provide support for our strategic account: parties adopt CV when they are faced with an electoral threat, but only when they can reasonably expect CV to do more to mobilize their own voters than their opponents. Taken together, our analysis provides a compelling and original account of the conditions leading parties to turn to compulsory voting laws.

A Strategic Account of Compulsory Voting

In this section, we flesh out our strategic account of compulsory voting by focusing on politicians' calculations about the distributional consequences of CV. We begin by establishing the core logic of our approach and provide the groundwork for testing our theory. In extending the strategic

approach to the adoption of compulsory voting laws, we follow Boix's (1999) lead and develop our argument in three sequential stages: (1) the consequences of CV, (2) the strategic calculations of politicians, and (3) exogenous changes to the political environment.

Consequences of CV

Like any institution, compulsory voting laws have multiple, and sometimes disputed, consequences. In addition to being linked to a higher incidence of spoiled ballots, CV has been associated with (1) allegedly higher quality political campaigns (Lijphart 1997); and (2) higher levels of party identification (Mackerras and McAllister 1996).¹ Other reported consequences include reducing the socio-economic bias in voter turnout (Lijphart 1997), producing social democratic-leaning policies (McAllister and Mughan 1986; Nagel 1988; Pacek and Radcliff 1995 all cited in Jackman 2001, although also see Norris 2004), pulling politicians toward the median voter (Kato 2007) and – in line with the argument developed below– minimizing parties' mobilizational efforts with regard to their voters (McAllister 1986).

Of course, the clearest consequence of compulsory voting laws is that they increase voter turnout. Numerous studies of advanced industrial democracies estimate that CV increases turnout from seven to sixteen percentage points (Powell 1986; Jackman 1987; Jackman and Miller 1995; Lijphart 1997 cited in Jackman 2001). Studies on Latin America similarly find that CV boosts turnout between eleven and seventeen percentage points (Fornos et al. 2004).

The mechanism by which CV increases turnout is straightforward. Compulsory voting laws make abstention costly to individual voters. Depending on the particular sanctions leveled, compulsory

¹ Some scholars have also identified arbitrary voting, or “donkey balloting,” as a consequence of compulsory voting (Mackerras 1970; Kelley and McAllister 1984). However, more recent analyses of voting in Belgium and Australia suggest that this potential effect of CV is relatively minor (Selb and Lachat 2007 cited in Birch 2009: 111; King and Leigh 2006 cited in Birch 2009: 111).

voting effectively overcomes the so-called “paradox of voting” identified by Downs (1957) and others (see Riker and Ordeshook 1968; Ferejohn and Fiorina 1974). Drawing on Kato (2007), the conditions under which an individual’s utility from turning out is greater than abstaining can be described as follows:

$$pB + D - C > -S$$

where p is the probability that the voter decides the election and thus receives her electoral benefit, B ; D is the so-called “Duty Term” or benefit independent of the outcome that the voter receives from the act of voting; C is the cost to the individual voter of voting, and S is the sanction for abstention. As long as the benefits of voting (pB and D) minus the costs of voting (C) outweigh the sanctions imposed for abstaining (S), eligible citizens will turn out. Of course, if the benefits of voting are either infinitesimally small, as is the case with pB , or they are often considered dubious, as is the case with the D term, then the decision essentially boils down to the relationship between S and C . Given that CV rules not only raise the cost of abstention but also tend to lower the costs of voting (e.g., elections are not held during the work week, registration is simplified, etc.), it is easy to see why compulsory voting makes an important difference in a voter’s calculus. Thus, the first building block of our account is that CV changes the costs associated with voting, thereby altering mass electoral behavior by increasing voter participation.

Strategic Calculations

The second building block of our account begins with the common assumption that institutions have distributional effects (Knight 1992; Tsebelis 1990; Benoit 2004). Here, this assumption is supported by the fact that, under a regime of voluntary voting, *which* members of the electorate abstain is not purely random, but rather is a function of class, social status, location, education, etc. (Lijphart 1997).

To the extent that different parties appeal to different groups of voters, parties will derive different benefits from introducing compulsory voting. Parties representing voters that tend to abstain under voluntary voting will stand to gain more than parties whose voters already turn out. Thus, assuming that parties seek to maximize votes, a party will favor compulsory voting over the voluntary voting status quo as long as the anticipated boost in turnout is expected to accrue more to its own

candidates than to the opposition's candidates. Specifically, a party's decision to support CV hinges on whether a party simultaneously believes that (1) some sizeable portion of its natural base of voters is abstaining under the status quo, and (2) the opposition's natural base is either not abstaining under the status quo or, if the opposition's base is abstaining, it is not as large as the party's own base.

While this account suggests that any party may prefer compulsory voting to voluntary voting, CV will only be adopted if that party also has the capacity to change the rules of the game. In other words, the *governing party* must come to believe that its own natural base of support is increasingly under-mobilized relative to the opposition's in order for it to implement CV. The more incumbents fear that they are losing the ability to get their own voters to the polls, the more appealing an antidote compulsory voting will be. In essence, the decision to adopt CV is based on the incumbent's wager that abstaining voters are the equivalent of untapped supporters.

The Electoral Environment

Changing the electoral rules is not a risk-free proposition, however. Governing parties are unlikely to eliminate or even modify the rules that helped to get them elected; the rarity of changes to electoral systems is evidence of this (Boix 1999; Lijphart 1999). A change to the current electoral rules is primarily considered when there is a significant electoral threat to an incumbent's maintaining power under the status quo rules. With regard to our specific electoral rule, therefore, we posit that a governing party with a relatively under-mobilized electorate will find compulsory voting an attractive option particularly when it is facing a growing threat from the opposition.

For example, in the late 19th and early to mid 20th century in Western Europe and Latin America, the Right faced precisely this combination of conditions. The expansion of suffrage dramatically shifted the size and composition of the voting population. At the same time, industrialization swelled the ranks of the working class and created new political identities (Przeworski and Sprague 1986; Collier and Collier 1991; Collier 1999). As several scholars note, the political incorporation of workers and the emergence of Socialist parties profoundly changed the calculus of incumbent elites (e.g. on Western

Europe see Boix 1999; on Latin America see Collier and Collier 1991; also see Acemoglu and Robinson 2005). During this period, the Left's organizational ability to mobilize – and, in particular, turn out – its potential voters was increasingly perceived as being unmatched by other parties (Przeworski and Sprague 1986).

Qualitative accounts of the period suggest that incumbents indeed feared the growing electoral support and organizational heft of the Left and that this led them to consider CV. For example, Pilet (2007) writes of late 19th century Belgium that the introduction of suffrage gave rise to the concern that only Leftist extremists would show up at the polls. Pilet reports that these fears were a central motivation behind the adoption of CV:

Conservatives were worried that most moderate voters will not turn out and vote while the most radical ones will be more mobilised and will actually vote. The consequence would be a relative rise of radical parties, and in particular of the POB [workers' party]. Their concern was that 'the most conservative persons, in a broad sense, will abstain; they are brave persons, indifferent, or shy. They don't realize that by not voting they open the way to radicals, excessive and violent citizens who don't have to be pushed to vote' (Dupriez 1901:119 cited in Pilet 2007: 4).

That a similar concern was driving a proposal for CV is reflected in the comments of an Argentine deputy prior to the adoption of compulsory voting as part of the Saenz-Peña reforms of 1912. According to the deputy, CV was aimed at mobilizing the “rich and content” and was viewed by the incumbent conservative PAN as a stabilizing factor to counter an otherwise dangerous mass who might be tempted by passion over reason (cited in Devoto and DiTella 1997).

Likewise, in debates leading up to the adoption of compulsory voting in Greece, references to offsetting the influence of the Socialists figure prominently. Malkopoulou (2007: 5-6) writes,

The main argument of the proponents of compulsory voting pointed at its inclusiveness. For, a measure like that would encourage to the polls, all social strata, *especially the wealthy members of the upper bourgeoisie*. In the committee's own words, it would contribute 'to countering the wide, unfortunately observed especially among the developed classes, inexcusable neglect, through which they wrong the polity and themselves.' These bourgeoisie voters were usually holders of moderate or flexible political opinions and could in any case *be expected to create an obstacle or minimum balance to more radical voting preferences*" [emphasis added].

Generalizing from these examples, we argue that the origins of compulsory voting thus depend on whether incumbents face a growing threat from the opposition, and whether they believe that the best

response to the threat lies in overcoming their own supporters' abstention. Simply put, compulsory voting becomes an appealing option for incumbents facing an electoral challenge, but only as long as incumbents also have a large natural constituency for CV to mobilize. Based on this logic, the likelihood of adopting compulsory voting laws therefore depends jointly on the electoral strength of the opposition and the size of the incumbent's natural constituency. Conversely, in the absence of a sizeable natural constituency, compulsory voting carries far more risk than reward. That is, unless incumbents have reason to suppose that it is their own voters who are under-mobilized, CV potentially delivers even more votes to the opposition.

Our two core hypotheses can be stated as follows:

H1: The likelihood of CV adoption *increases* as the electoral strength of the opposition increases, but only if the size of the incumbent's natural constituency is large.

H2: CV is less likely to be adopted if the electoral strength of the opposition increases, and the size of the incumbent's natural constituency is small.

Whereas our foregoing argument implies that the incumbent's response to the electoral threat is conditional on the size of their natural constituency, it is certainly plausible that the size of the incumbent's natural constituency has an independent positive effect on the likelihood of adopting compulsory voting. Consistent with our broader view of CV as a mobilization strategy, perhaps incumbents with large natural constituencies would benefit from adopting compulsory voting regardless of an electoral threat. In other words, compulsory voting might simply serve as an efficient and inexpensive means of boosting turnout, thus adding to an incumbent's margin of victory. Of course, in the absence of an electoral threat, it may also be that any remaining uncertainty about the size of one's natural constituency overwhelms the potential rewards. Indeed, this latter interpretation is certainly consistent with the global fact that CV adoption is relatively rare. We adjudicate these questions empirically with our third testable hypothesis, which we state as follows:

H3: The larger the size of the natural constituency of the incumbent party, the more likely it is to adopt CV.

Alternative Hypotheses

Whereas we have argued that the adoption of CV is a strategic decision made by a party seeking to increase its electoral strength, other plausible explanations have been advanced in the literature. Such accounts are primarily inductive, based solely on inferences from countries that have adopted CV. Moreover, to our knowledge, they have not been systematically tested, either at all or across cases and non-cases of CV adoption. The first of these explanations suggests that CV is adopted simply as a means to increase the public's political participation (e.g., Lijphart 1997). This hypothesis invokes the normative argument that citizen involvement is critical to the functioning of a democracy and, therefore, is valued by parties as an end in and of itself.² Although parties pushing for CV adoption often couch their motivation precisely in these terms, the question remains whether low turnout is a sufficient trigger for CV adoption. In other words, if governing parties are motivated primarily by the belief that full turnout is a desirable outcome for ensuring the health of a democracy, the following hypothesis should hold:

H4: CV is more likely to be adopted when turnout in the previous election is low.

A different set of alternative hypotheses relates the likelihood of adopting CV to a country's cultural and historical background. Based on the idea that participation may be seen as a "moral obligation," Massicotte et al. (2004: 37) suggest a relationship between a country's degree of Catholicism and the adoption of CV. Perhaps because of this association, they (2004: 38) also draw a connection between having a Spanish, as opposed to a British, colonial heritage and CV. This suggests the following two additional hypotheses:

H5: CV is more likely to be adopted by Catholic countries.

H6: CV is more likely to be adopted by countries with a Spanish colonial heritage than a British colonial heritage.

² This hypothesis could also be applicable to non-democratic countries. In these cases, the concern would not be the health of the democracy, but rather the signaling of the legitimacy of the regime (Norris 2004: 168).

A third possible factor links the adoption of CV is a country's population size. Giraud (1931) suggests that it is easier to implement and enforce compulsory voting laws in smaller countries. In contrast, Birch (2007: 21) finds evidence in support of a positive relationship between population size and CV adoption; she observes that the majority of the countries with CV have current populations greater than that of the median state.³ Although the logic underlying both correlations remains to be better specified, this yields two additional hypotheses:

H7a: CV is more likely to be adopted in countries with small population sizes.

H7b: CV is more likely to be adopted in countries with large population sizes.

Data and Case Selection

The focus of this paper is on systematically explaining variation in the adoption of compulsory voting laws by democratic states.⁴ Today, compulsory voting exists in twenty-eight countries around the world, more than half of which were competitive electoral democracies at the time of CV adoption. Consistent with our view of CV as an electoral strategy pursued by governing parties under democratic rule, we concentrate on this latter set of democracies.⁵ Our dependent variable is the adoption (or not) of

³ Birch compares countries with CV to countries without CV using population data from 2005.

⁴ Compulsory voting has a long history, which pre-dates the modern democratic era. According to Birch (2009), obligatory voting first appeared in medieval Swiss cantons, where citizens were required to show up to Assembly Meetings wearing swords, lest they be excluded from free communal dinners. Several of the North American colonies during the 17th century likewise implemented versions of compulsory voting enforced through fines, before jettisoning it following independence. Prior to the adoption of CV by European states, CV was also implemented by numerous German principalities and Austro-Hungarian provinces.

⁵ Following Przeworski et al. (2000), we employ a minimalist definition of democracy focusing on electoral competition. With Przeworski et al.'s (2000) data unavailable before 1950, we used the *xrcomp* variable from the Polity Dataset. Democracies were identified as those regimes in which either the incumbent executive is chosen by competitive election (coded 3 for the *xrcomp* variable) or there are dual executives (one of which is chosen by

compulsory voting laws by democratically elected governments,⁶ where compulsory voting laws are defined as laws that require registered voters to cast a vote in a national election.⁷ We recognize that not all countries enforce these laws to the same degree (Payne, et al. 2003 cited in Fornos et al. 2004; Gratchew 2004; Birch 2009). However, given our theoretical focus, we are interested simply in explaining whether or not democratically elected governments choose to adopt CV, not the subsequent redefining of the laws surrounding CV's enforcement.

Table 1 lists alphabetically the democratic countries that adopted CV between 1862 and 1998.⁸ Note that ten of these countries implemented CV before or during the interwar period, five did so between 1948 and 1970, and an additional three adopted the laws in the last thirty years of the century. Western European countries were more likely to adopt the laws earlier in the century (or in the previous century, competitive election) or the regime is undergoing a transition from selection to competitive elections (coded 2 for the *xrcomp* variable) (Marshall and Jagers 2004). These codings were verified against other sources, including Boix (2003) and Collier and Collier (1991).

⁶ We thus exclude from our sample countries that adopted CV, but were not democratic at the time of CV adoption: Bolivia 1924, Brazil 1932, Chile 1925, Dominican Republic 1966, Ecuador 1929, Egypt 1956, El Salvador 1950, Gabon 1961, Guatemala 1965, Honduras 1894, Laos 1989, Mexico 1917, Nicaragua 1893, Panama 1928, Paraguay 1967, Philippines 1972, Uruguay 1924.

⁷ In most countries, there are exemptions to CV laws for particular sets of voters (e.g., citizens living in a foreign country; elderly citizens; citizens who are mentally incapacitated; prisoners). That said, there is a qualitative difference between a government mandating voting for (most) citizens, and one not. Moreover, some of the groups of people exempt from voting under CV are also not eligible to vote in countries with voluntary voting schemes.

⁸ Compulsory voting laws were adopted (and many subsequently repealed) by particular cantons in Switzerland and regions in Austria, but voting was never made mandatory throughout the entire territory. Given the focus of this study on country units of analysis, we have not included these cantons as CV cases in the dataset. We have also excluded Switzerland and Austria from possible selection as non-cases during the years in which at least one canton or region maintained CV laws. The results of the analyses presented in this paper are robust, however, to the inclusion and exclusion of these countries as non-cases.

as the cases of Liechtenstein and Belgium indicate) than countries in Latin America. Similarly, older developed democracies were more likely than developing countries to adopt CV earlier in the 20th century – a pattern that is also consistent with, but not identical to, the geographic pattern of adoption. Our contention, which we test below, is that these patterns are the result of a particular confluence of the strategic conditions outlined above.

[TABLE 1 about here]

To deal with the problem of analyzing rare events, we assembled a cross-national dataset that includes all of the cases of CV adoption along with a random sample of non-cases.⁹ This provides an efficient and appropriate technique for capturing both instances and non-instances of CV adoption, thereby avoiding the problems of inferring causal relationships about the origins of these institutions based solely on countries with CV laws. Our dataset contains a total of 69 observations – all 18 country-years in which CV was adopted and an additional 51 country-years (or approximately triple of the number of CV cases) in which it was not. The non-CV observations were selected following the case-control random sampling technique recommended by King and Zeng (2001a; 2001c) for rare events. Specifically, the sample of randomly drawn non-cases was chosen from the universe of country-years in democratic countries from 1900 to 2004, the period during which approximately 90% of democracies with CV adopted those laws (obviously excluding from the possible universe of cases countries in which CV had already been adopted).¹⁰ Paired with the appropriate statistical corrections (described below),

⁹ As noted by King and Zeng (2001a, 2001c), datasets that include all possible non-cases, as is common in the international relations literature, are both unwieldy and wholly unnecessary. They argue that “the marginal contribution of the explanatory variables’ information content for each additional zero starts to drop as the number of zeros passes the number of ones.” (2001c: 137). By adding almost triple the number of non-case observations, we exceed their baseline requirement, while still maintaining a substantively meaningful and useful dataset.

¹⁰ For instance, in Australia, the universe of non-cases includes all country-years between 1901, when the Commonwealth of Australia began, and 1923, the year prior to CV adoption. Since 1924, voting has been obligatory and thus Australia is excluded as a possible non-case.

randomly drawing non-cases from the appropriate universe of all democracies is consistent with recommended best practices for analyzing rare events, allowing the researcher to gather data on observations efficiently while avoiding selection bias.¹¹

Explanatory Variables for the Strategic Account

Strategic accounts require establishing what actors' beliefs and expectations are at the time at which choices are made. According to our theory, incumbents must be sufficiently convinced that they face a growing threat from the opposition and that it is compounded by their relative inability to bring their own voters to the polls. While establishing beliefs is always a challenge, we posit that changes in electoral support across previous elections would have served as an important cue to incumbents about the strength of the opposition and their potential for coming to power. An opposition party that managed to increase its vote totals from election to election would have been perceived as a much greater threat than one that was stagnating or in decline. Therefore, we examined change in the opposition's support from one election to the next.

To create a variable that captures the electoral strength of the opposition, we focus on the aggregate change in opposition party or parties' support in the two elections prior to the adoption of CV (or the year of the non-case observation), where $\Delta\textit{Opposition_Support}$ is defined as the percentage point change in the vote share of the opposition presidential candidates in presidential systems or in the seat share of opposition parties in parliamentary systems between those two elections. Here we treat the opposition as follows: for Left incumbents, we look at changes in support for parties on the Right; and for

¹¹ Because we lack easily available information for all of the relevant independent variables described below for all democratic country-years between 1900-2004, matching is not an appropriate technique for choosing non-cases. Simply put, matching is useful for pruning existing datasets, not constructing them *sui generis* (personal correspondence with Gary King; also see Ho et al. 2007).

Right incumbents, we look at changes in support for parties on the Left.¹² For Liberal, or centrist, incumbents, we examine the sum of changes in support for parties on the Left and Right. For mixed coalition governments, we look the sum of changes in support for the non-governing parties on the Left and Right. This operationalization allows us to capture changes in the strength of each incumbent's primary electoral adversary.

To proxy the incumbent party's beliefs about the size of its potential electorate, we exploit the historical fact that parties on the Right have long relied on rural support, whereas parties on the Center and Left have benefited from urban support. This fits with the conventional wisdom for both Europe and Latin America for the late 19th and much of the 20th centuries (Przeworski and Sprague 1986; Kitschelt 1994; Collier and Collier 1991; Ware 1996). For example, the Left drew its support mainly from workers associated with the industrial sector, whereas the size of the urban bourgeoisie and middle class emanating from industrialization formed the core support for liberal or centrist parties (Kalyvas 1996; Ware 1996). Conversely, the Conservative parties largely drew their support from the rural classes, the landed gentry and peasantry (Kalyvas 1996; Moore 1966). In light of these observations, we create the variable, *Natural_Constituency* using the percent of the working population employed in industry.¹³ Specifically, we employ the percent of industrial workers as a positive indicator for the natural constituencies of Left, Center, and Mixed coalition incumbent governments, and a negative indicator for the Right governments' natural constituency. Although admittedly crude, this measure provides a systematic starting point for tapping into incumbent's beliefs about the size of their natural constituencies.

¹² The parties are categorized on the basis of their broad ideological positions on the economic dimension. To code the ideology and support level of the ruling parties and their opponents, we assembled data from a number of secondary sources including: Caramani 2001; Coppedge 1997; Geddes 2003; Nohlen 1999; 2001; 2005. Full details on the sources used for the coding of the variables are available from the authors.

¹³ Alternative indicators of incumbents' natural constituency might be the percentage of urban and rural populations in a society. Unfortunately, there are severe missing data problems with these variables across multiple sources (e.g., Banks 2007; Statistical Abstract of Latin America).

Indeed, precisely because parties in the early to mid 1900s (and even later in many developing democracies) would not have had precise information about the size of the natural constituencies, let alone the number of mobilized voters within those electorates, it is not entirely unreasonable to use broad indicators like the percent of workers in industry as a rough proxy for incumbent parties' expectations.

From these two variables – Δ *Opposition_Support* and *Natural_Constituency* – we create an interactive term, *Threat*. This variable captures the conditional relationships implied by our first and second hypotheses. If our first hypothesis is correct, the incumbent party is more likely to adopt CV when the opposition is gaining electoral strength conditional on the incumbent having a large natural constituency. Conversely, the second hypothesis predicts that an incumbent facing a growing opposition will be less likely to adopt CV when the incumbent's natural constituency is small. Again, the assumption in both cases is that if CV is treated by parties as a mobilization tool, then incumbents facing an electoral challenge will only turn to CV if they believe that it will help to bring their own supporters, not their opponents', to the polls. However, our third hypothesis leads us to expect that the larger its natural constituency, the more likely the incumbent will adopt CV, regardless of the electoral threat.

Explanatory Variables for Alternative Hypotheses

We construct several additional variables to test alternative hypotheses. To examine the hypothesis that CV is adopted to improve “unacceptably” low turnout, we examine voter turnout in the last national legislative or presidential election (depending on whether the country has a parliamentary or presidential system) before the adoption of CV, as a percentage of registered voters.¹⁴ Tests of Massicotte et al.'s (2004) hypotheses require measures of a country's Catholicism and colonial history. We operationalize the former as the percentage of a country's population that is Roman Catholic using

¹⁴ Data sources include Mackie and Rose (1991); Nohlen (1999, 2001, 2005); Election Results Archives (<http://www.binghamton.edu/cdp/era/index.html>); and “Parties and Elections in Europe” (<http://www.parties-and-elections.de/>).

data from Barrett (1982) and Barrett et al. (2001). We test the latter set of hypotheses with two dummy variables, one indicating a Spanish colonial heritage and the other indicating a British colonial heritage.¹⁵ We test Giraud's and Birch's competing hypotheses about the effect of a country's population size on its likelihood of adopting CV by including a variable measuring the log of population size (in thousands).¹⁶

Explaining Variation in the Adoption of CV across Democratic Countries

Table 2 presents the results of our logistic analyses of CV adoption, with the predicted signs of the explanatory variables listed in column two. The lack of available data for some of the independent variables accounts for the smaller number of observations in each regression than in the original dataset.¹⁷ In light of the case-control sampling method we employ, we follow the advice of King and Zeng (2001a; 2001b; 2001c) and apply a prior correction to the model to correct for the difference between the percentage of CV adoption in the regression sample and in the population of country-year cases.¹⁸

[TABLE 2 about here]

Our basic strategic theory of CV adoption is modeled in column three (Model I) of Table 2. To interpret these results, recall that in regressions with interactive terms, the effect of each constituent variable in the interactive term is conditional upon the level of the other (Friedrich 1982; Braumoeller 2004; Brambor, Clark and Golder 2006). The coefficients for Δ *Opposition_Support* and *Natural_Constituency* as listed in Table 2 only capture the effect of these variables in the special cases in which the other variable is zero. Thus, to fully assess the conditional nature of the effects of the strategic variables, we need to calculate the coefficient of each variable at different values of the other variable.

¹⁵ Data from the CIA World Factbook.

¹⁶ Data from International Historical Statistics. As with the percent of industrial workers variable, if data were not available for the year of the observation, data from the closest year were employed.

¹⁷ In the next section, we address this problem of missing data by using a multiple imputation procedure.

¹⁸ This entails applying a post-estimation correction to the estimated constant term in each model. The regression results do not change if we estimate the models using rare events logit instead.

But, even before we plot the conditional effect of each variable, a quick glance at the regression table suggests preliminary support for our strategic hypotheses. That the coefficient of $\Delta Opposition_Support$ is negative and significant (when $Natural_Constituency$ equals zero) is consistent with our second hypothesis that incumbents facing an electoral threat will be less likely to adopt CV when they lack a large natural constituency. Likewise, the positive coefficient for $Natural_Constituency$ (when $\Delta Opposition_Support$ equals zero) lends initial support to our third hypothesis that incumbents with large natural constituencies may turn to CV as a “cheap” mobilization tool, even in the absence of an electoral challenge.

[FIGURE 1 about here]

The conditional coefficients calculated from Model I support our strategic story.¹⁹ Figure 1 shows how the effect of change in opposition party support on CV adoption varies with the size of the incumbent’s natural constituency. Consistent with H1, the likelihood of the incumbent government adopting CV (as depicted by the solid line) increases as the size of the incumbent’s natural constituency grows. This effect is statistically significant at $p \leq 0.1$ for values of the $Natural_Constituency$ greater than 62.6%. That this value is higher than a bare majority of 50% is consistent with the logic that governing parties are only likely to consider instituting mandatory voting schemes when they have a considerable natural constituency advantage. Conversely, an incumbent is less likely to adopt CV when faced with a growing opposition *when* its natural constituency is small. In line with H2, $\Delta Opposition_Support$ has a negative effect on CV adoption for natural constituency sizes smaller than 31.4%; the effect is statistically significant at sizes of 0.6% or less. Importantly, robustness checks indicate that these confirmatory results are not driven by a particular case or non-case of compulsory voting: the conclusions do not change when we rerun the model excluding one observation at a time from the analysis.

[FIGURE 2 about here]

¹⁹ The results are robust to the use of either robust or non-robust standard errors.

The conditional coefficients do not provide unmitigated support for our last core hypothesis, however. Ultimately, as shown in Figure 2, the effect of natural constituency size on the likelihood of CV adoption does not prove independent of the changing strength of the opposition as we postulated in H3. When opposition support is static or gaining, an incumbent is indeed more likely to adopt CV as the size of its natural constituency increases; the conditional coefficient is positive and statistically significant. But, when the opposition is severely losing support, the incumbent instead is even less likely to resort to CV. This finding reveals that *unthreatened* incumbents are unlikely to risk changing the rules under which they were elected, especially when CV will either not help them or, worse still, might drive their opponents' abstaining voters to the polls.

Taken together, these results highlight the strategic nature of CV adoption. They suggest that incumbents are motivated to adopt CV as a strategic tool – to shore up support from a large natural constituency when they are faced with a growing electoral threat. Conversely, when CV appears too risky or counterproductive, it is less likely to be employed. This occurs either when the incumbent's natural constituency is small, or when the opposition, not the incumbent, appears undermobilized.

Consideration of Alternative Hypotheses

The strength of the strategic explanation behind CV adoption is not challenged by alternative theories. Table 2 includes the results of models in which we assess the explanatory value of the variables indicated by alternative hypotheses. As can be seen from Models II-VI, the coefficients for *Turnout*, *Catholic*, *Spanish Colonial Heritage*, *British Colonial Heritage*, and *Ln Population* do not attain statistical significance. Moreover, the addition of these alternative hypotheses' variables does not alter the effects of the strategic variables in any meaningful manner; plots of the conditional effects of the strategic variables from every model continue to reveal that the likelihood of CV adoption is increased in

substantively and statistically significant ways when incumbents with large natural constituencies face growing oppositional threats.²⁰

Robustness Checks

We perform additional tests to evaluate the robustness of our findings. In our dataset, we confront the challenge of deriving systematic measures for the natural constituency variables across different types of parties. Whereas the parties literature and historical evidence suggest that we can confidently identify the Left with the industrial working class and the Right with the rural non-working class, the natural constituencies of center and coalition governments are less clear cut. While the coding rule we employed is systematic and plausible (see *Data and Case Selection*), we want to confirm the robustness of our findings in light of this concern. We thus reestimated each of the previous models first excluding observations in which a center party was in government and second, excluding observations in which a mixed left-right coalition was in government. The substantive conclusions across those models are identical to those previously reported.²¹ As shown by Figures A1 and A2 in the Appendix for reestimation of the Model I when these sets of observations are excluded, the likelihood of CV adoption increases with a growing opposition when natural constituency size is large.

Next, we address the issue of missing data for key independent variables in our original dataset. Because of the already limited number of compulsory voting observations (n=18) that exist empirically, we are especially concerned with dealing with the missingness that affects the CV cases. Thus, to expand

²⁰ The substantive and statistical effects of our strategic variables remain unchanged in a model not shown here in which all five alternative variables are included. The effect of each of the alternative variables likewise remains statistically insignificant with one exception: the variable *Catholic* has a positive coefficient, statistically significant at $p=.06$.

²¹ The exception is the alternative *Catholic* model (Model III) without centrist parties. In this model, the strategic variables continue to have the expected substantive and statistically significant effects on CV adoption, but now the percent of Catholics in a country has a statistically significant positive effect on CV adoption.

the coverage of our dataset to include all observations of CV adoption, we performed a multiple imputation of missing values (King et al. 2001) for our two key independent variables, Δ *Opposition_Support* and *Natural_Constituency*.²² When we replicated our strategic model using the imputed data with all 18 CV cases included, the results are consistent with the original results. As shown by the conditional coefficient graph of Model I using imputed data (Appendix Figure A3), the likelihood of CV adoption again depends on the interaction of change in opposition party support and the size of the incumbent's natural constituency. The results of Models II-VI testing the alternative hypotheses likewise do not change when we replicate them using the imputed data. In toto, the empirical results consistently indicate the power of our strategic factors behind CV adoption.

Discussion

Parties only win seats if their supporters turn out. Based on this simple fact, this article develops a strategic account of why compulsory voting laws are enacted. Our core claim is that CV offers an attractive, albeit risky, tool for politicians who fear that the opposition is able to better mobilize its supporters. Consistent with our theory, multivariate analyses based on an original dataset reveal that incumbent parties are more likely to adopt CV whenever they face a growing electoral threat from the opposition, but only if the size of the incumbent's natural constituency is large. Conversely, we show that incumbents facing a growing electoral threat are less likely to adopt CV whenever the size of their own natural constituency is small. Our analyses also highlight the limits of several common alternative explanations. We find little support for hypotheses based on normative considerations, colonial background, or country size.²³ Taken together, this article thus provides a systematic and parsimonious explanation for the empirical pattern of CV adoption, while ruling out several plausible competing

²² Imputations performed using the Amelia II package for R (Honaker et al. 2009). Further details on the procedure are available from the authors.

²³ There is mixed support for the *Catholic* variable; it becomes a statistically significant positive predictor of CV but only in highly constrained models (see footnotes 20 and 21).

accounts. At the same time, the conditionality implied by our strategic story, combined with the general tendency of incumbents to stick with electoral institutions that brought them to power (Boix 1999; Lijphart 1999), helps make sense of the global fact that compulsory voting laws are relatively rare overall.

Although our theory and the hypotheses we test are neutral with respect to party ideology, our logic further helps to solve the particular historical puzzle that parties on the Right tended to push for CV, whereas today much of the support for CV adoption tends to reside on the Left. As we alluded to in the paper, qualitative accounts of CV adoption in the late 19th and early 20th century attest to the Right's fears that the rise of industrialization and unionization gave the Left a mobilizational edge. For these conservative parties, CV was seen as a device for bringing more traditional voters to the polls. In the postindustrial era, however, the situation parties face is often the reverse: it is the Left's ability to turn out its voters that is in decline. Consistent with our argument that the organizationally weaker party would benefit from and favor CV, research (e.g. see Pacek and Radcliffe 1995; Nagel 1988; Jackman 1999; Mackerras and McAllister 1999, but also see Birch 2009) shows that, in these societies, compulsory voting tends to result in an electoral boost to the Left. Moreover, recent debates over the adoption of CV in the UK, Canada and France in the 1990s and 2000s reveal that it indeed is the traditional mass-based parties on the Left who are pushing for CV as a means of countering their declining mobilizational capacity (cf. Birch 2009: 145-7). In France, for instance, the Socialists announced their support for compulsory voting following the 2002 presidential elections, which were marked by low turnout among Socialist voters and strong support for far right candidate Jean-Marie Le Pen (*Ibid.* 146).

Our study carries numerous implications for future research on institutional reform. First, by extending the strategic literature on endogenous electoral institutions beyond whether or not parties adopt proportional representation (e.g. Boix 1999; Benoit 2004; Andrews and Jackman 2005; also see Cusack, Iversen and Soskice 2007), we highlight a new and important element shaping the incumbent's calculus over the choice of rules: the capacity of their opponents to mobilize their constituency. While we have relied here on available aggregate socioeconomic measures to capture this capacity systematically, future

research should focus on gathering data directly on each party's mobilization capacity, such as data on the strength of labor unions or religious organizations.²⁴

Second, our study paves the way for addressing skeptics' broader concerns that electoral institutions devised under conditions of extreme political uncertainty effectively turn political leaders into 'strategic fools' (Andrews and Jackman 2004). In the case of compulsory voting especially, the conventional wisdom has been that such laws eventually undermined the electoral strength of the very parties, often conservative, that initially adopted them (cf. Przeworski 1991). But this may not be quite right. Although certainly there are instances where parties seemingly miscalculated the benefits that compulsory voting would bring – witness the Argentine conservatives who lost to the Radicals in 1916 – a preliminary analysis of our data indicates that conservative parties that adopted CV actually did better in the subsequent two elections than conservative parties that did not. Future research should thus plumb further the electoral consequences of CV adoption, pinpointing, for instance, how long sanguine effects lasted, or the circumstances under which obligatory voting immediately boomeranged.

Third, while this paper has concentrated on elucidating the conditions under which incumbents adopt CV, it also suggests the conditions under which parties might repeal it. Of course, it is important to note at the outset that however rare CV adoption has been, elimination of CV is even rarer. Among our cases, CV has only been officially repealed in the Netherlands in 1970; penalties for failing to vote have been officially removed in Venezuela (1993), Italy (1994), Greece (2001), and Liechtenstein (2004).²⁵ Where we have been able to begin to piece together evidence about CV repeal, however, we uncover just

²⁴ Some measures already exist for Leftist organizational strength in Western Europe (see Bartolini 2000), but they are neither available for Rightist parties in that region nor available systematically for parties in other countries.

²⁵ One reason contributing to this is surely the general observation that incumbents who win under one set of electoral rules are reluctant to change them. Moreover, in the case of CV, it is also important to recognize that enforcement varies dramatically; where punishment is nonexistent (either through law or practice), there is little need to expend energy reversing the institution.

the sort of inverse logic that our strategic story would predict. That is, the parties that push for the elimination of CV are those that saw it as a mobilizational tool of the *opposition*.

Consider the Netherlands and Venezuela. In their careful analysis of the Dutch electoral reform, Galen Irwin and Joop van Holsteyn ([1972] 2005) argue that the decision to repeal compulsory voting was initiated by political elites in the context of political realignment and the growth of the new anti-establishment party, the D66. According to Irwin and van Holsteyn, the success of the D66 was fueled largely by discontented voters who would otherwise abstain were voting strictly voluntary.²⁶ As this new party began to score more and more victories, parties across the political spectrum formed a coalition that succeeded in abolishing CV in 1970. Quoting one of the Netherlands' most famous opinion pollsters, Maurice de Hond, Irwin and van Holsteyn write "...the most important but unspoken reason for the abolishment of compulsory voting was the success of new parties such as the peasant party, 'it was thought that this kind of party in particular was supported by voters who would not turn out to vote without any obligation to do so'"(2005: n25). What of Venezuela in 1992? Lacking transcripts about the decision to eliminate CV penalties, unfortunately, we can only speculate about whether a similar logic was at work. Certainly the strategic context was similar, if more exaggerated: support for the two main parties had been declining since the 1980s; meanwhile, the economic downturn, two coups, and a presidential impeachment left voters, in the words of Michael Coppedge, "morally outraged" (2005). It would surely not be too far-fetched to imagine that the incumbents feared bringing such discontent voters

²⁶ Consider the remarks made by the Dutch communist party speaker at the time, "from a purely electoral viewpoint, compulsory attendance favors especially those whose only chance comes from those voters who are unconvinced or even indifferent. This compulsory attendance also gives advantage to those who for one reason or another are temporarily favored by the so-called "floating voters"; the flycatcher parties. Everybody can see from the results of the ballot that the Communist Party does not belong among those. Among our supporters one finds few lukewarm people floating voters do not attach themselves to a party as a first choice." (cited in Irwin and van Holsteyn 2005:23).

to the polls. Still, we are quick to note that the utter defeat of the AD and COPEI in the subsequent 1992 elections clearly points to the limits of strategic repeal.

Last but not least, our conclusions about the adoption of compulsory voting in democracies raise questions about institutional reform in non-democratic settings. A nearly equal number of authoritarian states have formally adopted compulsory voting laws since the end of the 19th century.²⁷ Although the exact electoral logic advanced here is unlikely to be at work in these non-democratic settings, the strategic use of institutional reforms is not necessarily foreign to dictators. Compulsory voting laws could be construed as insurance, not against the mere loss of seats as in a democracy, but rather against the complete loss of power should a regime change occur. Such questions and propositions invite future research.

²⁷ See footnote 6 for a list of these countries.

TABLE 1: Compulsory Voting Law Adoption in Democratic Countries

	Year of CV Adoption
Argentina	1912
Australia	1924
Belgium	1893
Costa Rica	1936
Cyprus	1960
Czechoslovakia	1920
Fiji	1998
Greece	1932
Italy	1948
Liechtenstein	1862
Luxembourg	1919
Nauru	1965
Netherlands	1917
Peru	1933
Singapore	1959
Thailand	1997
Turkey	1987
Venezuela	1958

Source: IDEA (www.idea.int/vt/compulsory_voting.cfm) accessed May 2007

TABLE 2: Logit Regression Models of the Adoption of Compulsory Voting Laws

Dependent Variable: Adoption of CV Laws	Expected Sign	Model I	Model II	Model III	Model IV	Model V	Model VI
Change in Opposition Strength	-	-0.04* (0.02)	-0.03 (0.02)	-0.04* (0.02)	-0.03 (0.03)	-0.04 (0.02)	-0.04 (0.03)
Natural Constituency	+	0.02* (0.01)	0.03* (0.01)	0.02* (0.01)	0.02* (0.01)	0.02* (0.01)	0.02** (0.01)
Threat (interaction term)	+	0.001** (0.0005)	0.001** (0.0005)	0.001** (0.0005)	0.001** (0.0005)	0.001** (0.0005)	0.001** (0.0006)
Turnout	-		0.03 (0.03)				
Catholic	+			0.01 (0.01)			
Spanish Col. Heritage	+				0.49 (1.06)		
British Col. Heritage	+					-0.85 (0.94)	
LnPopulation (thousands)	- (Giraud) + (Birch)						-0.36 (0.27)
Prior-Corrected Constant		-6.45*** (0.75)	-9.17*** (2.95)	-6.87*** (0.93)	-6.47*** (0.70)	-6.27*** (0.74)	-3.27 (2.59)
N		62	56	62	62	62	62
Pseudo R²		0.1637	0.1646	0.1827	0.1683	0.1814	0.1946

Note: Estimates from logit models with robust standard errors and prior-corrected constants. The dependent variable is coded “1” for country-years in which compulsory voting laws were adopted and “0” in all other. Standard errors are in parentheses. *** $p \leq .01$; ** $p \leq .05$; * $p \leq .1$

FIGURE 1: The Effect of Change in Opposition Support on CV Adoption Conditional Upon the Size of the Incumbent's Natural Constituency, with 90% Confidence Intervals

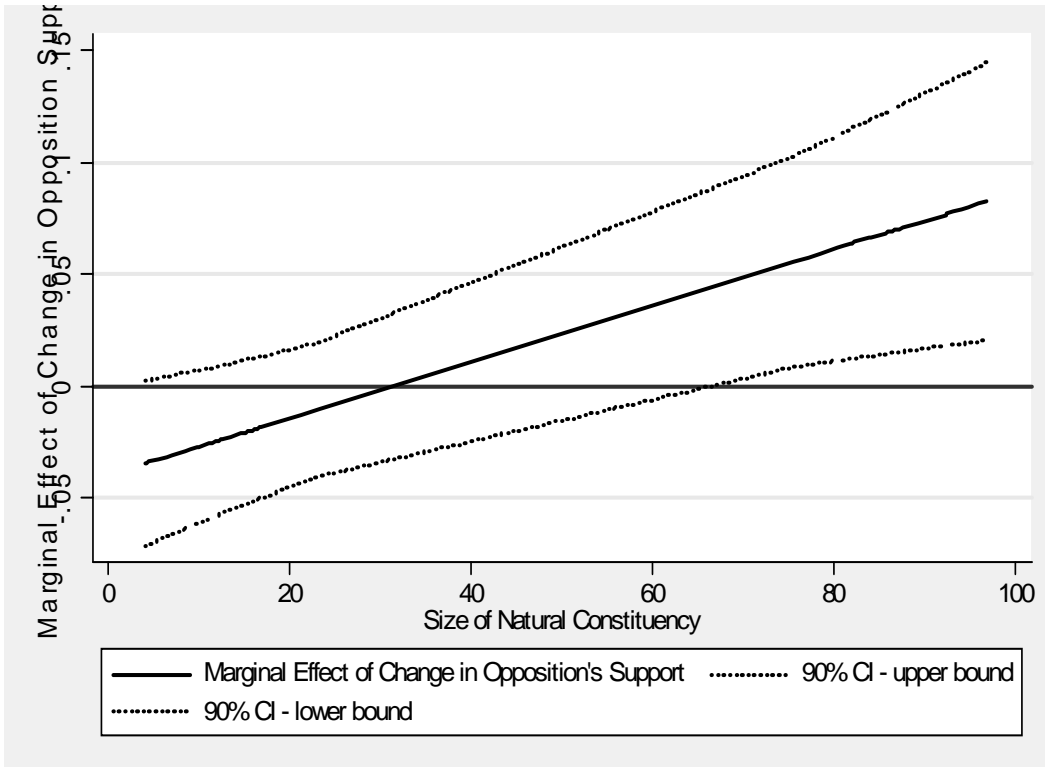
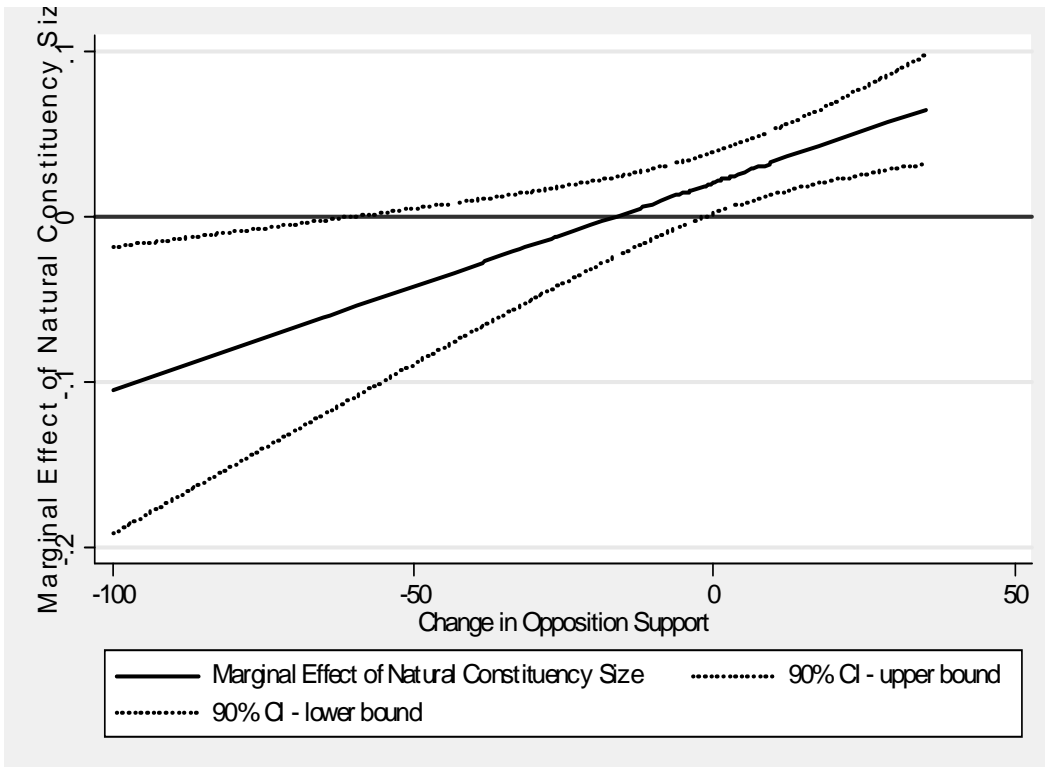


FIGURE 2: The Effect of the Size of the Incumbent's Natural Constituency on CV Adoption Conditional Upon the Change in Opposition Support, with 90% Confidence Intervals



APPENDIX

FIGURE A1: Results of the Strategic Model (Model I) Excluding Centrist Governments: The Effect of Change in Opposition Support on CV Adoption Conditional Upon the Size of the Incumbent's Natural Constituency, with 90% Confidence Intervals

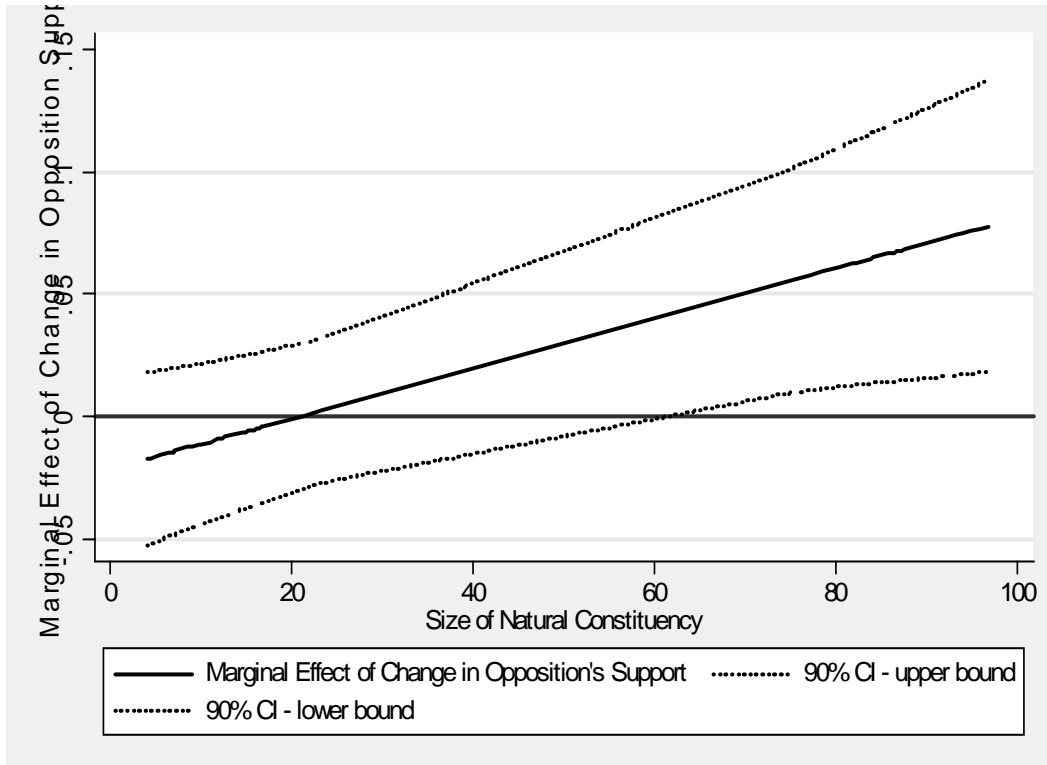


FIGURE A2: Results of the Strategic Model (Model I) Excluding Mixed Governments: The Effect of Change in Opposition Support on CV Adoption Conditional Upon the Size of the Incumbent's Natural Constituency, with 90% Confidence Intervals

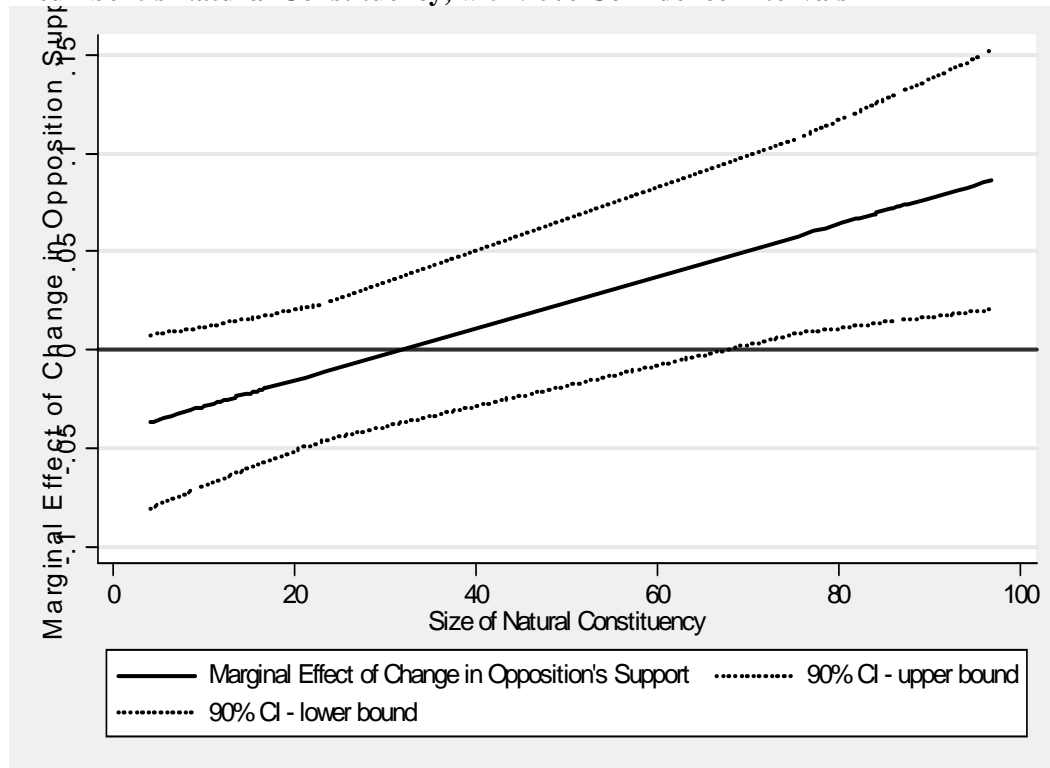
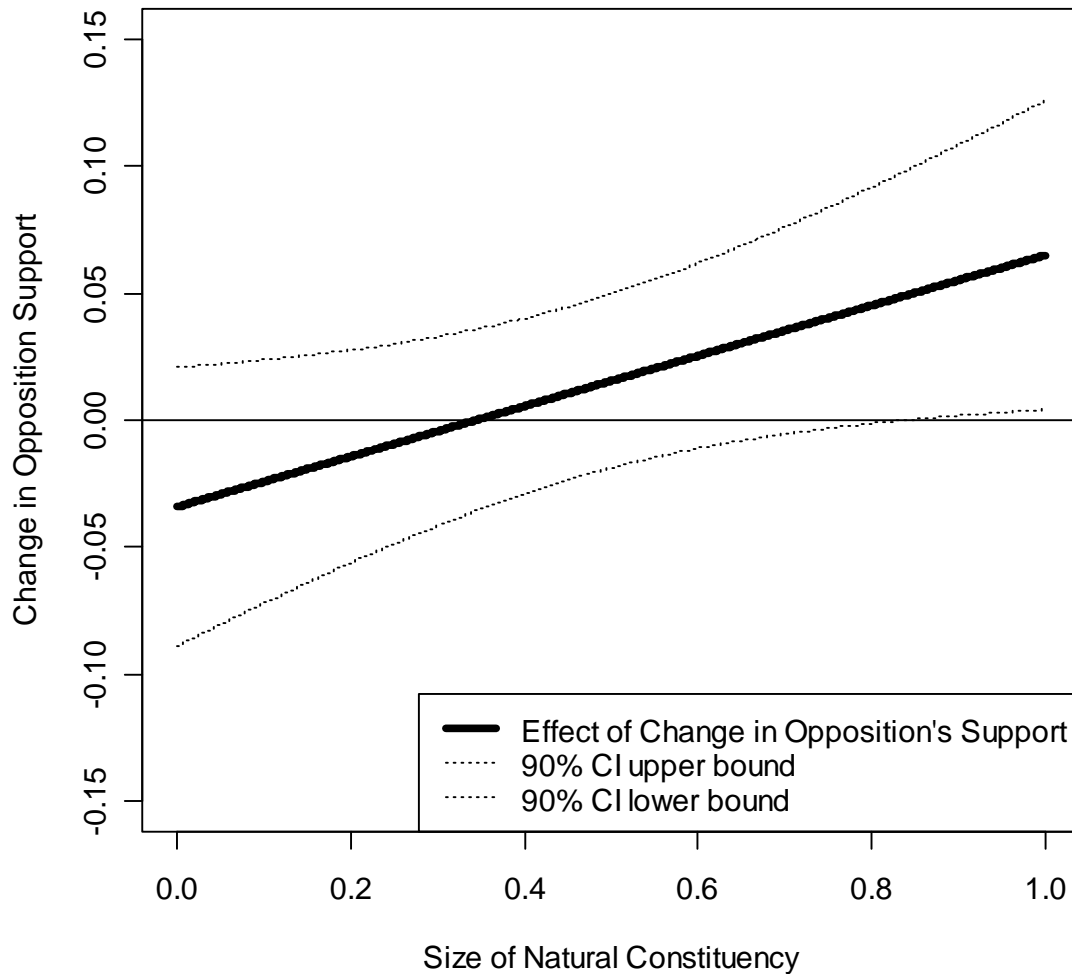


FIGURE A3: Results of Strategic Model with Imputations: The Effect of Change in Opposition Support on CV Adoption Conditional Upon the Size of the Incumbent's Natural Constituency, with 90% Confidence Intervals



Note: To aid in the multiple imputation process, the values of the *Natural_Constituency* variable were transformed to be between 0 and 1.

REFERENCES

- Acemoglu, Daron and James A. Robinson. 2005. *Economic Origins of Dictatorship and Democracy*. New York: Cambridge University Press.
- Andrews, Josephine and Robert Jackman. 2005. "Strategic Fools: Electoral Rule Choice Under Extreme Uncertainty." *Electoral Studies* 24: 66-84.
- Banks, Arthur. 2007. *The Cross-National Time-Series Data Archive*. Binghamton, N.Y.: Databases International.
- Barrett, David B. 1982. *World Christian Encyclopedia: A Comparative Survey of Churches and Religions in the Modern World AD 1900-2000*. New York: Oxford University Press.
- Barrett, David B. et al. 2001. *World Christian Encyclopedia: A Comparative Survey of Churches and Religions in the Modern World (2nd ed.)*. New York: Oxford University Press.
- Bartolini, Stefano. 2000. *The Political Mobilization of the European Left, 1860-1980*. Cambridge: Cambridge University Press.
- Benoit, Kenneth. 2004. "Models of Electoral System Change." *Electoral Studies* 23: 363-89.
- Birch, Sarah. 2007. "Conceptualising Electoral Obligation." Paper presented at the ECPR Workshop "Compulsory Voting: Principles and Practice," Helsinki, Finland, May 7-12.
- Birch, Sarah. 2009. *Full Participation: A Comparative Study of Compulsory Voting*. New York: United Nations University Press.
- Boix, Carles. 1999. "Setting the Rules of the Game: The Choice of Electoral Systems in Advanced Democracies." *American Political Science Review* 93(3): 609-24.
- Boix, Carles. 2003. *Democracy and Redistribution*. Cambridge: Cambridge University Press.
- Brambor, Thomas, William Clark, and Matt Golder. 2006. "Understanding Interaction Models: Improving Empirical Analyses." *Political Analysis* 14: 63-82.
- Braumoeller, Bear. 2004. "Hypothesis Testing and Multiplicative Interaction Terms." *International Organization* 58: 807-20.
- Calvo, Ernesto. 2009. "The Competitive Road to Proportional Representation: Partisan Biases

- and Electoral Regime Change under Increasing Party Competition.” *World Politics* 61(2): 254-295.
- Caramani, Daniele. 2001. *Elections in Western Europe Since 1815*. London: Macmillan Reference.
- Collier, David and Ruth Berins Collier. 1991. *Shaping the Political Arena: Critical Junctures, the Labor Movement, and Regime Dynamics in Latin America*. Princeton: Princeton University Press.
- Collier, Ruth Berins. 1999. *Paths Toward Democracy: The Working Class and Elites in Western Europe and South America*. Cambridge: Cambridge University Press.
- Coppedge, Michael. 1997. “A Classification of Latin American Political Parties.” Kellogg Institute Working Paper No. 244 (November).
- Coppedge, Michael. 2005. “Explaining Democratic Deterioration in Venezuela Through Nested Inference” in Francis Hagopian and Scott P. Mainwaring, eds. *The Third Wave of Democratization in Latin America: Advances and Setbacks*. New York: Cambridge University Press.
- Crepaz, Markus, ML. 1990. “The Impact of Party Polarization and Postmaterialism on Voter Turnout: A Comparative Study of 16 Democracies,” *European Journal of Political Research* 18 (2): 183-205.
- Cusack, Thomas R., Torben Iversen, and David Soskice. 2007. “Economic Interests and the Origins of Electoral Systems.” *American Political Science Review* 101 (3): 373-91.
- Devoto, Fernando, J. Marcelo Ferrari, and Julio Melón. 1997. “The Peaceful Transformation? Changes and Continuities in Argentinean Political Practices” in Devoto, Fernando J. and Torcuato S. DiTella, eds. *Political Culture, Social Movements, and Democratic Transitions in South America in the Twentieth Century*. Milan, Italy: Giangiacomo Feltrinelli Foundation.
- Downs, Anthony. 1957. *An Economic Theory of Voting*. New York: HarperCollins.

- Ferejohn, John A. and Morris P. Fiorina. 1974. "The Paradox of Not Voting: A Decision Theoretic Analysis." *American Political Science Review* 68 (2): 525-36.
- Fornos, Carolina A., Timothy J. Power, and James G. Garand. 2004. "Explaining Voter Turnout in Latin America, 1980-2000." *Comparative Political Studies* 37(8): 909-40.
- Franklin, Mark. 1999. "Electoral Engineering and Cross-National Turnout Differences: What Role for Compulsory Voting?" *British Journal of Political Science* 29: 205-24.
- Friedrich, Robert J. 1982. "In Defense of Multiplicative Terms in Multiple Regression Equations." *American Journal of Political Science* 26 (November): 797-833.
- Geddes, Barbara. 2003. *Paradigms and Sand Castles: Theory Building and Research Design in Comparative Politics*. Ann Arbor: University of Michigan Press.
- Giraud, Emile. 1931. "Le vote obligatoire du point de vue des principes et du bon fonctionnement des institutions représentatives." *Review du Droit Public et de la Science Politique en France et à l'Étranger* July-August-September.
- Grofman, Bernard, and Arend Lijphart. 2003. *The Evolution of Electoral and Party Systems in the Nordic Countries*. New York: Agathon Press.
- Gratchew, Maria. 2004. "Compulsory Voting in Western Europe," in Rafael Lopez Pintor and Maria Gratchew, eds. *Voter Turnout in Western Europe Since 1945*. Stockholm: International IDEA, pp. 25-31.
- Hill, Lisa. 2006. "Lower Voter Turnout in the United States: Is Compulsory Voting a Solution?" *Journal of Theoretical Politics* 18(2): 207-32.
- Honaker, James, Gary King and Matthew Blackwell. 2009. *AMELIA II: A Program for Missing Data*.
- Ho, Daniel E., and Kosuke Imai, Gary King, Elizabeth A. Stuart. 2007. "Matching as Nonparametric Preprocessing for Reducing Model Dependence in Parametric Causal Inference," *Political Analysis* 15: 199-236.
- Irwin, Galen A. and van Holsteyn, Joop. [1972] 2005. "Scarfman's Parcel; Old and New

- Thoughts on the Abolition of Compulsory Voting in the Netherlands', Paper presented at the international symposium on compulsory voting, Institute d'Etudes Politiques de Lille, Lille 20-21 October, 2005.
- Jackman, Robert W. 1987. "Political Institutions and Voter Turnout in the Industrial Democracies." *American Political Science Review* 81: 404-23.
- Jackman, Robert W. and Ross A. Miller. 1995. "Voter Turnout in the Industrial Democracy in the 1980s." *Comparative Political Studies* 27: 467-92.
- Jackman, Simon. 2001. "Compulsory Voting." *International Encyclopedia of the Social and Behavioral Sciences*. Oxford, UK: Elsevier.
- Kalyvas, Stathis N. 1996. *The Rise of Christian Democracy in Europe*. New York: Cornell University Press.
- Kato, Koichi. 2007. "The Impact of Compulsory Voting upon the Public Policy" Paper prepared for the Annual Conference of the EPOP, Bristol, September 7-9, 2007.
- Kato, Koichi. 2008. "Evaluating Compulsory Voting: Australia in Comparative Perspective." Ph.D. Dissertation, London School of Economics.
- Kelley, Jonathan and Ian McAllister. 1984. "Ballot Paper Cues and the Vote in Australia and Britain: Alphabetic Voting, Sex and Title." *Public Opinion Quarterly*. 48.2: 452-66.
- King, Amy and Andrew Leigh. 2006. "Ballot Order Effects under Compulsory Voting." unpublished manuscript.
- King, Gary. 1998. *Unifying Political Methodology: The Likelihood Theory of Statistical Inference*. Ann Arbor: University of Michigan Press.
- King, Gary, James Honaker, Anne Joseph, and Kenneth Scheve. 2001. "Analyzing Incomplete Political Science Data: An Alternative Algorithm for Multiple Imputation." *American Political Science Review*, 95.1 (March): 49-69.
- King, Gary and Langche Zeng. 2001a. "Explaining Rare Events in International Relations." *International Organization* 55 (3): 693-715.

- King, Gary and Langche Zeng. 2001b. "Improving Forecasts of State Failure." *World Politics* 53 (July): 623-58.
- King, Gary and Langche Zeng. 2001c. "Logistic Regression in Rare Events Data." *Political Analysis* 9 (2): 137-63.
- Kitschelt, Herbert. 1994. *The Transformation of European Social Democracy*. Cambridge: Cambridge University Press.
- Knight, Jack. 1992. *Institutions and Social Conflict*. Cambridge: Cambridge University Press.
- Lijphart, Arend. 1999. *Patterns of Democracy: Government Forms and Performance in Thirty-Six Countries*. New Haven: Yale University.
- Lijphart, Arend. 1997. "Unequal Participation: Democracy's Unresolved Dilemma." *American Political Science Review* 91: 1-14.
- Mackerras, Malcolm. 1970. "Preference Voting and the 'Donkey Vote'." *Politics*. 5.1: 69-76.
- Mackerras, Malcolm and Ian McAllister. 1999. "Compulsory Voting, Party Stability and Electoral Advantage in Australia." *Electoral Studies* 18: 217-33.
- Malkopoulou, Anthoula. 2007. "Compulsory Voting in Greece: A History of Concepts in Motion." Paper presented at the ECPR Workshop "Compulsory Voting: Principles and Practice," Helsinki, Finland, May 7-12.
- Marshall, Monty G. and Keith Jagers. 2004. *Polity IV Data Set*. [Computer file; version p4v2004] College Park, MD: Center for International Development and Conflict Management, University of Maryland.
- Massicotte, Louis, André Blais and Antoine Yoshinaka. 2004. *Establishing the Rules of the Game: Election Laws in Democracies*. Toronto: University of Toronto Press.
- McAllister, Ian. 1986. "Compulsory Voting, Turnout, and Party Advantage in Australia." *Politics: the Journal of Australasian Political Studies Association* 21(1): 89-93.
- McAllister, Ian and Anthony Mughan. 1986. "Differential Turnout and Party Advantage in British General Elections." Paper presented at the Annual Meetings of the Political

- Science Association, San Francisco, CA.
- Mitchell, B.R. 1998. *International Historical Statistics: Africa, Asia, and Oceania, 1750-1993*. Third Edition. London: Macmillan Reference.
- Mitchell, B.R. 1998. *International Historical Statistics: The Americas, 1750-1993*. Fourth Edition. London: Macmillan Reference.
- Mitchell, B.R. 1998. *International Historical Statistics: Europe, 1750-1993*. Fourth Edition. London: Macmillan Reference.
- Nagel, Jack H. 1988. "Voter Turnout in New Zealand General Election, 1928-1988." *Political Science* 40: 16-38.
- Nohlen, Dieter. 1999. *Elections in Africa: A Data Handbook*. Oxford: Oxford University Press.
- Nohlen, Dieter. 2001. *Elections in Asia and the Pacific: A Data Handbook*. Oxford: Oxford University Press.
- Nohlen, Dieter. 2005. *Elections in the Americas: A Data Handbook*. Oxford University Press.
- Norris, Pippa. 2002. *Democratic Phoenix: Reinventing Political Activism*. Cambridge: Cambridge University Press.
- Norris, Pippa. 2004. *Electoral Engineering*. Cambridge: Cambridge University Press.
- Pacek, Alexander and Benjamin Radcliff. 1995. "Turnout and the Vote for the Left-of-Centre Parties: A Cross-National Analysis." *British Journal of Political Science* 25: 137-43.
- Payne, J. Mark, Zovatto, D., Carrillo F., & Allamand, A. 2003. *La Política Importa: Democracia y Desarrollo en América Latina*. Washington DC: Inter-American Development Bank and International Institute for Democracy and Electoral Assistance.
- Pilet, Jean-Benoit. 2007. "Choosing Compulsory Voting in Belgium: Strategy and Ideas Combined." Paper presented at the ECPR Workshop "Compulsory Voting: Principles and Practice," Helsinki, Finland, May 7-12.
- Powell, G. Bingham. 1986. "American Voter Turnout in Comparative Perspective." *American Political Science Review* 80: 17-43.

- Power, Timothy and J.T. Roberts. 1995. "Compulsory Voting, Invalid Ballots, and Abstention in Brazil." *Political Research Quarterly* 48: 795-826.
- Przeworski, Adam. 1991. *Democracy and the Market: Political and Economic Reforms in Eastern Europe and Latin America*. Cambridge: Cambridge University Press.
- Przeworski, Adam, Michael E. Alvarez, José Antonio Cheibub, and Fernando Limongi. 2000. *Democracy and Development: Political Institutions and Well-Being in the World, 1950-1999*. Cambridge: Cambridge University Press.
- Przeworski, Adam and John Sprague. 1986. *Paper Stones*. Chicago: University of Chicago Press.
- Riker, William and Peter Ordeshook. 1968. "A Theory of the Calculus of Voting." *American Political Science Review* 62: 24-42.
- Rokkan, Stein. 1970. *Citizens, Elections, Parties: Approaches to the Comparative Study of the Process of Development*. Oslo: Universitetsforlaget.
- Selb, Peter and Romain Lachat. 2007. "The More the Better? Counterfactual Evidence on the Effect of Compulsory Voting on the Consistency of Party Choice." Paper presented at the ECPR Workshop "Compulsory Voting: Principles and Practice," Helsinki, Finland, May 7-12.
- Stokes, Susan C. 2005. "Perverse Accountability: A Formal Model of Machine Politics with Evidence From Argentina." *American Political Science Review* 99 (3): 315-25.
- Tsebelis, George. 1990. *Nested Games: Rational Choice in Competitive Politics*. Berkeley: University of California Press.
- United States. Central Intelligence Agency. *The World Factbook*. 2007.
<https://www.cia.gov/library/publications/the-world-factbook/index.html>. accessed 20 Aug. 2007.
- Ware, Alan. 1996. *Political Parties and Party Systems*. Oxford: Oxford University Press.