Essays on the Political Consequences of Unemployment

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Thesis Summary

Economic crises have political consequences. And in the wake of the most severe economic and financial crisis since the Great Depression, when unemployment rates remain stubbornly high throughout much of the developed world, a systematic understanding of these consequences is imperative. This thesis aims to contribute to such an understanding. By looking at both macro-level data from 23 OECD countries and Swiss micro-level data, it investigates the effect of changes in unemployment rates and employment status on voting behavior. In addition to that, it tests whether these effects depend on personal and circumstantial conditioning effects.

In line with the conventional view of the economic voting literature, the results from the macro-level analysis shows that rising unemployment rates tend to increase the electoral support for right of center parties at the expense of incumbent governments. Moreover, this rightward shift is magnified if unemployment increases further from already high levels, as well as during the recent crisis. Thus, the results suggest that the current crisis may bear considerable risk to political stability. At the same time, the micro-level results from Switzerland are more ambiguous, and thus indicate that the relationship between unemployment and voting may not be quite as mechanical after all. On the one hand, Swiss voters are more likely to vote for right-wing parties in times of rising unemployment. Also, when unemployed, they are increasingly more likely to vote for right-wing parties, and less likely to vote for social democratic parties, the higher their income loss from unemployment is. But on the other hand, the rightward shirt in times of increasing unemployment rates vanishes once we control for employment status. And the unemployed become increasingly less likely to vote for conservative parties the higher the increase in unemployment was, and more likely to vote for social democratic parties, if they have become unemployed just recently.

Overall, then, the results suggest that the current economic situation does indeed bear risk to political and social stability in the advanced world. At the same time, the strong impact of conditioning circumstances on the effects of both changes in the unemployment rate and employment status suggests that further research into that direction is worthwhile, as it provides a more nuanced understanding of the mechanisms through which economic circumstances impact voting behavior, and of the circumstances on which the strength of this impact depends.

Chapter 1

Introduction

More than five years after Lehman Brothers collapsed in September 2008, we still live through the consequences of what turned out to be the worst financial and economic crisis since the Great Depression. At the time of writing in early 2014, unemployment remains high in much of the developed world: 7 percent in the United States, 7.4 percent in the United Kingdom, 12.1 percent in the Eurozone, and much higher in some of its member countries: 15.7 percent in Portugal, 26.7 percent in Spain, and 27.4 percent in Greece. Youth unemployment is higher yet: it stands at 36.5 percent in Portugal, 57.4 percent in Spain, and 54.8 percent in Greece.[1] In addition to that, there is a growing concern that for many of the unemployed, finding a new job may be difficult. Recent research by Ghayad and Dickens (2012) finds that in the United States, there is a negative relationship between a person's duration of unemployment and her change of finding a new job. In peripheral Europe, a large number of the unemployed youth are poorly educated and thus badly prepared for work in a post-boom labor market (Buck 2013, Wise 2013). Finally, there is a growing concern among economists that recent technological progress will—at least over the medium-term—disproportionally benefit a well-educated minority and translate into job losses and stagnating living standards for many others (Economist 2014, Summers 2013). As a result of all of these factors, a large number of unemployed people may not only lack jobs, but also a perspective for a brighter future.

In many ways, the situation is reminiscent of the Great Depression, the economic consequences of which were even more devastating that those we are currently experiencing, and which eventually turned from an economic catastrophe into the political and social catastrophe of World War II. The point is not to argue that we are at the verge of drifting into a political catastrophe of the scale of World War II, but to emphasize that economic processes do not take place in a vacuum and have an impact on political and social phenomena—a fact that, while sounding obvious, is too often ignored when debating the appropriateness of public policy in response to the current crisis. Ahamed

[1] Except for the UK, for which data refers to the third quarter of 2013, numbers refer to November data. Data sources are BLS (2014) for the US, ONS (2014) for the UK, and Eurostat (2014) for the Eurozone.

(2010) vividly reminds us of this interaction of economics and political events when he describes how

> unemployment led to violence and revolt. In the United States, food riots broke out... In Britain, the miners went out on strike... Berlin was almost in a state of civil war. During the elections of September 1930, the Nazis, playing on the fears and frustrations of the unemployed and blaming everyone else—the Allies, the Communists, the Jews—for the misery of Germany, gained close to 6.4 million votes, increasing their seats in the Reichstag from 12 to 107. (p. 3)

And in fact, after being suspiciously absent from public discourse over the past five years, the political risks of high unemployment have started to enter the public conscience. In a recent piece in *The Economist*, Coggan (2013) predicts that because "around the world disillusionment with politicians and elections is running deep", and that in the year ahead "alarming numbers of voters will flirt with political extremes". "The financial crisis", he goes on, "has eroded the deal that underpinned democracy: that voters support politicians in return for greater prosperity". This, as he notes, has happened before: during the Great Depression in the 1930s, and in the South America in the 1970s and 1980s. In both cases, the result was a shift towards autocracy. An intriguing result that lends further weight to such comparisons is discussed in King et al. (2008), who address the seeming paradox of why a democratic system allows the rise of an extreme antidemocratic party that ultimately leads to the system's demise. The answer, they argue, is that voters generally vote for extremist parties when they expect to benefit from them, and seem to be discounting adverse consequences from a switch to an antidemocratic system. In other words, the authors show that authoritarian systems are not the artifacts of rare historical circumstances, but can be explained by a simple incentive-based voting model.

It is because of this that understanding the link between unemployment and voting behavior is so important, and it is the incompleteness of such an understanding that motivates this thesis. Because while there exists a vast literature on economic voting, these results are sometimes contradictory and the empirical frameworks often seem ad-hoc. Furthermore, the effect of being unemployed—that is, the effect of unemployment on the unemployed themselves—has, to the best of my knowledge, not been studied at all, something which is also true for the link between unemployment and politics in Switzerland. My aim in this thesis is to contribute to a broader and more systematic understanding of the political consequences of unemployment. In particular, the entire thesis is guided by the pursuit to address the following three questions:

Question 1: What is the effect of unemployment rates on voting behavior?

Question 2: What is the effect of being and becoming unemployed on voting behavior?

Question 3: Do these effects depend on certain circumstantial or personal conditioning factors?

To answer these questions, I first develop a simple conceptual framework that serves the dual purpose of organizing our thinking about the link between unemployment and voting, and guiding the empirical analysis in the two main chapters of the thesis. In the first of these two empirical chapters, I use macro-level data from 23 OECD countries and a Tobit estimation approach to investigate the relationship between changes in unemployment rates and voting behavior, and to test whether this relationship depends on the level of unemployment and was different during the Great Depression. In the second empirical chapter, I use individual-level data from the Swiss Household Panel and a multinomial logit estimator to focus on the voting behavior of the unemployed, and to test whether that voting behavior depends on the change in the unemployment rate, the income loss from unemployment, and the duration for which a person has been unemployed. In both of these chapters, I focus on an exhaustive set of party groups, which allows me to focus on the entire political spectrum, rather than on incumbent governments and right-wing extremist parties only.

The results suggest that, in line with previous findings, rising unemployment rates benefit right-wing and conservative parties at the expense of incumbent governments. Furthermore, the effect is found to be magnified once unemployment increases from already high levels, as well as during the current economic crisis. On a qualitative level, if not in terms of magnitudes, this shift to the right in times of increasing unemployment is partially confirmed in the micro level analysis with Swiss data, but is found to vanish once we control for individuals' employment status. The effect of being unemployed is somewhat ambiguous. On the one hand, the unemployed are found to become more likely to vote for right-wing parties, and less likely to vote for social democratic parties, the higher their income loss from being unemployment is. But on the other hand, they become increasingly less likely to vote for conservative parties the higher the increase in unemployment was, and more likely to vote for social democratic parties, if they have become unemployed just over the last year. Furthermore, there is no effect of unemployment rates and employment status on voting for the government, a finding that can likely be explained by the fact that the Swiss executive, the Federal Council, has the form of a quasi-permanent coalition of the country's major political parties and is thus not perceived as a single entity to be or not be supported.

These results and my research approach contribute to the existing literature in a number of ways. By adopting the economic voting theory from Duch and Stevenson (2008) and using it to think about the relationship between unemployment and voting, I provide a framework that has clear implications for empirical analysis and the choice of control variables, making the process and the empirical framework as such less ad-hoc. In addition to that, extending the original model by incorporating individual socio-economic backgrounds and thus allowing for heterogeneous voting decisions is a simple but useful way to think about differences in voting decisions. My general empirical approach to focus on an exhaustive and mutually-exclusive set of party groups provides a broader under-

standing of unemployment's effect on the political landscape than focusing on incumbent governments and right-wing extremist parties only, as is done in other economic voting studies. One reason there are no such studies so far may be that until recently, there was a lack of (conveniently) available data to carry out such an analysis. The dataset provided by Döring and Manow (2013) remedies this by providing comprehensive date on election results and party information for most OECD countries since at least 1945. The value of such an approach is demonstrated in my results of the macro-level analysis in chapter 4, which are in line with previous studies in the sense that they find higher unemployment to hurt incumbent governments and benefit right-wing extremist parties, but also show that conservative parties more broadly benefit from poor economic performance, too. To my knowledge, there are no economic voting studies thus far that look at whether the effect of increasing unemployment depends on the level of unemployment or was different during the Great Recession. Finally, my results from the micro-level analysis contribute to the literature in two ways: first because it is, to the best of my knowledge, the first study that looks at how unemployment changes the voting behavior of the unemployed themselves. And second because there are no studies that investigate the link between unemployment, or economics performance more generally, and voting behavior in Switzerland.

The remainder of this thesis is organized as follows: chapter 2 provides a concise overview of the relevant literature and its shortcomings, chapter 3 develops the conceptual framework and discusses its implications for the empirical analysis, chapter 4 takes a macro-level perspective and investigates the relationship between unemployment rates and voting across the OECD, while chapter 5 takes a micro-perspective and focuses on the effect of unemployment rates and employment status on voting in Switzerland. Finally, chapter 6 discusses the implications of these results and concludes.

Chapter 2

Literature Review

2.1 Theoretical Literature

Broadly speaking, there are two strands withing the literature on economic voting: the predominant one focusing on the relationship between economic performance and the electoral success of incumbent governments, and a much smaller one focusing on the relationship between economic performance and the electoral success of right-wing extremist parties. In the former, which focuses on incumbent governments, there are two theoretical views: the sanctioning view, and the selection view. The sanctioning view posits that voting decisions are fully retrospective in the sense that voters do reelect incumbents if they are satisfied with economic performance prior to the election and do not if they are not. Seminal contributions to this strand were Kramer (1971) and Fair (1978). At about the same time, contributions by Barro (1973) and, later, by Ferejohn (1986) showed that retrospective voting is rational. In these models, variations in economic voting, which cannot exist if all voters are rational and have full information, are explained by asymmetric information, an approach that has been incorporated, for instance, in Powell and Whitten (1993) and Hibbs (2006).

In contrast to the sanctioning view, the selection view starts with forward looking voters and argues that they elect parties based on their expected performance in office; voters will elect the party which they expect to provide them with the highers utility in the future. With respect to incumbents, this means that they still take into account past economic performance, but only because they expect to learn something about the incumbents' future competence by doing so. The literature goes back to Stigler (1973), who, in a critique on Kramer (1971) argued in favor of a selection perspective. At the same time, he noted that voters invariably face uncertainty about incumbent competence because the signal they can extract from past and current economic performance is imperfect. This is because they cannot know with certainty whether and to what degree the shocks to the economy they observe are driven by economic policy, and thus of the incumbents' responsibility, or by some exogenous economic force. Duch and Stevenson

(2008) explain that this caveat was unresolved until the development of the rational expectations theory. Then, it was Alesina et al. (1997) who showed that the logic of rational expectations implies that policy-makers cannot have a permanent and predictable impact on the economy because such policy would be anticipated by rational actors. It is based on this logic that the conceptual framework I use in this thesis, and which is presented in chapter 3, is built.

There are fewer attempts to model the relationship between economic performance and right-wing exteremist parties. This strand of the literature is dominated by empirical contributions that either use ad-hoc theoretical models, such as Brückner and Grüner (2010), or are guided by hypotheses that are based on intuition and previous empirical research, as in Golder (2003). Major exceptions are Rydgren (2005) and Friedman (2005). Rydgren argues that it is not so much national demand factors that explain the rise of extreme right-wing populist parties since the early 1980s, but rather the diffusion of a new "master frame", or party platform, which allowed for a successful supply of these parties. The emergence of this master frame is, however, not independent of economic circumstances. Rydgren thinks that after right-wing extremist parties were discredited in the wake of World War II and during the three decades of social- and economic development that followed it, it was the increase in economic volatility in the wake of the oil shocks in the 1970s that led to a loss in popularity of the political establishment. This opened the door for the return of right-wing extremism. Following the electoral success of the National Front in France in 1984, the party's platform spread throughout Western Europe.

In line with these observations, Friedman (2005) argues that, ultimately, the reason for the shift to right-wing extremism is that in times of economic hardship, people tend to become intolerant—not least against immigrants—and support parties that run on corresponding platforms, which tend to be right-wing extremist parties. How exactly does this come about? Friedman starts with the claim that people evaluate their well-being against two benchmarks: how well they are doing relative to others, and how they themselves have progressed over time.[1] The key of the argument is that these two benchmarks are partial substitutes: when voters feels that their situation has improved lately, their relative position becomes less important. Conversely, once they feel a lack of progress, maybe because of poor economic performance overall, or because of poor personal luck, progress becomes a zero-sum game and people's instinct to protect their relative status takes over. More often than not, Friedman argues, this instinct manifests itself in intolerance, racial and religious discrimination and antipathy against immigrants—emotions that are often captured by the platform of extreme right-wing parties. Especially together with the "master

[1]There is a large body of literature—going all the way back to the classical economists—that recognizes the importance of progress, independently of the level of wealth. Also, empirical results from behavioral economics and psychology provide strong support for this view. For the seminal paper in the field, see Kahneman and Tversky (1979), for insightful overviews of the subject, see Kahneman (2011) and Layard (2006).

frame" hypothesis in Rydgren (2005), this stylized view of voting behavior provides a useful framework to think about the asymmetric electoral effect of increasing unemployment that we often observe. Also, Friedman himself demonstrates that the framework goes a long way in helping us understand important events in Western history. When surveying the major social and political events over the past two centuries in the United States, the United Kingdom, France and Germany he finds a strong pattern where the turn away from openness, tolerance and the weakening of democratic institutions followed in the wake of economic stagnation, when people's confidence in a brighter future was diminished.

2.2 Empirical Literature

The empirical literature, too, is dominated by contributions that focus on incumbent government performance. The literature is vast, and I do not attempt to summarize it in its entirety but instead focus on the sub literatures that are relevant for my discussion here. Seminal contributions to the overall literature are Lewis-Beck (1988) and Duch and Stevenson (2008), and recent summaries are provided in Lewis-Beck and Paldam (2000) and Hibbs (2006). One relevant sub-literature is a series of studies that examine the relationship between economic performance and incumbent governments in times of economic crises. (Singer 2011) finds that the economy is particularly relevant for voting decisions in times of recession. A finding that is broadly confirmed by a series of studies that look at the performance of incumbent governments in the current crisis (Anderson and Hecht 2012, Bellucci et al. 2012, Carkoglu 2012, Clarke et al. 2011, Fraile and Lewis-Beck 2012, Freire and Sanatana-Pereira 2012, Lewis-Beck and Nadeau 2012, Lobo and Lewis-Beck 2012, Marsh and Mikhaylov 2012, Nezi 2012). All of the contributions above rely on micro-level data. Contributions by Bartels and Achen (2008), Bartels (2011) and Bartels (2013a), in contrast, aim to provide a broad overview and use cross-country macro data-level data instead. The results are broadly in line with the above in that they confirm the link between poor economic performance, measured either by poor GDP growth or a rise in unemployment, and the negative effect on incumbents electoral prospects.

The question whether extremist parties benefit from poor economic performance has been addressed and answered in the affirmative in various studies for a number of different periods. Bromhead et al. (2013) show that the Great Depression has benefited right-wing parties considerably in the period between in the 1920s and 1930s, particularly as poor economic conditions endured. In line with these findings, Stögbauer (2001), who uses a longitudinal data-set to investigate the effect of unemployment on economic voting in the Weimar Republic, concludes that unemployment had a strong impact on NSDAP support and that the economic crisis was the main determinant for the collapse of the republic. The comparative literature on the determinants of extremist right-wing party success across countries was started by Jackman and Volpert (1996) who established that these parties benefit from high unemployment rates and proportional electoral systems

and suffer from higher electoral thresholds. The relationship between poor economic performance and extremist right-wing party success is supported both by Golder (2003), who finds that extreme right-wing parties benefit from high unemployment, high immigration and the interaction thereof, as well as by Brückner and Grüner (2010), who find a positive relationship between poor GDP growth and right-wing extremist party popularity. Along similar lines, Falk and Zweimüller (2011) find that in Germany, right-wing extremist crimes occur more frequently when unemployment is high, and that differences in the level of unemployment is the main determinant of differences in right-wing extremist crime rates across East- and West German states.

In contrast, a number of studies suggest that poor economic performance is negatively related to the success of right-wing extremist parties. Knigge (1998) used the biannual Eurobarometer and a reduced sample (Belgium, France, the Netherlands, West Germany, Denmark, and Italy) between 1984 and 1993 and found that extreme right-wing parties benefited from high levels of immigration and political dissatisfaction, while the effect of high unemployment was negative, results that were confirmed by Lubbers et al. (2002) and Arzheimer and Carter (2006) with somewhat different research designs. Lubbers et al. (2002) show that cross-national differences in support of extreme right-wing parties are driven primarily by differences in public opinion on immigration and democracy, the share of non-Western immigrants and, most importantly, the characteristics of the right-wing parties themselves. Similarly, Oesch (2008) find the desire for cultural protectionism and satisfaction with democracy to dominate economic concerns as determinants of right-wing populist party support in Austria, Switzerland, Belgium, Norway and France.

2.3 Shortcomings of the Existing Literature

There are at least three shortcomings of the existing literature. First, there is a lack of an agreed upon general framework that guides empirical analysis, a shortcoming that is particularly pronounced in macro-level analysis. As we have seen in the discussion above, results are often conflicting, driven, one has the impression, by an ad-hoc choice of control variables. Second, there exist no comprehensive studies that assess the impact of economic voting on the political landscape as a whole. All studies either focus on incumbent governments or—mostly right-wing—extremist parties. Even if it is these groups that should turn out to be most affected by changes in economic performance, disregarding all other political parties a priori prevents us from gaining a more complete pictures of how changes in the economy affect the political landscape. Finally, there is a surprising lack of research on the behavior of the unemployed themselves. Given that the believe that poor economic conditions alter voters' political behavior is at the heart of the economic voting literature, it seems odd that the behavior of those that are most affected by dire economic conditions is not studied in detail. In what follows, I aim to address all of these three shortcomings.

Chapter 3

Unemployment and Voting: A Conceptual Framework

3.1 Introduction

In this chapter, I develop a model of vote choice that serves as the conceptual framework for the empirical chapters that follow. The contribution of this thesis is empirical in nature, so a theoretical model is useful only to the extent to which it allows for comparative statics exercises that inform and guide the empirical analysis. The model's implications for the subsequent empirical part are discussed in section 3.4. This section is self-explanatory so that the preceding two section, which serve to build up the model, can be skipped without consequences for the intuitive understanding of the discussion in section 3.4.

The model I develop is based on Duch and Stevenson (2008), who build on seminal contributions by Alesina and Rosenthal (1995), Alesina and Rosenthal (1996) and Persson and Tabellini (1990). Apart from changing the steps to develop the model to (I hope) enhance clarity, and from integrating at once different extensions that are presented separately in the book, I extend the model in two substantive ways: first, my focus is on the change in the rate of unemployment, rather than on the growth rate of output. Second, I divert from the pure rational expectations framework of the original model by allowing for individual specific voting that is determined by a voter's socio-economic background. These simple extensions make the model a useful conceptual framework to think about the impact of unemployment on voting decisions. Furthermore, by integrating socio-economic backgrounds, the importance of which is acknowledged in most empirical studies on economic voting, the model allows for heterogeneous voting decisions, making model predictions more realistic and more useful for the purpose of this study.

The model follows the selection view of economic voting, which, as I have discussed in the previous chapter, builds on rational-expectations theory. By design, demands on voters' mental capacity are high in these models, and the usual caveats and limitations

apply.[1] But the model captures many of the empirical regularities observed and thus seems a good starting point to organize out thoughts about voting decisions. In particular, the model is designed to capture voting decisions in a world where multiple parties compete for unified control of the executive in a plurality system. I ignore further extensions to multi-party governments. Such models considerably complicate the mathematical notation, while they do not change the underlying logic of the arguments and thus add little to an intuitive understanding of the issue. To develop the model, I start by introducing the baseline two party model in section 3.2, before extending it to a world with multiple decisions makers, multiple parties, and expressive voting in section 3.3. The implications of the model for the empirical analysis are discussed in the section 3.4.

3.2 A Simple Model of Vote Choice

The model starts from the assumption that, conceptually, an individual's voting decision can be represented in the following two steps: first, the individual assigns a value to each option in a set of exhaustive and mutually exclusive alternatives (vote for any party, abstain, casting a blank ballot). This value is determined by alternative specific and individual specific characteristics, as well as a random element. Second, the individual chooses the alternative with the highest value. Voting is thus thought of as a discrete choice, and a theory on economic voting has to clarify the relationship between an individual's perception of economic performance and his or her probability of voting for any given alternative. Economic voting, as defined in Duch and Stevenson (2008) and as used in this thesis is thus a very general concept: it is the change in a voter's support for a given voting alternative that is caused by a change of his perception of economic performance. In this general sense, economic voting is thus neither directional nor incumbency oriented. Throughout this thesis, I use some concept of unemployment as a proxy for individual's perception of economic performance. This presupposes, of course, that people's perception are in line with actual economic performance in general and with the actual unemployment rate in specific. Duch and Stevenson (2008) provide evidence that this is indeed the case: people's perception of the state of the economy are in line with what that state actually is.

To build up the model, let us start with a world where two parties compete for unified control of the executive, and where we assume that the way this executive sets economic policy is through directly controlling the rate of inflation in the following expectations-augmented Philips curve:

$$\Delta u_{gt} = \Delta \bar{u}_t - (\pi_{gt} - \pi^e_{gt}) + \eta_{gt} \tag{3.1}$$

[1] For elaborate and critical discussions of rational expectation models, see, for instance, Caballero (2010) and Stiglitz (2011).

where Δu_{gt} is the change in the unemployment rate between periods t and $t-1$ given the policy of incumbent government g, $\Delta \bar{u}_t$ is the change in the "natural rate" of unemployment, π_{gt} is the inflation rate in period t that is, by assumption, directly chosen by incumbent g, π^e_{gt} is the rate of inflation voters expect the incumbent to choose, and η_{gt} is a random shock to the economy. This random shock has two elements: the first, ϵ_{gt}, captures the incumbent's managerial skills and includes any unobserved economic impact of incumbent behavior that is not constant over time and administration. Following Duch and Stevenson (2008), I call this the "competency shock". The second element, ξ_t, captures exogenous shocks to unemployment that are independent of the administration's behavior. Thus, we have:

$$\eta_{gt} = \epsilon_{gt} + \xi_t. \tag{3.2}$$

Voters cannot observe either of these two shocks directly. But they can form expectations about the competency shock because the economy partially depends on it. To make these inferred expectations useful in forecasting the incumbent's future competence, we assume competence to follow a first-order moving average process, so that competence in period t is given by:

$$\epsilon_{gt} = \mu_{gt} + \mu_{gt-1}. \tag{3.3}$$

where we assume that $\mu_{gt} \sim N(0, \sigma^2_\mu)$. Similarly, we assume the exogenous shock to be distributed as $\xi_t \sim N(0, \sigma^2_\xi)$. Putting things together, the change in the unemployment rate is thus governed by:

$$\Delta u_{gt} = \Delta \bar{u}_t - (\pi_{gt} - \pi^e_{gt}) + (\mu_{gt} + \mu_{gt-1}) + \xi_t \tag{3.4}$$

Voters are identical and their utility v in period $t+1$ as a function of incumbent g's policies is given by:

$$v_{gt+1}(\pi_{gt+1}, \Delta u_{gt+1}) = -\frac{1}{2}\pi^2_{gt+1} - b\Delta u_{gt+1} \qquad b > 0. \tag{3.5}$$

This says that a voter derives positive utility from a decrease in the unemployment rate and shuns price changes and rising unemployment, with the parameter b indicating the relative weight the voter attaches to unemployment and inflation. The functional form of the utility function is standard in the literature. As long as utility is decreasing in unemployment, the substantive results are not dependent on the specific form choose. For further discussion, see Duch and Stevenson (2008). The voter's future utility thus depend on the party elected into office today, so that he must forecast future economic performance under different incumbents. It is assumed that the voter forms these forecasts rationally, using all the information available to him.

Politicians, for their part, are assumed to be interested in being in office only. They

do not follow their personal preferences with regard to economic policy but choose the policy that, given the maximization behavior of voters, maximizes their chance of being elected. This implies that all parties choose the same policies and that the only way they do influence the economy is through their managerial competence, which is captured in ϵ_{gt}. In particular, given that voter's utility for any given change in the unemployment rate is maximized if inflation is zero, all parties will set the rate accordingly. Because our rational voter knows that, equation equation 3.4 reduces to:

$$\Delta u_{gt} = \Delta \bar{u}_t + (\mu_{gt} + \mu_{gt-1}) + \xi_t. \tag{3.6}$$

We have seen above that our voter's utility in period $t+1$ depends on the policies of the incumbent government in that period, and that because any incumbent party will set inflation equal to zero, the only way incumbents can influence economic outcomes is through their managerial competence. This means that when our voter is forming expectations about economic outcomes under different incumbents at the time of the election in period t, he knows that all he must do is to form expectations about the competency shock from a given incumbent party g in period $t+1$, $E[\epsilon_{gt+1}]$. And because our voter is rational, he conditions this expectation on all the information available to him at the time. To facilitate this information formation process, a key assumption is that the voter learns the incumbent's competence with a one period delay so that in period t he knows μ_{gt-1} but not yet μ_{gt}. If we rearrange equation 3.6 so that all the terms that are observable to the voter in period t are on the right hand side we get:

$$\mu_{gt} + \xi_t = \Delta u_{gt} - \Delta \bar{u}_t - \mu_{gt-1}. \tag{3.7}$$

The voter also observes the sum of the two terms of the left hand side, but is unable to observe them separately, so that he cannot know to what extend the shock in period t results from incumbent competence in that period, and to what extend extend it results from exogenous economic factors. But the available information helps to form the conditional expectation our voter is aiming for. Defining the left hand side as k_{gt}, he can now compute the expectation of μ_{gt} given k_{gt}. For this, we need the distributions of both of these terms. Above, we have assumed $\mu_{gt} \sim N(0, \sigma_\mu^2)$. Also, the distribution of k_{gt} is given by $k_{gt} \sim N\left(0, \sigma_\mu^2 + \sigma_\xi^2\right)$. The conditional expectation is thus given by:[2]

$$E[\mu_{gt}|k_{gt}] = \left(\frac{\sigma_\mu^2}{\sigma_\mu^2 + \sigma_\xi^2}\right)(\Delta u_{gt} - \Delta \bar{u}_t - \mu_{gt-1}). \tag{3.8}$$

To arrive at $E[\epsilon_{gt+1}]$ we need two additional steps: first, note that $E[\mu_{gt}|k_{gt}] = E[\mu_{gt}|\Delta u_{gt}]$. Second, by taking expectations in equation 3.3 we can see that:

$$E[\epsilon_{gt+1}] = E[\mu_{gt+1}] + E[\mu_{gt}|\Delta u_{gt}] = E[\mu_{gt}|\Delta u_{gt}]. \tag{3.9}$$

[2]The derivation of the conditional expectation in equation 3.8 is provided in appendix A.1.

This says that given our assumptions, the voter can form expectations about the incumbent's competence in the next period, ϵ_{gt+1}, given the observed change in the rate of unemployment at the time of the election in period t. Armed with this, we can now compare the voter's expected utility by voting for the incumbent with that from voting for the challenger. The voter's expected utility from voting for incumbent g is simply his expected utility in the next period if g is in office. This is given by:

$$\begin{aligned} E[v_{gt+1}|vote_g] &= E[v(\pi_{gt+1}, \Delta u_{gt+1})] \\ &= -b\left(\Delta\bar{u}_t + \left(\frac{\sigma_\mu^2}{\sigma_\mu^2 + \sigma_\xi^2}\right)(\Delta u_{gt} - \Delta\bar{u}_t - \mu_{gt-1})\right) \end{aligned} \tag{3.10}$$

The voter has no basis to form expectations about challenger k's economic competence, so that his expected utility in period $t+1$, given that k is in office, is simply given by:

$$\begin{aligned} E[v_{kt+1}|vote_k] &= E[v(\pi_{kt+1}, \Delta u_{kt+1})] \\ &= -b\Delta\bar{u}_t \end{aligned} \tag{3.11}$$

In a two party world, the voter does not have an incentive to vote strategically and will simply vote for the party that he expects to maximize his utility in the next period. Hence, the he will vote for the incumbent if:

$$\begin{aligned} & E[v_{gt+1}|vote_g] > E[v_{kt+1}|vote_k)] \\ -b\left(\Delta\bar{u}_t + \left(\frac{\sigma_\mu^2}{\sigma_\mu^2 + \sigma_\xi^2}\right)(\Delta u_{gt} - \Delta\bar{u}_t - \mu_{gt-1})\right) &> -b\Delta\bar{u}_t \\ b\left(\frac{\sigma_\mu^2}{\sigma_\mu^2 + \sigma_\xi^2}\right)(\Delta u_{gt} - \Delta\bar{u}_t - \mu_{gt-1}) &< 0 \end{aligned} \tag{3.12}$$

Equation 3.12 has an appealing interpretation: it says that for given values of b, $\left(\frac{\sigma_\mu^2}{\sigma_\mu^2+\sigma_\xi^2}\right)$, and μ_{gt+1}, our voter supports the incumbent if the observed change in the unemployment rate has been lower than the change in the natural rate. In other words: he votes for incumbent g if thanks to g's policies, the economy has performed above its benchmark performance. But this contribution is weighted by the degree to which the government can be held responsible for the economy's performance, which is captured by the competency signal $\left(\frac{\sigma_\mu^2}{\sigma_\mu^2+\sigma_\xi^2}\right)$. Intuitively, the more the variance of managerial competency shocks contributes to the variance of the total shock, the more responsible the government is for economic performance.

3.3 A (Slightly) More Realistic Model of Vote Choice

The model I have developed so far has two important limitations. One is that the competency signal forces us to speculate about the relative size of σ_μ^2 and σ_ξ^2, two terms of which, as Duch and Stevenson (2008) note, we have no substantive interpretation. Another is that the model focuses on two parties competing for unified executive power. This is useful to think about voting in countries such as the United States and the United Kingdom. But most countries have a multi-party system with more than two parties competing for executive power. In this section, I address each of these two shortcomings in turn.

3.3.1 Two Types of Decision Makers

To obtain a more useful version of the competency signal, I follow Duch and Stevenson (2008) in introducing two different decision makers: electorally dependent decisions makers (EDDs) and non-electorally dependent decision makers (NEDDs). EDDs are elected government officials and correspond to the incumbent in the previous section. NEDDs are all other decision makers who might have an impact on the economy, but who's decision power does not depend on the electoral results. Such actors can include firms, individuals, interest groups, foreign leaders and international organizations, among others. Let us start by remembering equation 3.6 above:

$$\Delta u_{gt} = \Delta \bar{u}_t + \eta_{gt}.$$

Now, with two types of decision makers, this becomes:

$$\Delta u_{gt} = \Delta \bar{u}_t + \sum_{l=1}^{N} \omega_{glt} + \sum_{l=1}^{M} \psi_{lt} \tag{3.13}$$

where ω_{glt} is the growth shock associated with the l'th decision of the EDD, and ψ_{lt} is the growth shock associated with the l'th decision of the NEDD. Similar to above, we assume that the l'th shock is persistent and governed by a first-order moving average process of the form $\omega_{glt} = \mu_{glt} + \mu_{glt-1}$. We thus assume that the l'th shock in period t and $t-1$ are of the same type. Plugging this into equation 3.13 we get:

$$\Delta u_{gt} = \Delta \bar{u}_t + \sum_{l=1}^{N} (\mu_{glt} + \mu_{glt-1}) + \sum_{l=1}^{M} \psi_{lt} \tag{3.14}$$

Now, the procedure to arrive at the voter's expectation of the incumbent's competence in period $t+1$ conditional on his information in time t is the same as in the previous section. We start by rearranging equation 3.14 to get:

$$\sum_{l=1}^{N} \mu_{glt} + \sum_{l=1}^{M} \psi_{lt} = \Delta \bar{u}_t - \Delta u_{gt} + \sum_{l=1}^{N} \mu_{glt-1}. \tag{3.15}$$

and define the left hand side as k_{gt}. To find the distribution of this expression, note that $\sum_{l=1}^{N} \mu_{glt}$ is the sum of normally distributed random variables, each with expectation zero and variance σ_μ^2, so that $\sum_{l=1}^{N} \mu_{glt} \sim N(0, N\sigma_\mu^2)$. Likewise, $\sum_{l=1}^{M} \psi_{lt} \sim N(0, M\sigma_\psi^2)$. The distribution of k_{gt} is thus given by $k_{gt} \sim N(0, N\sigma_\mu^2 + M\sigma_\psi^2)$, and the conditional expectation of $\sum_{l=1}^{N} \mu_{glt}$ given k_{gt} is:[3]

$$E\left[\sum_{l=1}^{N} \mu_{glt} | k_{gt}\right] = \left(\frac{N\sigma_\mu^2}{N\sigma_\mu^2 + M\sigma_\xi^2}\right)\left(\Delta u_{gt} - \Delta\bar{u}_t - \sum_{l=1}^{N} \mu_{glt-1}\right). \tag{3.16}$$

Following a logic equivalent to the previous section, the voter's expected utility in period $t+1$ from voting for the incumbent is:

$$\begin{aligned} E\left[\sum_{l=1}^{N} \mu_{glt+1} | vote_g\right] &= E[v(\pi_{gt+1}, \Delta u_{gt+1})] \\ &= -b\left(\Delta\bar{u}_t - \left(\frac{N\sigma_\mu^2}{N\sigma_\mu^2 + M\sigma_\xi^2}\right)\left(\Delta u_{gt} - \Delta\bar{u}_t - \sum_{l=1}^{N} \mu_{glt-1}\right)\right) \end{aligned} \tag{3.17}$$

Similarly, expected utility from voting for the opposition party k is given by:

$$\begin{aligned} E\left[\sum_{l=1}^{N} \mu_{klt} | vote_k\right] &= E[v(\pi_{kt+1}, \Delta u_{kt+1})] \\ &= -b\Delta\bar{u}_t \end{aligned} \tag{3.18}$$

Also, just as in the simple model above, the voter will support the incumbent if:

$$\begin{aligned} E\left[\sum_{l=1}^{N} \mu_{glt+1} | vote_g\right] &> E\left[\sum_{l=1}^{N} \mu_{klt} | vote_k\right] \\ -b\left(\Delta\bar{u}_t - \left(\frac{N\sigma_\mu^2}{N\sigma_\mu^2 + M\sigma_\xi^2}\right)\left(\Delta u_{gt} - \Delta\bar{u}_t - \sum_{l=1}^{N} \mu_{glt-1}\right)\right) &> -b\Delta\bar{u}_t \\ b\left(\frac{N\sigma_\mu^2}{N\sigma_\mu^2 + M\sigma_\xi^2}\right)\left(\Delta u_{gt} - \Delta\bar{u}_t - \sum_{l=1}^{N} \mu_{glt-1}\right) &< 0 \end{aligned} \tag{3.19}$$

3.3.2 Multiple Parties and Expressive Voting

As a final step, let us extend the model from a two-party world to a multi-party world. I again follow Duch and Stevenson (2008) in doing so. I will use the index k to refer to a

[3]The derivation of the conditional expectation in equation 3.16 follows from the derivation of equation 3.8, which is provided in appendix A.1.

generic opposition party, and **A** to denote the set of all opposition parties. In a world of multiple parties it is useful to allow for the possibility that a given voter i derives some utility, γ_{ijt}, from the act of voting for a given party j in period t, independent of that party's economic competence. The term thus captures all non-economic reasons for voter i to vote for party j in period t. In such a world of expressive voting, voters are not necessarily identical any longer. They still forecast incumbent competence in period $t+1$ in the same rational way, but they may differ with respect to the utility they receive from expressive voting. Following the logic of the preceding sections, the expected utility of voter i in period $t+1$ from voting for any given opposition party k is given by:

$$E[v_{ikt+1}] = \gamma_{ijt} - b\Delta\bar{u}_t \quad \forall k \in \mathbf{A} \tag{3.20}$$

The only substantial complication in a multi-party context is that because voters are assumed to be rational, we have to allow for strategic voting. Taking strategic voting into account, we can write the voter's expected utility from voting for party j relative to abstaining as:[4]

$$E[v|vote_j] - E[v|vote_0] = \sum_{j' \in \mathbf{J}} P_{jj'}(v_{ijt+1} - v_{ij't+1}) \tag{3.21}$$

where J is the set of all parties, $E[v|vote_j]$ is the expected utility from voting for party j, $E[v|vote_0]$ is the expected utility from abstaining, v_{ijt} and $v_{ij't+1}$ are the utilities the voter derives only when party j or j' wins the election. Finally, $P_{jj'}$ is what Duch and Stevenson (2008) call the "pivot probability": the probability that parties j and j' are tied for first place in the election. Thus, for the incumbent equation 3.21 becomes:

$$\begin{aligned} E[v|vote_g] - E[v|vote_0] &= \sum_{k \in \mathbf{A}} P_{gk} \left(E[v_{igt+1}] - E[v_{ikt+1}] \right) \\ &= \gamma_{igt} - b \left(\sum_{k \in \mathbf{A}} P_{gk} \right) \left(\frac{N\sigma_\mu^2}{N\sigma_\mu^2 + M\sigma_\xi^2} \right) \left(\Delta u_{gt} - \Delta\bar{u}_t - \sum_{l=1}^{N} \mu_{glt-1} \right) \end{aligned} \tag{3.22}$$

Correspondingly, for each opposition party k we have:

[4]The implications of strategic voting have been worked out by McKelvey and Ordeshook (1972) and are further discussed in Duch and Stevenson (2008).

$$
\begin{aligned}
E[v|vote_k] - E[v|vote_0] &= P_{gk}(E[v_{ikt+1}] - E[v_{igt+1}]) \\
&\quad + \sum_{k' \in \mathbf{A}} P_{kk'}(E[v_{ikt+1}] - E[v_{ik't+1}]) \\
&= \gamma_{ikt} + P_{kg} b \left(\frac{N\sigma_\mu^2}{N\sigma_\mu^2 + M\sigma_\xi^2} \right) \left(\Delta u_{gt} - \Delta \bar{u}_t - \sum_{l=1}^{N} \mu_{glt-1} \right)
\end{aligned} \tag{3.23}
$$

There will be as many of these expressions as there are opposition parties. If, for the sake of simplicity, we assume that $P_{gk} > 0$ for only one opposition party, then our voter will vote for the incumbent rather than that opposition if:

$$
\begin{aligned}
\gamma_{igt} - bP_{gk} \left(\frac{N\sigma_\mu^2}{N\sigma_\mu^2 + M\sigma_\xi^2} \right) \left(\Delta u_{gt} - \Delta \bar{u}_t - \sum_{l=1}^{N} \mu_{glt-1} \right) \\
-\gamma_{ikt} - P_{gk} b \left(\frac{N\sigma_\mu^2}{N\sigma_\mu^2 + M\sigma_\xi^2} \right) \left(\Delta u_{gt} - \Delta \bar{u}_t - \sum_{l=1}^{N} \mu_{glt-1} \right) > 0 \\
\frac{(\gamma_{igt} - \gamma_{ikt})}{\left(\frac{N\sigma_\mu^2}{N\sigma_\mu^2 + M\sigma_\xi^2} \right)} - 2bP_{gk} \left(\Delta u_{gt} - \Delta \bar{u}_t - \sum_{l=1}^{N} \mu_{glt-1} \right) > 0
\end{aligned} \tag{3.24}
$$

3.4 Comparative Statics and Empirical Implications

The final condition we arrived at in developing the model above was equation 3.24, which states that voter i will vote for the incumbent party g rather than for a given opposition party k if:[5]

$$
\frac{(\gamma_{igt} - \gamma_{ikt})}{\left(\frac{N\sigma_\mu^2}{N\sigma_\mu^2 + M\sigma_\xi^2} \right)} - 2bP_{gk}(\Delta u_{gt} - \Delta \bar{u}_t - c_{gt-1}) > 0. \tag{3.25}
$$

The aim of this section is to show how this condition can help us guide the empirical analysis in the two subsequent chapters. Before doing this, let us make sure we understand what it says. The condition has four substantive elements, and I will discuss each of these in turn. The key element is what we can think of as the incumbent government g's contribution to recent economic performance, $(\Delta u_{gt} - \Delta \bar{u}_t - c_{gt-1})$, where Δu_{gt} is the change in the unemployment rate between period t and $t-1$ that has resulted from g's economic policies, $\Delta \bar{u}_t$ is the change of the natural rate of unemployment over the same period, and c_{gt-1} is a measure of the incumbent's competency in the previous period. Intuitively, the difference between the first two terms captures how the economy has

[5]For the sake of simplicity, I substitute $\sum_{l=1}^{N} \mu_{gt-1}$ from equation 3.24 with c_{gt-1}. This simplifies the notation while preserving the substantive meaning of the term.

performed under g's policies relative to a situation where these policies had not been in place. Past government competence is subtracted because, ultimately, our voter cares about his utility in period $t+1$, which is a function of economic performance in that same period, which, in turn, is a function of incumbent government g's competence. By assumption, g's contribution to economic performance in time t is a function of its competence in time t and in time $t-1$, and the voter learns about incumbent competence with a one period lag. Thus, our voter knows that g's competence in $t+1$ is partly determined by its competence in t. And to extract a signal about that competence, he subtracts from economic performance in time t the incumbent's competence from the previous period, c_{gt-1} to arrive at this part of economic performance that is only a function of g's competence in period t.

The competency signal, $\left(\frac{N\sigma_\mu^2}{N\sigma_\mu^2+M\sigma_\xi^2}\right)$, tells the voter to what degree the incumbent government is responsible for $(\Delta u_{gt} - \Delta\bar{u}_t - c_{gt-1})$. It does so because if we abstract from the variances, which we safely can, the term indicates how many economically relevant decisions are taken by the incumbent (N), relative to those taken by other decision makers (M). Thus, the higher the share of economically relevant decisions taken by the incumbent party, the higher its responsibility for economic outcomes, and the more weight economic performance has in the voting decision, relative to the term in the numerator, $(\gamma_{igt} - \gamma_{ikt})$. In Duch and Stevenson (2008) the term $(\gamma_{igt} - \gamma_{ikt})$ denotes the utility difference voter i derives from the act of voting for the incumbent rather than for the opposition, which is why I refer to it above as expressive voting. We can, however, also think of it in broader terms, as it effectively captures all non-economic related reasons of voter i to vote for incumbent g or an opposition k in period t. I deviate from Duch and Stevenson (2008) in making these utilities individual specific, thinking of them as being a function of voters' socio-economic backgrounds. It is this small change that introduces heterogeneity into the voting outcomes. The fourth substantive element is P_{gk}, which is the probability that incumbent party g will tie the opposition party k for first place in the election. The higher this probability, the more relevant becomes the incumbent's economic track record. Finally, b is a positive constant.

So, what the entire condition says is that when deciding whether to vote for the incumbent g or the opposition k, voter i takes into account two elements: a forecast of the incumbent's economic competence in period $t+1$, $(\Delta u_{gt} - \Delta\bar{u}_t - c_{gt-1})$, and his utility difference from the act of voting for g instead of k, $(\gamma_{igt} - \gamma_{ikt})$. The condition further says that the weight he attaches to each of these two elements depends on the reliability of his forecast of incumbent competence in the next period, $\left(\frac{N\sigma_\mu^2}{N\sigma_\mu^2+M\sigma_\xi^2}\right)$, and on the probability that the opposition ties the challenger in the election, P_{gk}. To build intuition and to link the model with simple retrospective economic voting, I will start the discussion with the most simple case and then play around with various elements to see how they condition the conclusion from that simple case. Let us assume, for a start, that $(\gamma_{igt} - \gamma_{ikt})$ and c_{gt-1} are both zero, that $\left(\frac{N\sigma_\mu^2}{N\sigma_\mu^2+M\sigma_\xi^2}\right)$ is one, and that P_{gk} in non-zero so that we can drop

all of these terms without changing anything of consequence. In this case, equation 3.25 reduces to:

$$-2b(\Delta u_{gt} - \Delta \bar{u}_t) > 0. \tag{3.26}$$

This is simple retrospective economic voting. A voter will vote for the incumbent if the change in the unemployment rate is below the benchmark, which in this model is the change in the "natural rate" of unemployment. If not, he will vote for the opposition. This is the simple idea that underlies the empirical literature on retrospective economic voting such as Bartels and Achen (2008). Clearly, then, the change in the rate of unemployment relative to some appropriate benchmark remains an important element for the empirical analysis. However, this being the world of rational expectations, our voter is not primarily interested in current unemployment but in future unemployment and in the (dis)utility this will generate for him. In fact, the only reason the unemployment in period t is of interest to him is because it is determined in part by the incumbent party's competence in that period, and because the incumbent party's competence in period t lets him infer something about its competence in $t+1$.[6] This becomes more transparent once we allow c_{gt-1} to be non-zero, so that our condition becomes:

$$-2b(\Delta u_{gt} - \Delta \bar{u}_t - c_{gt-1}) > 0. \tag{3.27}$$

Given that c_{gt-1} is the incumbent's competence in period $t-1$, we now see that it is only the part of $\Delta u_{gt} - \Delta \bar{u}_t$ that is not determined by past competence, and thus the result of competence in period t, that is relevant for the voter's decision. One of the key assumptions of the model, made on page 12, is that the voter knows the incumbent's competence with a one period delay. Hence at the time of the election in period t, the voter does know c_{gt-1}. In reality, the voter's decision is unlikely to be determined by economic conditions only. There is, for instance, a large literature on expressive voting, which finds that people often see voting as a way to express themselves or to make a personal statement (Brennan and Hamlin 1998, Hamlin and Jennings 2009). In addition to expressive voting, there are likely to be other, non-economic, policy issues such as inequality, immigration or environmental concerns that drive voter's voting decision. The model captures this in the utility difference from the act of voting for the incumbent and voting for the opposition, $(\gamma_{igt} - \gamma_{ikt})$. So, if we allow this term to be non-zero, our condition becomes:

$$(\gamma_{igt} - \gamma_{ikt}) - 2b(\Delta u_{gt} - \Delta \bar{u}_t - c_{gt-1}) > 0. \tag{3.28}$$

One implication of this is that a voter who is personally attached to the incumbent may vote for it even if economic performance under incumbent policy has been poor.

[6] This is because we assumed on page 11 that incumbent competence is generated by a first-order moving average process.

Importantly, $(\gamma_{igt} - \gamma_{ikt})$ is voter specific (thus the additional subscript i). This is a deviation from the original model in Duch and Stevenson (2008), who introduce such a term, but assume it to be the same for all voters. We now have the two elements that enter the voter's decision making process: the rational forecast of economic competence and the voter specific utility difference from the act of voting. What we are left with is to understand how he weights these two elements. There are, again, two things to take into account. First, the voter takes into account the reliability of his forecast of future incumbent competence, which is given by the competency signal $\left(\frac{N\sigma_\mu^2}{N\sigma_\mu^2+M\sigma_\xi^2}\right)$. Allowing this to take values other than one, our condition becomes:

$$\frac{(\gamma_{igt} - \gamma_{ikt})}{\left(\frac{N\sigma_\mu^2}{N\sigma_\mu^2+M\sigma_\xi^2}\right)} - 2b(\Delta u_{gt} - \Delta\bar{u}_t - c_{gt-1}) > 0. \tag{3.29}$$

So, what exactly does the competency signal tell our voter? N is the number of economically relevant policy initiatives the incumbent government makes, while σ_μ^2 is the variance of the impact of each of these initiatives. Similarly, M is the number of economically relevant policy initiatives that are decided upon by actors that are not elected by our voter, such as firms, interest groups, foreign leaders or the IMF, and σ_ψ^2 is the variance of the impact of each such decision. As Duch and Stevenson (2008) argue, each of these decisions is likely to only have a small impact by itself, so that there is no harm in assuming that the variance terms are small, too. Then, the ratio is driven be the number of decisions the incumbent government makes relative to all economy relevant decisions. This is where the term "competency signal" comes from: the larger the number economically relevant decisions made by the incumbent, the stronger a signal economic performance is for the competency of the incumbent. As a result, the weaker the competency signal, the more weight our voter will give to non-economic considerations captured in $(\gamma_{igt} - \gamma_{ikt})$. For the empirical analysis below this suggests that it is important to control for factors that can enhance or diminish the incumbents decision power and thus determine the degree to which he can influence economic performance. The second element by which the voter weights his decision is, P_{gk}, the probability that parties g and k tie each other in for first place in the election. The more likely this scenario is, the more weight our voter gives to his competence forecast. Conversely, if the probability of a tie is zero, there is no economic voting at all and the decision is governed solely be non-economic considerations captured in $(\gamma_{igt} - \gamma_{ikt})$. With this, we have all the substantive elements from equation 3.30 together.

For the rest of this discussion, and in particular for the empirical analysis that follows, I assume $\Delta\bar{u}_t$ to equal zero, so that the term that captures recent economic performance reduces to $(\Delta u_{gt} - c_{gt-1})$. Economically, this is equivalent to assuming that the natural rate of unemployment does not change over time. Over a time span of fifty years, this is unlikely to be true exactly. But what the voter takes into account for his decision is the change of the natural rate over the previous few periods, and because over the span of a

few years the natural rate is unlikely to change significantly, the assumption is plausible. Taking this into account and dropping the positive constant terms, our reference equation becomes:

$$\frac{(\gamma_{igt} - \gamma_{ikt})}{\left(\frac{N\sigma_\mu^2}{N\sigma_\mu^2 + M\sigma_\xi^2}\right)} - P_{gk}(\Delta u_{gt} - c_{gt-1}) > 0. \tag{3.30}$$

One important implication for the empirical analysis below is that a voter may support a party that has no chance of being elected if he derives utility simply from voting for that party. Another implication is that because we allow $(\gamma_{igt} - \gamma_{ikt})$ to be voter specific, voters may derive different utilities from voting for a given party and thus may not all vote alike. This deviation from the original model presented in Duch and Stevenson (2008) has two advantages: first, if we think of this difference as being determined by a voter's socio economic background, then we have a simple way to integrate the importance of socio economic factors with the rational expectations world. And second, introducing individual expressive voting allows different individuals to vote for different parties, even though they make the same rational forecast of incumbent competence in $t + 1$.

Finally, in the two empirical essays that follow, I compare not only the voteshares of one incumbent and one challenger, but of multiply party groups. Our framework extends to these cases in a straightforward manner: voters will simply compare each party group to the incumbent, and then vote for that group—either a challenger of the incumbent itself—for which expected utility in the next period is highest.

Chapter 4

Unemployment and Voting: A Macro Perspective

4.1 Introduction

The conceptual framework in chapter 3 focuses on the vote choice of individual voters. But the aggregate voting results on which I focus in this chapter are, ultimately, the sum of a multitude of such individual choices, so that the implications from the conceptual framework also make for a useful guide for an analysis on the macro level. In this chapter, I aim to answer three questions: first, what is the effect of a change in the unemployment rate on the voteshare of different party groups? Second, do these marginal effects depend on the level of unemployment? And third, have these marginal effects been different during the Great Recession that begun in the late 2008?

For the first question in particular, condition 3.30 makes clear predictions: it says that, all else equal, an increase in the rate of unemployment should hurt the incumbent government on the polls. It also says that the opposition parties that should benefit most from such a situation are those which give voters the highest utility from non-economic voting. Results from Tobit estimations confirm this reasoning. An increase in the rate of unemployment hurts incumbent governments significantly and substantially, while it tends to be most beneficial to conservative and extreme right-wing parties. The findings are thus in line with those by Bartels (2013b) and Golder (2003).

With respect to the effect of the level of unemployment and the Great Recession, the framework's predictions are less clear. The economic voting component of the model is independent of the level of unemployment and given its quasi-exogenous nature, few voters are likely to blame their governments for the crisis. It is, however, plausible to assume that increasing unemployment at already high levels alters people's preferences for non-economic or expressive voting. The results indicate that such effects are indeed present. In particular, it is right-wing extremist and conservative parties that benefit from further increases in unemployment from already high levels. Similarly, it is these

two party groups that benefit most strongly from increasing unemployment in the Great Recession, while incumbent governments loose substantial amounts of support in such cases. Interestingly, however, the results suggest that it is high unemployment, and not the crisis as such that is beneficial to conservative parties and disadvantageous for incumbents. This implies that voters can differentiate between the exogenous shock and its consequences on the national economy, and blame incumbents for the latter but not for the former. Furthermore, the high marginal effects of increasing unemployment on the support of right-wing extremist parties indicate that the non-economic factors such as elevated levels of anxiety and frustration are magnified during the crisis. Before discussing these results in detail in section 4.4, I introduce the dataset in section 4.2 and discuss my empirical strategy in section 4.3.

4.2 Data

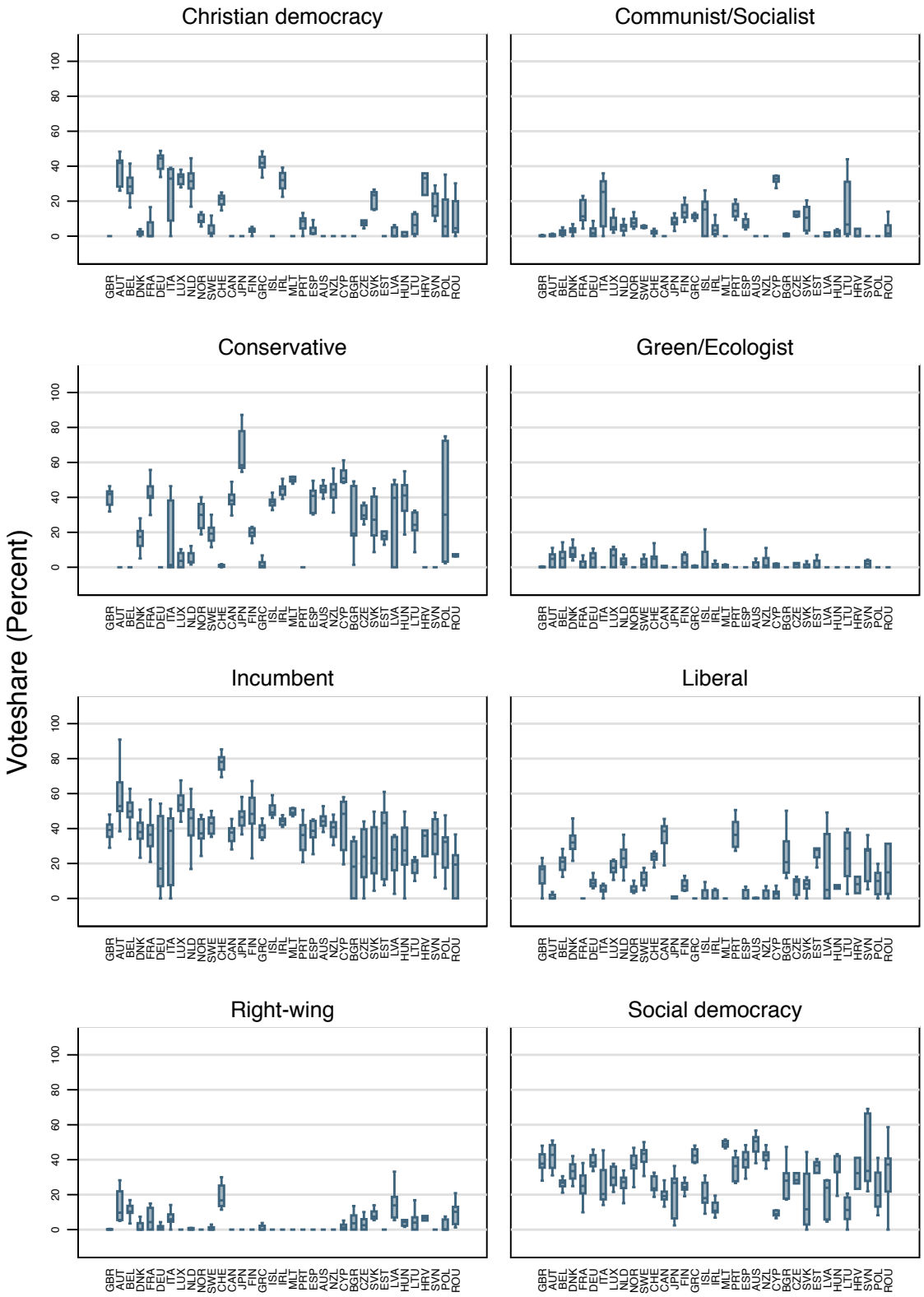
4.2.1 Dataset Description

My dataset contains information on 155 elections in 23 countries between the third quarter of 1960 and the fourth quarter of 2012. The dataset is of quarterly frequency, with one country-time observation corresponding to the quarter within which an election took place in a certain country. Electoral data is from Döring and Manow (2013), who provide electoral results and party information for most OECD countries up to Mai 2013, starting at different times early in the last century. When available, economic data is obtained from the OECD, either from the *Economic Outlook* (OECD 2013a) or the *Main Economic Indicator* Database (OECD 2013c). Both databases provide data from 1960 onward. More detailed information on the dataset, such as countries and elections in the sample, definitions and sources of all variables as well as summary statistics are provided in appendix B.1.

4.2.2 Dependent Variables

Our theoretical framework in chapter 3 suggests as the dependent variable the voteshare a given party has obtained in a given election. While I follow this suggestion in using actual voteshares, rather than the change in the voteshare to the last election, I use voteshares of party groups, rather than individual parties. The reason is simple: I want to make cross-country comparisons and parties differ between countries, while party groups do not. As a result, my dependent variable in all regressions is the voteshare a particular party group j attains in an election held in period t in country i. To obtain these voteshares, I sum up for each election the voteshares of all parties that belong to a certain party group. Figure 4.1 and figure 4.2 give an overview of these voteshares across countries and over time, respectively.

Figure 4.1: Distribution of Party Group Voteshare By Country



Each box covers the range between the 25th and 75th percentile of voteshares by elections and contains a median line. Upper (lower) adjacent values are given by the highest value not greater than the 75th (25th) percentile +(-) 3/2 of the interquartile range.

Figure 4.2: Party Group Voteshares Over Time

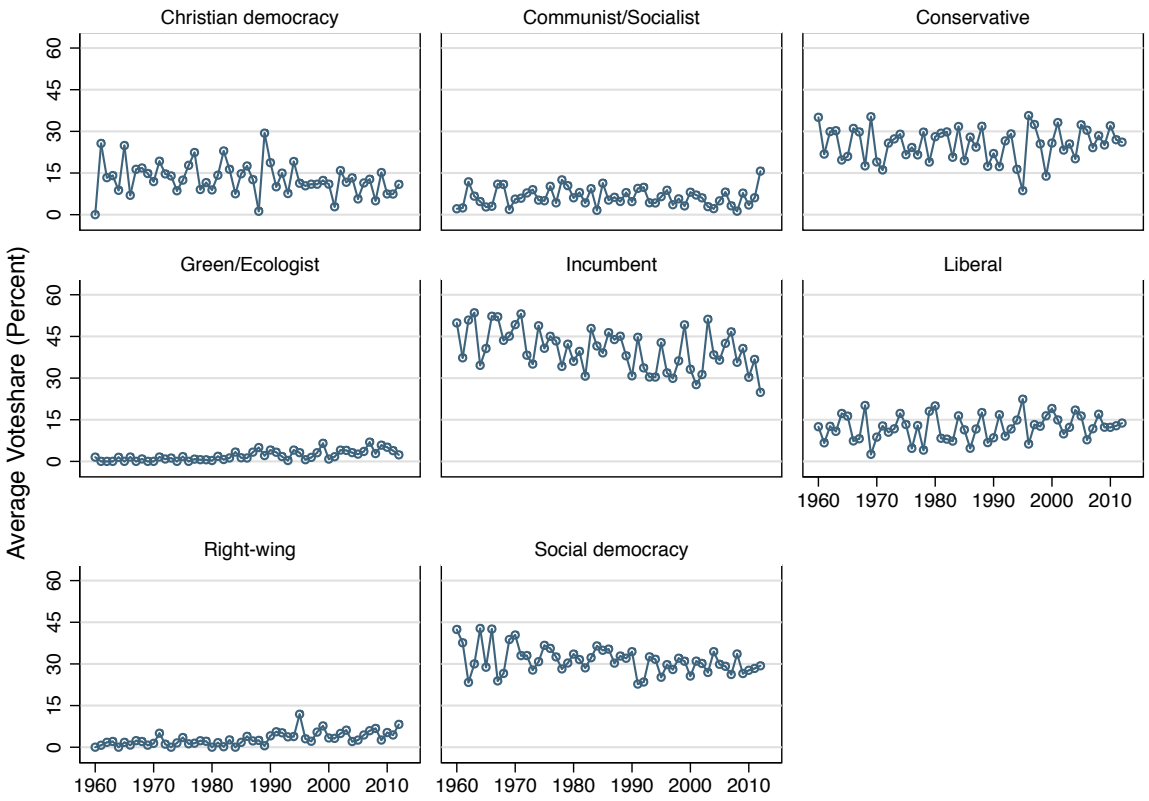


Figure shows the average voteshare attained by a particular party group in all elections held in all countries in a given year.

When looking at voteshares across countries, it is not surprising that incumbent governments generally garner relatively high shares (the ability to do this is what made them incumbents in the first place). Also, given Switzerland's political system of a permanent quasi-coalition government of the country's major parties, it is not surprising that its incumbent voteshare is particularly high and displays little variance. Just as much, it seems perhaps natural to find that the voteshare of christian democratic parties in Ireland is much larger than it is in Japan (where it is zero). What these numbers do highlight, however, is that voteshares of different party groups are not a function of individual voting decisions at the time of a given election only, but also of institutional and cultural characteristics within a country, a fact I will take into account by including country effects into all my regressions.

Similarly, although somewhat less pronounced, we see patterns if we look at voteshares over time. We can see, for instance, that both green and right-wing parties have started to gain positive voteshares in the early 1980s. The former, one would expect, due to increasing awareness of environmental consequences of a rich countries' lifestyles.[1] In the

[1]The "Limits to Growth" report by the Club of Rome was published in 1972 and intensified the scientific discourse on environmental issues, while the social movement of 1986 was instrumental in popularizing ideas of environmental awareness. The movement was, for instance, a main force behind the

case of right-wing parties, the development may have to do with the adoption and the spread of what was called on page 6 a new "master frame"—a new platform focusing on immigration issues that initially succeeded in France and then, it was argued, quickly spread throughout the continent. As in the case of country effects, such observations suggest that taking time specific effects into account is important, and I will do that by including decade dummies in all my regressions. I use decade- rather than year dummies because there are not enough observations for all years to identify year effects.

Before I move on, three final issues are important: first, in my definition of party groups I include incumbent governments. Strictly speaking, they are not the same type of group as, say, liberal- or social democratic parties because they are formed out of these conventional party groups. For the analysis below this is of little consequence, however, and I will treat incumbents as any other party group. Second, and more importantly, some party groups receive zero voteshare in some elections. This is not surprising, of course, and can also be seen in the figures above. Because the dataset by Döring and Manow (2013) provides results only for those parties (and hence, party groups) that have gained positive vote shares, I manually added the remaining party groups at each election and coded their vote share as zero.[2] I discuss the statistical reasons why this is necessary in section 4.3. Finally, the groups of right-wing extremist parties is of particular importance in the discussion below, so a word on what kind of parties are included in that group is warranted. In general, the political science literature talks of two kinds of right-wing extremist parties: radical right-wing parties and populist right-wing parties. In Switzerland, the former would include the "National Front Against Foreign Domination" and the "Ticino League", while the latter would include the "Swiss Peoples' Party (SVP)". Actually, Döring and Manow (2013)—apparently guided by the party's historical roots—code the SVP as "agrarian". To be in line with how the party is commonly treated in the literature, such as in Oesch (2008) and Kriesi et al. (2006), I manually recode it as "right-wing". This coding is also more in line with parties with similar platforms in other countries; in France, the Front National is coded as right-wing as are both the Freedom Party of Austria and the Alliance for the Future of Austria.

4.2.3 Explanatory Variable of Interest

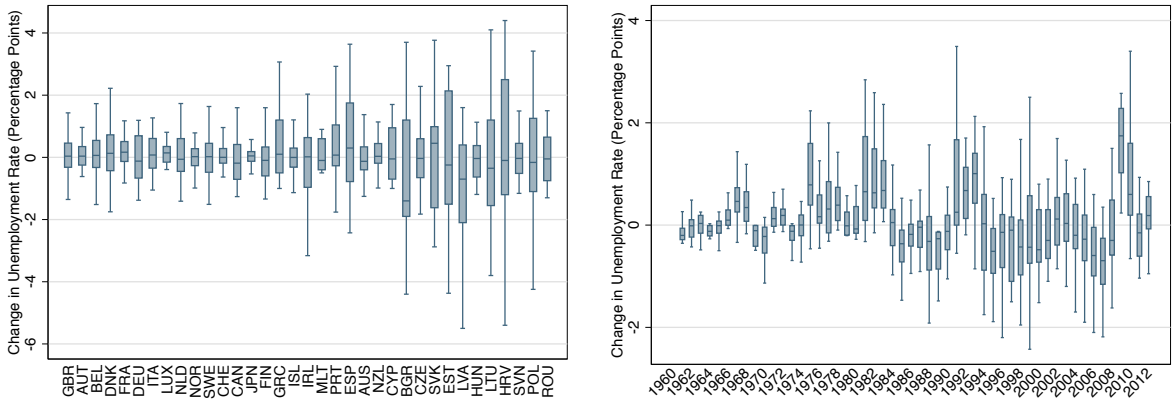
Given the focus of this chapter and our conceptual framework, the logical variable of interest is the change in the unemployment rate previous to an election. While this is straightforward enough, there are many such changes one could calculate. Condition 3.30 suggests that voters take into account the change over the last period, which would natu-

foundation of the Green Party of Switzerland in 1983.

[2]To be precise, I did the reverse: I created an empty dataset that included all party groups in all countries at all dates, and then merged into that dataset the actual electoral data from Döring and Manow (2013). In those periods where there were some observations from that dataset (i.e. where an election took place), I coded those voteshares that remained empty as zero, and then dropped all the remaining periods where there was no election.

rally be a year. This is also in line with findings by Bartels and Achen (2008) and Bartels (2013b), who find that economic performance over the year preceding the election has a considerably stronger effect on voting than the performance over longer time spans.[3] I use quarterly data, and data for a given quarter are, at best, available with a one period lag. Because of that, I use as my explanatory variable of interest the change in the rate of unemployment between the quarter preceding the election quarter and the same quarter one year earlier: $\Delta u_{it} \equiv u_{it-1} - u_{it-5}$. Data is from the OECD's Economics Outlook database (OECD 2013a) and, if unavailable there, from the Main Economic Indicators database (OECD 2013c). Figure 4.3 provides an overview of the data both across country and over time.

Figure 4.3: Change in Unemployment Over Time and Across Countries



Each box covers the range between the 25th and 75th percentile of the change in the unemployment rate across countries (left panel) and time (right panel). Upper (lower) adjacent values are given by the highest value not greater than the 75th (25th) percentile +(-) 3/2 of the interquartile range.

The left panel reveals large differences in the volatility of unemployment across countries. While the medians are, naturally, centered closely around zero in most countries, interquartile changes vary considerably, being about 2 percentage points in Switzerland (CHE) and almost 10 percentage points in Croatia (HRV), for instance. The Distribution of unemployment on in the right panel over time is centered around zero, too, but suggests the presence of a common business cycle across all countries in the sample. In the year 2009 in particular, the impact of the financial crisis is clearly visible, with the median increase in unemployment of more than 1.5 percentage point, and the third quartile of more than 2 percentage points both being the highest by some distance. Also, the year is one of only two in the entire sample where unemployment has increased in all countries within the sample (the other year being 1983).[4]

[3]Using alternative time horizons to calculate the change in the unemployment rate does not change results substantially, as the robustness exercises in appendix B.4 show.

[4]This is not unambiguously clear from the boxes, since they do not show points that are larger in magnitude than the adjunct values. However, in both cases there has been an increase in unemployment in all countries.

4.2.4 Control Variables

Condition 3.30 suggests four types of control variables that we have to take into account: those affecting the signal from economic performance, those affecting voters' expressive voting behavior, and determinants of the factors by which these two elements are weighted: the competency signal and the competitiveness of a given party group. I will discuss these four elements and the variables I use to capture them in turn.

The signal of economic performance, $(\Delta u_{gt} - c_{gt-1})$, consists of two elements: the change in the unemployment rate and the signal of the incumbents past competence. The former, of course, is our explanatory variable of interest, which I have discussed above. Remember that the reason that past competence is of any importance at all is because it provides voters with information about present competence, which, in turn, is an indicator of future competence—the element our forward-looking rational voters care about. This reasoning follows from our assumption that competence is governed by a first-order moving average process. For the empirical analysis, the question is how reliable a guide past competence is for future competence. The way I try to capture this is by controlling for the age of the incumbent party, and in the case of coalition governments, the age of the largest party. The reasoning is simple: the older a party is, the more information a voter can gather on its behavior and thus, everything else being equal, the more predictable the party's policies should be.

In a sense, the utility difference from the act of voting for two given parties, $(\gamma_{igt} - \gamma_{ikt})$, is the hardest element to control for because the factors it can be influenced by is virtually limitless. Nonetheless, theory, empirical findings and intuition provide some obvious candidates. As discussed in section 2, one explanation for the rise of right-wing extremist parties since the 1980s is their new focus on immigration issues, a link that has been confirmed by a number of empirical studies. So, the share of immigrants in a country is a logical candidate to control for. In principle, one could also control for the change in that share between two elections, as it is likely to be a mixture of both the level and the change that steers public discussion. But to follow common practice in the literature, I introduce the level only. Another variable that captures an important social issue and may thus influence expressive voting is the Gini index, a measure for inequality. Here, I use an indicator based on household disposable income. Additionally, the ideology of the incumbent government may play a role too, even though the direction of the effect is not entirely clear. A right-wing government could either legitimize even more extreme right-wing policies, or offer the possibility to distance oneself from it by voting for a left-wing party. In any case, it may matter and I try to capture it by including a dummy variable that indicates whether a government is right-of-center or not. Similarly, by introducing the variance of party-groups left-right ideology—as measured on a scale from 0, indicating extreme left, to 10, indicating extreme right—I try to capture the possibilities voters have for expressive voting in the first place (if all party groups were the same, one could hardly

make a personal statement by voting for any one group). Finally, I include per capita GDP, which is suggested by Lipset (1959) and Acemoglu and Robinson (2006) as a proxy for the maturity and thus the stability of a democracy.

By measuring the ratio of economically relevant decisions made by the incumbent government (N) relative to all economically relevant decisions ($N+M$), the competency signal, $\left(\frac{N\sigma_\mu^2}{N\sigma_\mu^2+M\sigma_\xi^2}\right)$, is a function of both international and domestic constraints. As a rough measure of international constraints, I include a country's trade-to-GDP ratio, which is calculated as the sum of imports and exports over GDP. The intuition for doing this is simple: the higher the trade share, the higher the dependence on foreign (economic) developments and thus, all else equal, the lower the incumbent's responsibility for domestic economic performance. To capture domestic constraints, I include three variables: a dummy indicating whether a county has a parliamentary system, as opposed to a presidential one; a dummy indicating whether the executive party controls all law-making houses in the legislature so that it can enact law unilaterally; and finally, the share of government consumption of GDP, which, following (Duch and Stevenson 2008), serves as a proxy for the existence and the strength of an entrenched bureaucracy that limits the power of elected officials.

Finally, in the conceptual framework P_{gk} is the probability that a certain party ties the incumbent for first place in the election. In our context here, we can think of it as the competitiveness of a party group, or an indication for whether one's vote is being "wasted" when voting for it or not. To capture that, I include a party group's vote share in the previous election.

4.3 Empirical Strategy

When adapted for our context here, the framework from chapter 3 essentially tells us that the support for a given party family j in country i in period t is a function of the change in the rate of unemployment Δu_{it} and a number of control variables. I have discussed these control variables in the previous section, so for our purpose here, we can simply think of them as a set of control variables $\mathbf{x}_{it}$. Furthermore, given the discussion in the preceding section it seems reasonable to include country fixed effects α_i and decade fixed effects λ_d. Given that I use quarterly data, the use of quarter dummies or at least year dummies would be optimal to capture time effects. I use decade dummies instead because there are not enough observations in all years to identify such effects. Finally, as always, there is an idiosyncratic component ϵ_{ijt}. Then, if we assume linear additive relationships we have:

$$y^*_{ijt} = \varphi_j \Delta u_{it} + \mathbf{x}'_{it}\beta_j + \alpha_i + \lambda_d + \epsilon_{ijt}. \tag{4.1}$$

To make notation below less cumbersome, I will combine the non-random elements on

the right hand side of this equation into the matrix $\mathbf{X}_{it}$, so that the equation reduces to:

$$y^*_{ijt} = \mathbf{X}'_{it}\beta_j + \epsilon_{ijt} \tag{4.2}$$

An important feature of the data is that we observe only non-negative values of y^*_{ijt}.[5] As a consequence, we do not directly observe the support for a given party group. This is the reason it is marked with an asterisk to indicate that it is an unobserved (or latent) variable. What we do observe instead is the voteshare y_{ijt} that party families receive in different elections. If we assume that positive support translates directly into electoral support and is thus reflected in the voteshare, then we can think of the relation between these two variables as:

$$y_{ijt} = \begin{cases} y^*_{ijt} & \text{if } y^*_{ijt} > 0 \\ 0 & \text{if } y^*_{ijt} \leq 0 \end{cases} \tag{4.3}$$

An important implication of this for estimation is that reliance on OLS will deliver inconsistent results, since $E(y_{ijt}|\mathbf{X}_{it}) \neq \mathbf{X}'_{it}\beta_j$ (intuitively, this becomes clear once we recognize that the mean of a variable like y^*_{ijt}, which is censored from below, will be lower than for y_{ijt}). The standard way to deal with this is a so called Tobit model, after Tobin (1958). Reliance on the Tobit model is also standard in the economic voting literature, where it is used, for instance, by both Golder (2003) and Jackman and Volpert (1996). Under the assumption that $\epsilon_{ijt}|\mathbf{X}_{it} \sim N(0, \sigma^2_\epsilon)$, the model allows us to specify two features of the data that are of interest: the probability that the variable is censored, $P(y_{ijt} = 0)$, and the conditional expectation of y_{ijt} given $\mathbf{X}_{it}$, $E(y_{ijt}|\mathbf{X}_{it}, y^*_{ijt} > 0)$.

When taking into account the censoring feature of our data by relying on a Tobit estimator, we also deal with the selection bias problem, which invariably arises in such a situation. The reason it arises is straightforward: cases with zero voteshare contain information, too—they tell us that at the time of a certain election in a certain country, there was not enough support for a given party group. Yet we only observe our variable of interest in case it is positive. So, when we only focus on these values, we arbitrarily select only part of the relevant information, which then leads to biased and inconsistent estimators. This is an argument for including zero values, but not yet for a Tobit estimator. The reason we cannot rely on OLS is because if we did, we would implicitly assume that for all party groups with a zero voteshare, the underlying support would be the same. This is almost certainly not true. In equation 4.1, there is nothing that prevents y^*_{ijt} from being negative. And conceptually, we can think of larger negative values as cases where a party group is "further away" from gaining votes in an election. By using OLS, we would ignore this information and, again, end up with biased and inconsistent estimators (King 1998).

[5] This censoring feature of the data can be clearly seen from the distributions of voteshares presented in appendix B.3.

Reliance on the Tobit estimator comes with its own set of assumptions, of course. The normality assumption I have mentioned above. Another assumption, implicit in equation 4.1 and made even more relevant by the way I have constructed my dataset, is that given the right set of circumstances, each party group can garner positive support in every country. Looking back at figure 4.1, where some party groups have never gained any votes in some countries, this may seem implausible. And to a certain degree it clearly is. But cross-country comparisons of the sort I conduct here, that aim at providing a broad overview of certain phenomena, necessarily have to omit some country specific circumstances. At the same time, including country specific effects into my regressions mitigates this limitation somewhat because to the degree that the factors preventing electorates from ever voting for some party groups are constant over time, they are captured in these country effects.

4.4 Results

In turn, this section presents three sets of results: the baseline results from estimating equation 4.1, the ones from taking into account the level of unemployment and those from testing for an effect of the Great Recession. In all regressions, the dependent variables are the voteshares of the respective party groups, as discussed in section 4.2.2. Also, all regressions contain the full set of control variables discussed in section 4.2.4 as well as a full set of country- and decades dummies. Standard errors are computed using cluster robust estimators. Throughout, I interpret coefficients as marginal effects on the latent variable y^*_{ijt}. That is, I am interested in $\frac{\partial E(y^*_{ijt})}{\partial x_{ct}}$, rather than $\frac{\partial E(y_{ijt}|\mathbf{X}_{it})}{\partial x_{ct}}$. Finally, the Stata standard distribution dos not implement a Tobit fixed effects estimator for panel data. It does implement a random effects estimator, yet the assumption that $E(\alpha_c|\Delta u_{it}, \mathbf{X}_{it}) = 0$ is unlikely to hold when dealing with country-level data. At the same time, the user written fixed effects panel estimator –pantob– command, which implements the Honore (1992) estimator, is not very transparent and hard to interpret. I thus follow Golder (2003) and use country dummies to take account of fixed effects. Robustness checks are provided in section B.4 in the appendix.

4.4.1 Unemployment and Party Group Voteshares

Table 4.1 presents the baseline results. Let us start by focusing on our coefficients of interest, the effect of the change in the unemployment rate on the voteshares of different party groups. These coefficients are given in the first row. As predicted, incumbent governments suffer from higher increases in the unemployment rate. And the effect is economically (or politically) large: for every percentage point by which the unemployment rate increases, incumbents loose, on average and all else being equal, about 2.6 percentage points in underlying support. Thus, should unemployment rise by, say, 5 percentage

points rather than by 2 percentage points, incumbent support would go down by almost 8 percentage points, on average.[6]

Table 4.1: Effect of Unemployment on Party Group Voteshares

	Chr	Com	Con	Eco	Inc	Lib	Right	Soc
model								
Δ Unemployment Rate	-0.221***	-0.075	0.972***	-0.089***	-2.628***	-0.727	1.111***	-0.107
	(0.011)	(0.305)	(0.033)	(0.021)	(0.058)	(0.736)	(0.045)	(0.592)
Foreign Population	0.115***	-0.117	-0.235***	-0.168***	0.067***	0.700*	0.688***	-0.223
	(0.003)	(0.171)	(0.003)	(0.001)	(0.006)	(0.413)	(0.004)	(0.541)
Gini Index	-0.171***	-0.056	0.486***	0.023***	0.017***	0.263	-0.566***	0.379
	(0.001)	(0.118)	(0.001)	(0.000)	(0.002)	(0.418)	(0.001)	(0.230)
Per Capita GDP (Log)	-1.904***	4.082	4.600***	5.519***	10.225***	-4.571	13.929***	0.414
	(0.002)	(3.127)	(0.002)	(0.001)	(0.004)	(6.814)	(0.003)	(9.115)
Right Incumbent	-0.578***	0.862	-0.439***	0.054***	-1.775***	0.375	-1.957***	-0.377
	(0.028)	(0.611)	(0.051)	(0.017)	(0.056)	(0.948)	(0.033)	(0.878)
Trade-to-GDP Ratio	-0.005***	0.024	0.032***	0.030***	0.028***	-0.133**	-0.139***	-0.009
	(0.000)	(0.026)	(0.000)	(0.000)	(0.001)	(0.053)	(0.000)	(0.055)
Partliamentary System	27.635***	-2.744***	-8.313***	-2.346***	99.088***	-7.181***	-1.170***	8.386***
	(0.015)	(0.938)	(0.024)	(0.011)	(0.038)	(1.327)	(0.033)	(2.477)
Executive constraints	-6.886***	0.466	8.987***	-0.504***	-11.016***	-0.044	-8.639***	0.852
	(0.077)	(0.846)	(0.031)	(0.031)	(0.086)	(3.463)	(0.134)	(2.312)
Gov't Spending (%GDP)	0.067***	0.008	0.150***	0.083***	1.075***	-0.435	-1.154***	-0.080
	(0.001)	(0.142)	(0.001)	(0.001)	(0.002)	(0.364)	(0.002)	(0.416)
Age Incumbent Party	-0.005***	0.008	-0.042***	-0.014***	0.048***	0.040**	0.033***	-0.039**
	(0.000)	(0.016)	(0.000)	(0.000)	(0.001)	(0.018)	(0.000)	(0.016)
Voteshare Last Election	0.592***	0.673***	0.553***	0.394***	-0.031***	0.408***	0.226***	0.434***
	(0.001)	(0.051)	(0.002)	(0.004)	(0.001)	(0.081)	(0.004)	(0.127)
Decade dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obervations	155	155	155	155	155	155	155	155
Pseudo R2	0.39	0.28	0.36	0.37	0.11	0.30	0.38	0.19

Standard errors in parentheses. $^{*}p < 0.1$,$^{**}p < 0.05$,$^{***}p < 0.01$. In each column, dependent variable is the voteshare of the indicated party group.

In line with previous research, it is right-wing extremist parties that benefit most from rising unemployment. The magnitude of the effect of about 1.1 percentage points is less than half of that for incumbents, however. The result suggest that under normal circumstances, there is little danger of right-wing extremist parties gaining significant voteshares, especially since they usually start from very low levels, as we have seen in figure 4.1. The advantage of looking at the entire political spectrum is that we can observe additional interesting result. For one thing, the shift to the right under increasing unemployment rates is accompanied by conservative parties, whose gain of about 1 percentage point for any additional percentage point increase in the unemployment rate is almost as strong as that of right-wing extremist parties. Equally interesting, support for green and ecologist parties seems to wane in times of rising unemployment, a result that is in line with the idea that environmental concerns are sentiments for times of economic progress. The effect, while highly significant, is of very small magnitude, however, suggesting that it takes an additional 10 percentage point increase in the rate of unemployment for green parties to loose 1 percentage points in underlying support. Support for Christian democratic

[6]To make the discussion less cumbersome I will refrain henceforth from clarifying that the coefficients are predictions of the average effect, and that they must be interpreted holding all other variables constant.

parties, too, is lower if unemployment increases. However the magnitude of the effect, while stronger than for green parties, is small as well.

The finding that it is primarily right-wing extremist and conservative parties that benefit from rising unemployment is not inconsistent with our conceptual framework. But it also doesn't naturally follow from it. In particular, from the framework as discussed in chapter 3, it is not clear why left-wing extremist parties with a similar ideological difference to the incumbent should not benefit equally strong. One possible explanation is the argument by Friedman (2005), which I have discussed in section 2, and who argues that in times of stagnation, people start to view economic progress as a zero-sum game, which makes them politically and socially conservative and thus rises their support for the platforms of right-wing extremist parties.

Next, let us move to discussing the remaining variables of the model. When doing so, we have to bear in mind one important caveat: the conceptual framework, based on which I selected my control variables, is, is designed to think about the effect of unemployment on voting. All additional variables of the model are included because they condition the effect a change in the rate of unemployment has on the voteshares of different party groups, not because they themselves necessarily have an effect on those voteshares. For that reason, I will not discuss these estimates in all the possible details but focus of some aspects that stand out. Consistent with our reasoning, the share of immigrants has a considerable effect on the electoral success of right-wing extremist parties. The results suggest that an increase in the share of foreign residents increases by 5 percentage points, the underlying support for right-wing extremist parties increases by almost 3.5 percentage points. The effect of inequality, as measured by the Gini index, is hard to interpret. The indicator is scaled such that a value of 100 indicates total inequality and 0 indicates total equality. It is thus surprising that an increase in the index seems to have no effect on the voteshares of social democratic parties. What is more, it is not obvious why a move in the Gini from from 20 points, the lowers value in the sample, to 40 points, the highest value, is predicted to increase the vote share of conservative parties by almost 10 percentage points, while decreasing that of right-wing extremist parties by even more than that. If we interpret higher voteshares for incumbent governments as a sign for stable democracies, then per capita GDP does have the qualitative effect we would expect: a one percent increase in per capita GDP leads to a ten percentage point increase in incumbent voteshare. However, this seems a surprisingly large effect, and given that the same change in per capita GDP increases the voteshare of right-wing extremist parties by even more, we should interpret it with care.

The variables included to capture the competency signal, the trade-to-GDP ratio, the dummy for parliamentary systems, executive constraints and government spending, are all significant most of the time. Because the competency signal can work both ways, we have no ex-ante expectation of their sign. A decrease in the unemployment rate should matter less in voter's calculus if the government is not perceived of having much responsibility

for it so that both the government's electoral reward for good economic performance, as well as its punishment in dire times, is reduced. In other words, government responsibility should influence the absolute value of our coefficient of interest, but not its sign. What is puzzling is the high coefficient of the parliamentary system dummy. It implies that the underlying support of incumbent governments is higher in such a system by almost 100 percentage points as compared to a presidential or an assembly elected presidential system. Given that support can also be negative, this is, in principle, possible. But quiet anomalous all the less. Because the particular political system is not a main issue here, I do not investigate the issue further. Interpreting the coefficient on incumbent party age is faced with similar issues as the competency signal variables just discussed. And finally, the voteshare in the previous election has the expected positive effect for all groups except for the incumbent, where it is statistically significant but politically irrelevant.

4.4.2 Effects of High Unemployment

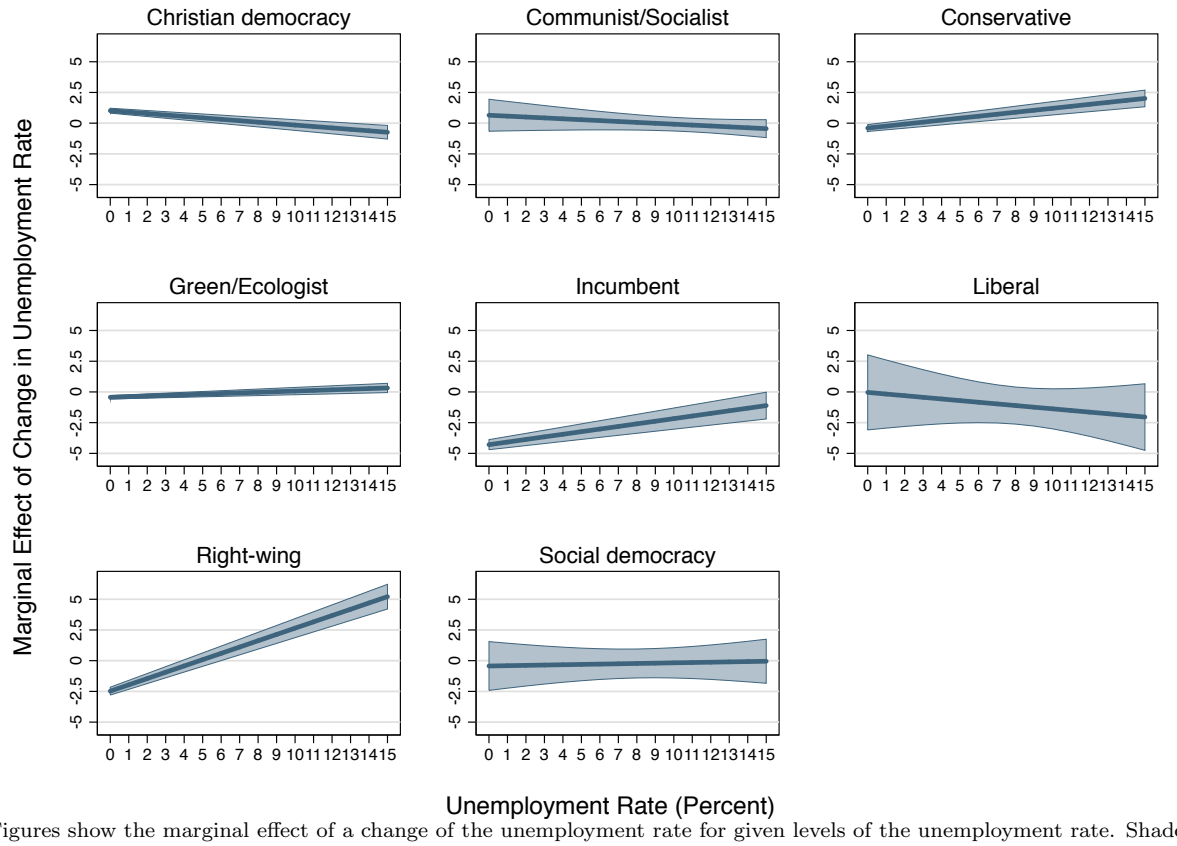
One question that arises from the above results is whether the marginal effect of a change in unemployment is independent of the prevailing level of unemployment. Does a 3 percentage point increase in the unemployment rate, say, have the same political consequences independent of whether the unemployment rate stands at 5 percent or at 10 percent? If we think within our conceptual framework, the economic voting part, $(\Delta u_{gt} - c_{gt-1})$, says "yes"; the initial level of unemployment is irrelevant for the voter's assessment of the incumbent's recent economic performance, which is what he uses to extract a signal about the incumbent's future competence.

But the question is whether the voter reacts the same to a given change in unemployment at all levels of unemployment. This must not be the case. On way to think about this is the zero-sum argument from Friedman (2005) I have discussed above. Deteriorating economic conditions, the argument goes, leads people to think of progress as a zero-sum game and to become intolerant, which then leads them to support right-wing extremist parties that generally capture these emotions in their party platforms. Alternatively, increasing unemployment from already high levels could increase a voter's concern for social security, be that for himself or others, and thus change his voting behavior towards parties that stand for more generous welfare systems such as social democratic or socialist parties. In our framework, such non-economically motivated voting behavior is captured by the term $(\gamma_{igt} - \gamma_{ikt})$, which would increase in favor of right-wing extremist parties in the first scenario, and in favor of social democratic parties in the latter.

To test for such behavior, I include the level of unemployment and an interaction term between the change and the level of unemployment in the regressions discussed in the previous section. The table with full results is provided in appendix B.5. Here, I present the results in graphical form. Figure 4.4 shows marginal effects of a change in the rate of unemployment on the voteshares of party groups at different levels of unemployment.

I present and discuss results up to 15 percent of unemployment because that's the range where 95 percent of the observations of the samples lie.

Figure 4.4: Effect of Changing Unemployment For Different Levels of Unemployment



Figures show the marginal effect of a change of the unemployment rate for given levels of the unemployment rate. Shaded areas indicate 95 percent confidence bands.

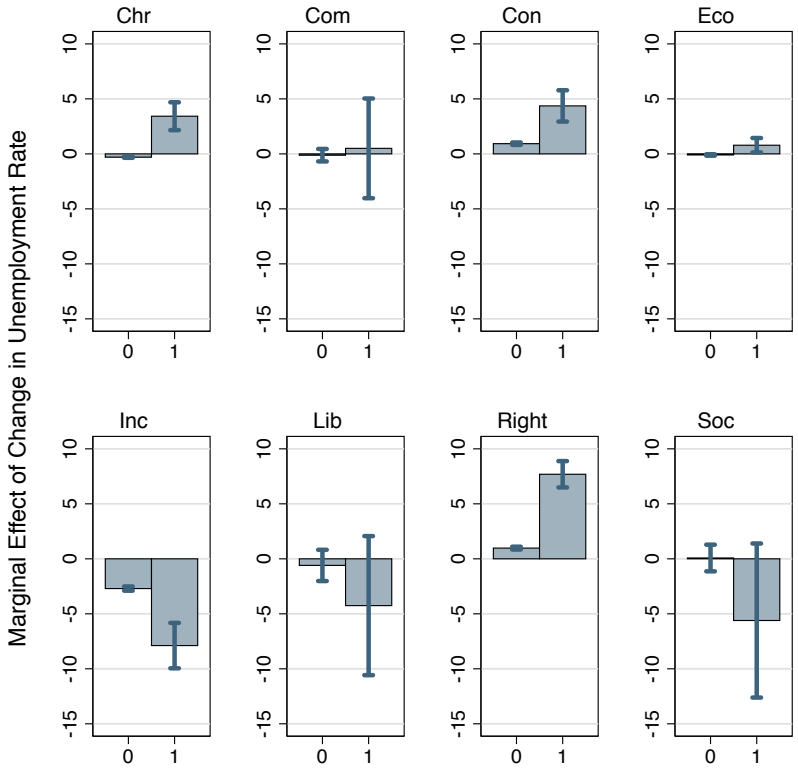
The results are more in line with our first scenario above: the marginal effect of rising unemployment is increasing in the level of unemployment for right-wing extremist parties and, to a lesser extent, for conservative parties. When unemployment stands at 10 percent, an additional one percentage increase rises the underlying support for right-wing extremist parties by about 2.5 percentage points. At 15 percent, the marginal effect grows to 5 percentage points. This is a large increase, and given the elevated levels of unemployment we currently observe throughout the developed world, it is politically relevant. Conservative parties, too, benefit more from an increase in unemployment at higher levels. But for the same marginal effect of 2.5 percentage points, unemployment has to stand at 15 percent, already. The only other group where the effect is significantly different from zero and economically relevant is incumbent governments. The marginal effect is negative at most levels of unemployment as expected. It is, however, surprising that the effect becomes less negative as the level of unemployment increases. This suggests that the higher the level of unemployment, the less electoral damage an additional increase does to incumbent governments. Our second scenario from above, that rising unemployment

from higher starting points may rise voters' appreciation for social welfare is not born out by the data. Neither social democratic parties nor socialist parties reap any electoral gains from rising unemployment, irrespective of the level.

4.4.3 Effects of the Great Recession

Given that we still live through the consequences of the most severe economic crisis in 80 years, a related interesting question is whether and how this crisis has changed voters' voting behavior. One way to answer that question is to compare marginal effects of an increase in the unemployment rate on the voteshare of party groups before the beginning of the crisis, generally dated as the collapse of Lehman Brothers in the third quarter of 2008, and since then. To do this, I simply include a dummy for the Great Recession and an interaction term between that dummy and the change in the unemployment rate. Full results are again present in the appendix, in section **??**. Here, I present results graphically in figure 4.5.

Figure 4.5: Marginal Effects of Change in Unemployment Rate Before and During the Great Recession



Figures show point estimates for the marginal effect of a change of the unemployment rate (Δu_{it}) for periods previous to the beginning of the Great Recession in the third quarter 2008 (0) and since then (1). Outside values indicate the outer bounds of the 95 percent confidence interval.

Given our results in the previous section, there results come as no surprise. Incum-

bents have suffered substantial electoral losses from rising unemployment in the crisis. On average, the loss of an additional percentage point increase in unemployment is predicted to lead to a reduction in underlying support of about 7.5 percentage points, compared to about 2.5 percentage points in normal times. The main beneficiaries of rising unemployment in the crisis are, right-wing extremist parties. Their underlying support increases by about 7.5 percentage points for every additional one percentage point increase in unemployment, thus capturing the entire loss of incumbents. Support for conservative parties increases by almost 5 percentage points for the same increase, as does the support for Christian democratic parties. As in the previous section, harsh economic conditions in the Great Recession do not appear to rise voters' preferences for either left leaning parties; the support for neither social democratic nor communist parties is significantly affected by rising unemployment in the crisis.

Table 4.2: Effect of Changing Unemployment During the Great Recession

	Chr	Com	Con	Eco	Inc	Lib	Right	Soc
model								
Δ Unemployment Rate	-0.296***	-0.119	0.926***	-0.099***	-2.706***	-0.600	0.975***	0.075
	(0.032)	(0.289)	(0.055)	(0.033)	(0.097)	(0.724)	(0.065)	(0.618)
Great Recession	1.070	0.968	-5.594***	-1.451***	14.346***	2.676	-31.492***	4.160
	(0.767)	(2.664)	(0.770)	(0.457)	(1.386)	(4.871)	(0.771)	(4.587)
Δ Unemp*Great Recession	3.721***	0.622	3.436***	0.885***	-5.184***	-3.656	6.714***	-5.686
	(0.620)	(2.156)	(0.680)	(0.307)	(0.969)	(3.203)	(0.553)	(3.656)
Foreign Population	0.033***	-0.146	-0.167***	-0.159***	-0.122***	0.707	0.880***	-0.198
	(0.004)	(0.177)	(0.004)	(0.002)	(0.007)	(0.432)	(0.004)	(0.550)
Gini Index	-0.147***	-0.040	0.537***	0.040***	-0.033***	0.221	-0.427***	0.307
	(0.001)	(0.124)	(0.001)	(0.000)	(0.002)	(0.436)	(0.001)	(0.243)
Per Capita GDP (Log)	-2.407***	3.735	5.708***	5.749***	7.957***	-4.897	15.377***	-0.664
	(0.002)	(3.078)	(0.002)	(0.001)	(0.004)	(6.659)	(0.004)	(9.027)
Right Incumbent	-0.268***	0.945	-0.485***	0.056***	-1.374***	0.244	-1.996***	-0.409
	(0.029)	(0.591)	(0.051)	(0.017)	(0.054)	(0.954)	(0.034)	(0.907)
Trade-to-GDP Ratio	-0.014***	0.022	0.019***	0.027***	0.042***	-0.121**	-0.144***	0.012
	(0.000)	(0.027)	(0.000)	(0.000)	(0.001)	(0.054)	(0.000)	(0.056)
Partliamentary System	28.268***	-2.752***	-13.420***	-2.461***	97.701***	-7.036***	-3.563***	8.420***
	(0.016)	(0.969)	(0.024)	(0.012)	(0.039)	(1.238)	(0.034)	(2.517)
Executive constraints	-9.433***	-0.071	9.372***	-0.479***	-12.195***	0.749	-8.810***	1.713
	(0.191)	(0.460)	(0.043)	(0.035)	(0.161)	(3.932)	(0.132)	(2.241)
Gov't Spending (%GDP)	-0.112***	-0.044	0.205***	0.088***	0.914***	-0.356	-1.009***	0.050
	(0.001)	(0.125)	(0.001)	(0.001)	(0.002)	(0.372)	(0.002)	(0.451)
Age Incumbent Party	-0.007***	0.008	-0.041***	-0.014***	0.045***	0.041**	0.026***	-0.038**
	(0.000)	(0.017)	(0.000)	(0.000)	(0.001)	(0.017)	(0.000)	(0.015)
Voteshare Last Election	0.559***	0.661***	0.540***	0.402***	-0.018***	0.399***	0.220***	0.459***
	(0.001)	(0.048)	(0.002)	(0.004)	(0.001)	(0.086)	(0.004)	(0.125)
Decade dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obervations	155	155	155	155	155	155	155	155
Pseudo R2	0.40	0.28	0.36	0.37	0.11	0.30	0.39	0.20

Standard errors in parentheses. $^{*}p < 0.1$,$^{**}p < 0.05$,$^{***}p < 0.01$. In each column, dependent variable is the voteshare of the indicated party group.

The discussion becomes more nuanced, however, once we consider the effect the Great Recession itself has on the voteshares of different party groups. These effects are shown in the second row of table 4.2, which shows an excerpt of the full results presented in the appendix. If we keep our focus on incumbent and right-wing extremist parties, we

see that the crisis itself tends to increase the voteshare of incumbents by a substantial 14 percentage points, while reducing that of right-wing extremist parties by almost 32 percentage points. Since the Great Recession is almost synonymous with substantial increases in unemployment rates we have to interpret these coefficients together to arrive at meaningful results. Rounding coefficient to the nearest half percentage point, we can see that during the Great Recession, the marginal effect of every additional percentage point increase in the unemployment rate on the support for incumbent parties is -7.5 (-2.5 - 5) percentage points. At the same time, the marginal effect of the Great Recession itself is $14.5 - 5\Delta u_{it}$ percentage points. Thus, the crisis is predicted to have a negative effect once it comes with a rise in the unemployment rate of 1.95 (14.5/7.5) percentage points or more. If we apply the same reasoning as above to right-wing extremist parties, we find that to benefit from the Great Recession, they need an increase in the unemployment rate of at least 4.2 (31.5/7.5) percentage points.

How can we interpret these results? One plausible explanation goes like this: given the quasi exogenous nature of the crisis, voters do not blame their incumbent governments for it. In fact, amid rising uncertainty, they tend to increase their support for incumbents because they may believe them to have the governing experience to weather the situation. So, the increase for incumbent support from the crisis could be thought of as a "flight to quality", or maybe a "flight to experience". It is only once unemployment increases substantially that people come to doubt that quality, and loose faith in their government. It is then, amid high unemployment, that the zero-sum thinking from Friedman (2005) kicks in and leads people to support right-wing extremist governments even stronger than in normal times. The high marginal marginal electoral gains of right-wing extremist parties are likely to be the result not only of a loss in the faith of incumbent party competence—which benefits all opposition parties—but also from an elevated sense of frustration and hopelessness, which manifests itself through the expressive voting channel.

4.5 Conclusion

The results from the macro level analysis in chapter 4 are broadly in line with established results in the economic voting literature both qualitatively and in terms of magnitudes; overall, a rising unemployment unemployment increases support for right-wing extremist parties, at the expense of incumbent government. As in earlier contributions, the negative effect on incumbents is found to be of larger magnitude than the positive effect on right-wing extremist parties; an additional two percentage point increase in the unemployment rate reduces the electoral support of incumbent governments by 5 percentage points on average, while increasing the support for right-wing extremist parties by less than half of that. As previous studies, the results thus indicate that in normal times, the benefit of higher rising unemployment on support for right-wing extremist parties is limited. By focusing on the entire political spectrum, my approach has the benefit of uncovering an

additional positive effect of rising unemployment on conservative parties, an effect that is about equal in magnitude to that on right-wing parties. Overall, then, the results suggest that times of economic turmoil are accompanied with more conservative voting behavior.

One interesting question that has not been addressed in the literature so far is whether these effects are conditional on the level of unemployment: does a 2 percentage point increase in the unemployment rate have the same effect on support for different party groups independent of whether the rate stands at 5 percent or 10 percent at the time of the increase? This question is all the more important in times like ours, where unemployment rates are well into double digits in some European countries. The results strongly suggest that the level of unemployment does matter. In particular, the marginal effect on right-wing party support strongly increases at higher levels: the hypothetical 2 percentage point increase from above is predicted to have no effect on right-wing party support at a prevailing level of 5 percent, while increasing support by five percentage points at a level of 10 percent. To a much lesser degree, the same holds for conservative parties. Somewhat anomalous, the marginal negative effect on the support for incumbent parties becomes smaller with higher levels of unemployment, yet remains negative at all reasonable levels.

A related question, which, too, has not been addressed thus far, is whether voting behavior has changed since the beginning of the Great Recession, an event that is normally dated to the third quarter of 2008. The results suggest that voting during the crisis has been distinct from previous years in a sense that is consistent with the results just discussed. Under reasonable conditions, the crisis has reduced support for incumbent governments and raised support for right-wing extremist parties. The results are particularly interesting, however, not because they are in line with both earlier findings in this thesis and with the wider literature, but because they add a degree of nuance to these results. They suggest that it takes at least a 2 percentage point rise in the unemployment rate during the crisis before incumbents are electorally "punished", and at least a 4 percentage point increase for right-wing extremist parties to benefit from the crisis. This suggests that in a crisis that can be thought of as an exogenous shock to most countries—and thus a shock for which the incumbent government is not responsible—we observe a flight we observe a "flight to quality and experience", with people supporting the presumably more experienced incumbent parties unless economic conditions deteriorate to a degree that makes them loose faith in them. And only after that happened, right-wing extremist parties stand to benefit.

Chapter 5

Unemployment and Voting: A Micro Perspective

5.1 Introduction

In the aggregate, the sum of an electorate's voting decisions translate into the voteshares of different parties or party groups that we were concerned with in the previous chapter. In this chapter, we are concerned not with the aggregate voting outcome, but with the voting decisions of individual voters. Using data from the Swiss Household Panel (SHP), I address the following three issues: first, I look at the relationship between unemployment rates and the support for different party groups. Second, I investigate the effect of being unemployed on an individual's voting behavior and whether this effect is conditional on particular circumstances such as the level of the prevailing unemployment rate, the income change from being unemployed and whether an individual has just become unemployed recently. Finally, I look at the relationship between unemployment and support for the government.

The first and the third question are the standard economic voting questions. The second one, focusing on the effect of unemployment on the voting behavior of the unemployed themselves, however, has received remarkably little attention in the economic voting literature. In fact, I am not aware of any study that investigates the effect. This is surprising for two reasons: first, because the reasoning that adverse economic circumstances change people's voting behavior—the idea at the heart of economic voting—implies that the change in voting behavior of the unemployed, who are presumably among those worst affected by such adverse circumstances, should be particularly strong. Second, in times of high unemployment throughout much of the developed world, the question of whether and how such a situation translates into the voting behavior of the unemployed themselves becomes all the more relevant.

Through what channels would we expect this effect to work? Our conceptual framework suggests, as always, two possible explanations: the economic- and the expressive

voting channel. The former would mean that a person blames her unemployment status on the government and thus supports non-government parties. Within the Swiss institutional framework this would mean that a person blames all five government parties—or the subset of these parties she deems to be dominant in drafting economic policy—and thus chooses one of her alternative vote choices. I check for the existence of such behavior in the next section. The expressive voting channel would be important if being unemployed changes a person's preferences with regard to non-economic and expressive voting such as increased support for a strong social welfare system, increased frustration towards the political establishment, or fear of relative status loss and more reactionary voting behavior, along the lines of the zero-sum argument of Friedman (2005) discussed on page 6. Another possible link between unemployment and voting that may work through the expressive voting channel is life-satisfaction. Seminal work by Winkelmann and Winkelmann (1998) points to the importance of non-pecuniary costs of unemployment. Using longitudinal data on life-satisfaction on working-age men in Germany, they show that unemployment significantly reduces life satisfaction and that the non-pecuniary effect is much larger than the associated loss of income. There results are confirmed by more recent work by Kassenboehmer and Haisken-DeNew (2008) who find the same negative effect of unemployment on life-satisfaction in Germany over the previous 20 years. It is quite plausible that changes in life satisfaction translate into changes in expressive voting. All of these effects would be visible in a change of support for individual parties and party groups, and is thus what I check for in this section.

My motivation to use Swiss data to address these question is that there are, to my knowledge, no studies that investigate the link between economic performance and voting behavior in Switzerland, so that using Swiss data makes another novel contribution to the existing literature. But focusing on Switzerland imposes two limitations: one economic and one institutional in nature. The first and more consequential limitation stems from the fact that since 1999, economic conditions in Switzerland have been remarkably stable. The median cantonal unemployment rate has never exceeded the 3.5 percent mark, note even in the height of the Great Recession in 2009. At these levels of unemployment economic voting is likely to be less pronounced, an intuition that is reinforced by the results in the previous chapter. Less problematic is the institutional peculiarity that the Swiss executive branch of the government, the Federal Council, has the form of a quasi-permanent coalition of the countries four major political parties (SP, CVP, FDP, SVP) and, since 2008, the BDP, making the country a prototypical consensus democracy (Fitzgerald and Curtis 2012). There are two consequences of this. First, for the conceptual framework developed in chapter 3 to remain a useful mental guide to think about the issue at hand, we have to slightly change the way we interpret the expressive voting term $(\gamma_{igt} - \gamma_{ikt})$. In the original framework, this term captured the utility difference from voting for the government party g and a generic opposition k. For those party groups that do not include one of the five government parties, this interpretation is still valid. For

those groups that do include government parties, we can think of the expressive voting term as the utility difference between voting for a specific government party k, compared to the highest utility from voting for any of the remaining government parties, g. The second consequence of the Swiss institutional framework is that because executive power is dispersed, the government is not perceived as a single unit to vote or not vote for, and economic and social discontent is more likely to be reflected in the voteshares of specific party groups, rather than in the voteshare of all government parties combined. For instance, a growing desire to become part of the European Union would most likely result in an increase in the voteshare of the SP and thus social democratic parties, while concerns about immigration issues have visibly increased the popularity of the SVP and thus right-wing parties. In both cases, the individual platform of these two parties is much more decisive for vote choice than the fact that both parties have representatives in the Federal Council. Because of that, I primarily focus on the support for party groups, and treat support for the government separately.

The results are more ambiguous than in the previous chapter. While in the baseline specification, increasing unemployment rates are found to benefit right-wing parties, this effect vanishes once we control for employment status. Actually, in this specification rising unemployment makes people more likely to vote for social democratic parties. With regard to the effect of being unemployed, the results are equally mixed. In the baseline specification, being unemployed is not found to have an effect on voting behavior. It is, however, found to make people more likely to vote for right-wing parties, and less likely to vote for social democratic parties, with increasing income losses from being unemployment. At the same time, the unemployed are increasingly less likely to vote for conservative parties at higher increases in the unemployment rate, and that they are are more likely to vote for social democratic parties when they have been unemployed for a relatively brief period of time only. Finally, there are, as expected, no electoral effects of either rising unemployment or employment status on a person's likelihood to vote for the government are a whole.

5.2 Data

5.2.1 Dataset Description

The study uses data collected by the Swiss Household Panel (SHP), which is based at the Swiss Center of Expertise in the Social Sciences FORS, and is financed by the Swiss National Science Foundation. The SHP is a longitudinal survey that has been carried out annually since 1999 and is a representative sample of the Swiss population. Extensive information on the SHP is provided in Voorpostel M. (2010). I use waves 1 through 13, corresponding to data between 1999 and 2012. In 2009, the SHP introduced a rotation system for certain questions, so that they are not asked annually any longer. Because

of that, questions on political attitudes were omitted from the survey in the years 2010 and 2012. As a result, my dataset contains 12 years of observations rather than 14. For various reasons, not all individuals have participated in all periods, of course. To reduce a possible attrition problem, I follow Kuhn (2009) and use the entire sample, rather than the balanced sample only.

5.2.2 Dependent Variables

My dependent variable is the party group an individual would vote for at the time of the SHP survey, if an election were held the following day. More precisely, the variable is based on SHP question pYYp19, which asks: "If there was an election for the National Council tomorrow, for which party would you vote?" In the SHP, the responses are then coded for 17 individual parties and a group "remaining parties", as well as different categories of "would not vote" and "inapplicable".

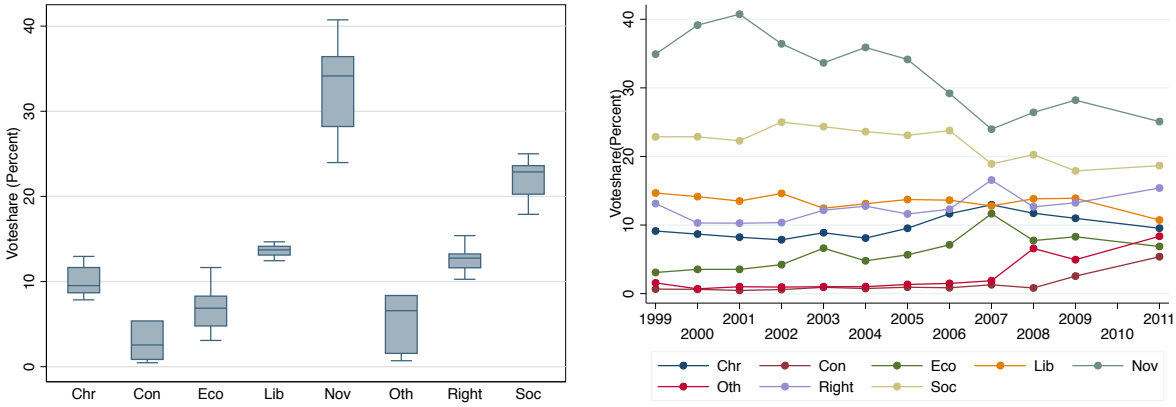
Table 5.1: Categorization of Parties into Party Groups

Party Family	Parties
Christian democracy (Chr)	Christlichdemokratische Volkspartei (CVP), Christlich-soziale Partei (CSP), Evangelische Volkspartei (EVP)
Conservative (Con)	Eidgenössisch-Demokratische Union (EDU), Bürgerlich-Demokratische Partei (BDP) Graubünden, Demokratische Partei
Green/Ecologist (Eco)	Grüne
Liberal (Lib)	Freisinnig-Demokratische Partei (FDP), FDP Die Liberalen, Liberale Partei der Schweiz (LPS)
Other parties (Oth)	Frauen macht Politik, Partei der Arbeit der Schweiz (PdA), Grünliberale Partei Schweiz (GLP)
Right-wing (Right)	Lega dei Ticinesi, Freiheitspartei der Schweiz, Schweizerische Volkspartei (SVP), Schweizer Demokraten (SD)
Social democracy (Soc)	Landesring der Unabhängigen (LdU), Sozialdemokratische Partei (SP)
No vote (Nov)	"Vote for candidate, not for party", "for no party", "wouldn't vote"

There are two reasons why I recode this original variable into party groups. First, because using the same party groups as in the previous chapter makes comparisons and overall conclusions easier. Second, and more importantly, together with the "I wouldn't vote" and an "inapplicable" alternative, the coding into 17 parties in the SHP data would result in a dependent variable with 19 possible outcomes. This is too much to handle for a multinomial model. Moreover, it is of no interest here to analyze electoral results for, say, the Independent Alliance (LdU), which has gained a mere 44 of the 145,409 total votes, and which ceased to exist in 1999. For these reasons, I generate my dependent variable as follows: first, I recode "inapplicable", "no answer" and "does not know" as missing values. Next, I assign to each of the 17 vote choices in the SHP data the party group label from Döring and Manow (2013). GLP, which is not assigned a group label, I categorize as "other parties", because its dual focus on ecological issues and liberal economic policy does not fit any of the group labels. Also as "other parties", I code the feminist green

alternative party, and the labor party. Doing so eliminates the party group "special issue groups" in case of the former, and "communist parties" in case of the latter, and thus further reduces the dimension of my dependent variable. Next, I recode the Swiss People's Party (SVP) from "agrarian" to "right-wing". This is how the party is commonly treated in the political science literature, such as in Oesch (2008) or Kriesi et al. (2006). The same is true for the freedom party, which I recode as right-wing, too. The SHP answers "vote for candidate, not for a party", "for no party" and "wouldn't vote", I generate a new label "no vote". This procedure results in eight mutually exclusive and exhaustive party groups. Details on the categorization of parties into these groups are provided in table 5.1. The distribution of voteshares of each groups as well as their voteshares over time are shown in figure 5.1.

Figure 5.1: Party Group Voteshares in SHP Dataset



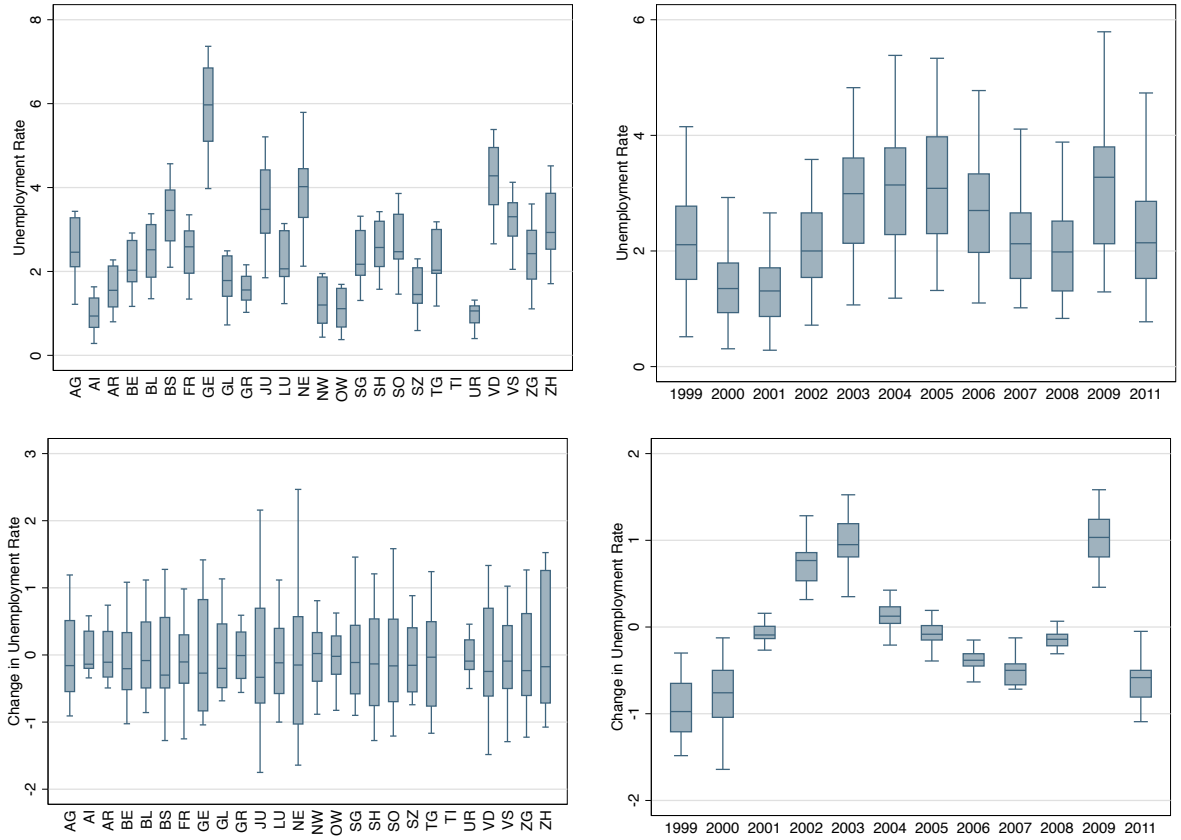
In the left panel, each box covers the range between the 25th and 75th percentile of voteshares of each party group. Upper (lower) adjacent values are given by the highest value not greater than the 75th (25th) percentile +(-) 3/2 of the interquartile range. In the right panel, the average annual voteshares of each party group are shown over time. Data source: Swiss Household Panel (SHP).

5.2.3 Explanatory Variable of Interest

The analysis in this chapter focuses on two different explanatory variables of interest: cantonal unemployment rates and employment status. Data on cantonal unemployment rates is obtained from SECO (2013) and is available for all cantons except Ticino. For Zurich, the unemployment rate of the regional unemployment is used, as a cantonal rate is not available. There are two advantages of using cantonal, rather than national unemployment rates. First, using cantonal rates introduces an additional source of variation across individuals, whereas the national rate would be captured by the year effects. Second, and more important, it is in the spirit of Ansolabehere et al. (2012), who argue that is should be unemployment in an individual's geographic and personal space, rather than the national rate, that should influence his voting behavior most. One obvious objection against using cantonal rates is that few people will actually know that rate. But the

argument does not rely on people knowing the rate, but rather on perceiving whether it is high or low by the number of unemployed people around them.

Figure 5.2: Cantonal Unemployment Rates by Canton and Year



Each box covers the range between the 25th and 75th percentile of the unemployment rate (upper panels) and the change in the unemployment rate (lower panels) by canton (left panels) and over time (right panels) and contains a median line. Upper (lower) adjacent values are given by the highest value not greater than the 75th (25th) percentile +(-) 3/2 of the interquartile range. Data source: Swiss Household Panel (SHP).

Figure 5.2 shows both the distribution of the levels (upper panels) and the changes (lower panels) of these rates by canton and over time. In the introduction to this chapter I have already drawn attention to the remarkably benign and stable performance of the Swiss economy since 1999, a fact that is clearly visible in the figure. The median unemployment rate has generally been well below 4 percent, both across cantons and over time, and increases have never been of a magnitude that would lead one to expect radical political change. Even in the recent economic crisis, the median increase of the unemployment rate was of the order of one percentage point in 2009, before the rate dropped by almost the same amount one year later. This makes analysis conditional on the level of the unemployment rate less informative.

Data on people's employment status, the second variable of interest, is constructed from the two SHP variables WSTATYY, which gives information on a persons working status, and OCCUPAYY, which records occupational status. An individual is treated as unemployed in my analysis if it is in either or both of the two variables. In section 5.4.2,

I use unemployment status as the dependent variable. Across all periods, the unemployment rate in my dataset is 1.86 percent, which is equivalent to 1,173 individuals that are unemployed for at least one period. One subgroup of interest, which has even less observations, is those that just recently became unemployed. To capture that, I create a binary variable that is one in the case an individual is unemployed at the time of the current SHP survey, but was not a year earlier, and zero in all other cases. But despite a reduced number of observations, both of these variables capture effects that both intuition and empirical findings would let us expect: as the figures in appendix C.2 show, both being unemployment and becoming unemployed correlate with drops in household income and life satisfaction, in the case of becoming unemployed even dramatically so.

5.2.4 Control Variables

The selection of control variables is based on the conceptual framework in chapter 3, which suggests four types of control variables: those capturing the government's economic competence, those capturing non-economic voting preferences as well as variables that capture the competency signal and a party group's competitiveness. I will discuss the variables I use to control for each of these four dimensions in turn.

The SHP data provides numerous variables that can be used to capture the contribution from non-economic and expressive voting, $(\gamma_{igt} - \gamma_{ikt})$. These controls correspond to the socio-economic variables that are commonly included in individual-level economic voting studies, and I follow that literature, particularly Duch and Stevenson (2008), in selecting relevant variables. In doing so, I include variables for age, gender, the level of education, net household income, and for interview language to proxy a person's geographic region of residence. To capture a person's ideological background, I control for a self-assessment of her ideological position on a 0 (very left) to 10 (very right) scale, as well as her assessment of her father's position on the same scale. This variable is important because parental voting behavior and political orientation has been widely found to influence the voting behavior of the next generation. Using SHP data, Coffe and Voorpostel (2010) find such effects for Switzerland. In addition to these variables, I include a variable that, on a 0 (very low) to 10 (very high) scale, indicate a persons interest in politics, the degree to which a person thinks she has influence on the political process and her satisfaction with democracy.

Given the quasi permanent coalition government in Switzerland, it is not meaningful to interpret P_{gk} as a party group's change to tie the government in an election. But people may still be weary to "waste" their ballot and vote for a party group that has only captured a very small voteshare in the last election and thus has correspondingly limited influence on the political process. So in a multi-country study, we would have to control for that by including something like each party group's voteshare in the last election. Given that I focus on Switzerland only, these voteshares are constant across individuals

in a given year, and thus captured by the year dummies. Similarly, the competency signal is being controlled for by the year dummies, too; to the extend that the government's foreign- and domestic political constraints change in any meaningful ways at all over the period of my sample, such changes will be constant across all individuals in a given year. Finally, in the macro analysis in the previous chapter I have included the age of the incumbent party to proxy the consistency of its policies and thus the degree to which past performance allows the voter to form expectations about future performance. Given the stable and relatively predictable policy-making of the Swiss executive, controlling for such factors is unnecessary, too. Summary statistics of all control variables are provided in appendix C.1.

5.3 Empirical Strategy

5.3.1 Voting for Party Groups

On the level of an individual voter, the vote choice is conceptually equivalent to choosing from a set of exhaustive and mutually exclusive alternatives: the voter can vote for any of the parties on the ballot, cast an empty ballot, or abstain from voting altogether. A natural way to model such a discreet choice with multiple options is the random utility maximization framework, where the utility a voter receives from each alternative is a linear function of a set of observable determinants, $\mathbf{x}_{it}$, an individual specific effect, α_i, a time effect λ_t, and a random element, ϵ_{ijt}. Given my focus on party groups, the choice for any of the individual parties on the ballot will eventually be mapped into an individual's vote for a party group. Conceptually, this is of no consequence if we assume that individuals do in fact choose parties directly, rather than selecting a party groups first before, in a second step, choosing from the parties within that group. If this were the case, such multi-level behavior would have to be modeled explicitly. But in Switzerland, the assumption that people simply do vote for parties without the intermediate party groups step is reasonable, and we can think of the mapping into party groups as no more than a way to reduce the demand on the multinomial model. When translating this into our context, we thus assume that voter i derives a utility level v^*_{ijt} from voting for party group j at time t, so that we have:

$$v^*_{ijt} = \mathbf{x}'_{it}\boldsymbol{\beta}_j + \alpha_i + \lambda_t + \epsilon_{ijt}. \tag{5.1}$$

The underlying assumption of the framework is that the voter simply chooses the alternative for which utility is maximal; at time t he chooses alternative k_t if $k_t = \arg\max\{v^*_{i1t}, v^*_{i2t}, \ldots, v^*_{iJt}\}$. With regard to estimation, two issues present themselves: the handling of the individual effect, α_i, which leads to the choice of whether or not to use a panel data framework and, if so, which one, and the assumption on the random

element ϵ_{ijt}, which leads to the choice between a logit and a probit model. With regard to the first, I follow Duch and Stevenson (2008) in estimating a pooled multinomial model with standard errors clustered by individuals. Such a model assumes that once we control for the set of observable regressors, x_{it}, and the time effect, λ_t, the individual effect becomes irrelevant. This is a strong assumption, and it is partly taken for convenience because Stata does not implement a multinomial choice model for panel data. But given our relatively clear understanding of what the relevant control variables are, and given that I include year effects, the chance of omitted variable bias is substantially reduced. Furthermore, clustering by individuals takes care of potential serial correlation issues of the error terms. With regard to the distribution of said error term, I follow Duch and Stevenson (2008) in assuming that $\epsilon_{ijt} \sim i.i.d.$ of extreme value type 1, which leads to the multinomial logit model.

An often invoked caveat of the logit model is that it is subject to the independence of irrelevant alternatives property (IIA), which posits that the relative odds between two alternatives do depend on the characteristics of these alternatives only, and not on the existence of other,irrelevant, alternatives. In our specific case, this implies, for instance, that for any given voter, the odds of choosing SVP or SP have not changed in 2008 when part of the SVP split and founded the BDP. This seems unlikely, because the BDP is likely to have taken away more votes from the SVP than from the SP, thus lowering the odds of a voter choosing SVP rather than SP. However, Duch and Stevenson (2008) emphasize that the IIA property applies conditional on the covariates in the model, and that, as argued in Train (2003), in a well specified vote choice model, IIA holds. Given that there is substantial empirical evidence on the main drivers of vote choice, and that I incorporate most of these factors into my model here, the IIA problem, if not fully eliminated, should be strongly reduced.[1] Another issue arises from the particular data structure in the SHP. In particular, the logit model assumes ϵ_{it} to be i.i.d of extreme value type I, an assumption that, given our panel data structure, is unlikely to hold. The problem can, however, be dealt with relatively easily by clustering the standard errors in Stata by individuals, which is what I do in all my regressions.

5.3.2 Voting for the Government

In the case of voting for the government, the framework is conceptually different in that the vote choice is binary; a voter either supports the government or he does not. The underlying behavioral framework is, however, very similar to the one just described. The main difference is that instead of modeling the utility from different alternatives, v^*_{ijt}, we now model the utility difference of the two alternatives, v^*_{it}, as a function of a set of observable determinants, $\mathbf{x}_{it}$, an individual specific effect, α_i, a time effect λ_t, and a

[1] Duch and Stevenson (2008) present robustness checks by comparing the MNL estimates with binary choice models, which do not rely on IIA, to show that the estimates are virtually identical.

random element, ϵ_{it}, so that we have

$$v_{it}^* = \mathbf{x'}_{it}\boldsymbol{\beta} + \alpha_i + \lambda_t + \epsilon_{it}. \tag{5.2}$$

We do not directly observe v_{it}^*, but only the actual choice people make, v_{it}. The former is mapped into the latter according to the following simple decision rule:

$$v_{it} = \begin{cases} 1 & \text{if } v_{it}^* > 0 \\ 0 & \text{if } v_{it}^* \leq 0 \end{cases} \tag{5.3}$$

In words, this simply says that at time t, individual i votes for the government if his utility from doing so exceeds the utility from not doing so. To estimate the model, I use a random-effects logit model. I use random effects because the SHP is a representative sample of the Swiss population, so that modeling the individual effect, α_i, as randomly distributed among individuals seems appropriate. And I use a logit model because it has the appealing feature that its coefficients can be interpreted as odds ratios, $p_{it}/(1-p_{it})$, with p_{it} being the probability that $v_{it} = 1$. This is because in a logit model, we have $\partial ln[p_{it}/(1-p_{it})]/\partial x_{ijt} = \beta_j$. As a result, the coefficient β_j can be interpreted as the change in the log of the odds ratio, and e^{β_j}, as the change in the odds ratio. The probability that an individual votes for the government is then modeled as

$$P(v_{it} = 1|\mathbf{x}_{it}, \beta, \lambda_t, \alpha_i) = \frac{e^{\mathbf{x'}_{it}\boldsymbol{\beta}+\lambda_t+\alpha_i}}{(1+e^{\mathbf{x'}_{it}\boldsymbol{\beta}+\lambda_t+\alpha_i})}, \tag{5.4}$$

where $\alpha_i \sim N(0, \sigma_\alpha^2)$. Given that Switzerland has a coalition government, we can think of this as being the choice between the highest utility from voting for any of the government parties and the highest utility from any of the non-government alternatives, which may be either voting for a non-government party or not voting.

5.4 Results

Corresponding to the three questions of interest in this chapter, this section presents three sets of results: subsection 5.4.1 shows the effect of a change in cantonal unemployment rates on the probabilities of voting for different party groups, subsection 5.4.2 shows the effect of employment status on the same probabilities, and subsection 5.4.3 shows the effect of cantonal unemployment rates and employment status on the support for the government. I have discussed in the introduction that using Swiss data limits observations to times of benign economic circumstances only, a fact that is also reflected in the SHP data, where there are only 1,173 individuals that are unemployed for at least one period. When focusing on employment status as the explanatory variable, the results are thus driven by the vote choice of these few individuals so that mapping these choices into eight different categories may be asking too much from the data. To check whether results

change if answer choices are mapped into fewer categories, I follow Kuhn (2009) by focusing on the three party blocks "left", "center-right" and "conservative-right". Results from these regressions do not reveal any additional information, however, and are presented in appendix C.4.

5.4.1 Cantonal Unemployment Rate and Voting

In this and the following subsection, estimates are average marginal effects from a multinomial logit model as discussed in section 5.3.1. In all models, I include a full set of cantonal and year dummies, use the alternative "no vote" as the base category and cluster standard errors by individuals. Coefficients can thus be interpreted as the average marginal effect of a change in a given regressor on the probability that an individual votes for a given party group instead of not voting. Table 5.2 presents the estimates of the effect of a change in the cantonal unemployment rate on the probability of voting for different party groups. Qualitatively, the results are in line with those from chapter 4, with an increase in the unemployment rate leading to a significant increase in the probability of voting for right-wing parties. Quantitatively, however, the effect is very small; on average, an additional one percentage point increase in the cantonal unemployment rate increases an individual's probability to vote for right-wing parties by 1.2 percentage point. An effect of half the size is also found on the party group "other parties". Because I have treated this group as a residual when constructing my party groups, results with regard to it cannot be interpreted and I will not do so throughout.

To check the performance of the model as a whole, let us go through the remaining coefficients to see whether they are in line with established empirical findings and intuition. Except for christian democratic and conservative parties, where it has no effect, increasing age is found to reduce the probability of voting for any party group, indicating that with increasing age, people tend to vote less. Women are found to be more likely to vote for the green party and less likely to vote for right-wing parties. Both effects are highly significant, but again rather small in magnitude. A large and highly significant detrimental effect on the probability of voting for right-wing parties is found for individuals with a university education, whose probability of voting for these parties is about 8 percentage points lower. At the same time, they are significantly more likely to vote for liberal and green parties. It would be hard to argue that being married should have a clear a priori effect on voting for any of the party groups, except, maybe, for the christian democratic one. Such an effect we do find, but if it were the primary issue of interest we would have to deal more carefully with the issue of reverse causality.

Political ideology is measured on a 10 point scale and running from "extreme left" to "extreme right". For self-placement, the results are all highly significant and in line with intuition; a one point increase in the self-placement increases the probability of voting for parties on the right of the political spectrum and has the opposite effect on the

Table 5.2: Effect of Cantonal Unemployment on Voting

	Chr	Con	Eco	Lib	Oth	Right	Soc
ΔCantonal Unemployment Rate	-0.001	-0.005	0.001	-0.003	0.006**	0.012**	0.012
	(0.007)	(0.004)	(0.005)	(0.007)	(0.003)	(0.006)	(0.008)
Age	-0.000	-0.000	-0.001***	0.001***	-0.000***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female	0.005	-0.002	0.017***	-0.008	-0.001	-0.016***	0.007
	(0.007)	(0.002)	(0.006)	(0.007)	(0.003)	(0.006)	(0.009)
University Education	0.009	0.001	0.016**	0.032***	0.015***	-0.081***	0.019*
	(0.010)	(0.004)	(0.007)	(0.009)	(0.003)	(0.011)	(0.011)
Married	0.026***	0.004	-0.012**	-0.020***	0.000	-0.001	-0.006
	(0.007)	(0.003)	(0.005)	(0.007)	(0.003)	(0.006)	(0.009)
Left/Right Self-Placement	0.012***	0.003***	-0.021***	0.043***	-0.005***	0.048***	-0.067***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)
Left/Right Placement of Father	0.007***	-0.000	0.003**	0.004***	-0.001*	-0.001	-0.017***
	(0.002)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)
Interest in Politics	-0.000	0.000	0.003***	0.002	0.003***	-0.001	0.018***
	(0.001)	(0.000)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)
Satisfaction with Democracy	0.010***	-0.001**	-0.002*	0.015***	-0.003***	-0.014***	0.016***
	(0.002)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)
Interview Language French	0.047	-0.214***	-0.004	0.085*	0.016	0.043	0.019
	(0.056)	(0.018)	(0.039)	(0.051)	(0.030)	(0.053)	(0.062)
Interview Language Italian	-0.018	-0.030***	-0.011	0.038*	0.006	-0.050***	0.060***
	(0.018)	(0.005)	(0.011)	(0.021)	(0.006)	(0.015)	(0.022)
Household Net Income (Log)	-0.029***	-0.005***	-0.000	0.048***	0.006**	-0.031***	0.004
	(0.006)	(0.002)	(0.005)	(0.006)	(0.003)	(0.005)	(0.007)
Observations	32981	32981	32981	32981	32981	32981	32981

Standard errors in parentheses. $^{*}p < 0.1$,$^{**}p < 0.05$,$^{***}p < 0.01$. The dependent variable is an individual's choice for one of eight exhaustive and mutually exclusive voting choices, seven of which correspond to the seven columns of the table, the eight, "no vote", serves as the base category. Coefficients are average marginal effects from a multinomial logit model. The model was estimated with a full set of canton and year dummies, and with standard errors clustered by individuals.

probability of voting for those parties on the left. An influence of ones father's political ideology on ones own, which has been found in Coffe and Voorpostel (2010), is revealed as well, though not fully consistently. A higher placement of ones father's political ideology significantly increases ones probability to vote for christian democratic and liberal parties, while strongly reducing ones probability to vote for social democratic parties. At the same time, however, it also increases ones probability to vote for the green party, which is contrary to what we would expect.

A higher interest in politics, again measures as a self-assessment on a 10 point scale from "very low" to "very high" increases the probability of voting for social democratic and other parties as well as for the green party. The effect on social democratic parties, while being the strongest by far, is still relatively small, however, and indicates that a one point increase in the scale of political interest increases ones probability to vote for social democratic parties by 1.8 percentage points. A similar effect is found for a one point increase in satisfaction with democracy, in which case the probability of voting for social democratic parties increases by 1.6 percentage points. In addition to that, the

probability of voting for liberal parties increases by 1.5 percentage points, and that of voting for christian democratic parties by 1 percentage points. For the remaining party groups, the effect is negative, and strongest for right-wing parties, where the probability of voting drops by 1.4 percentage points.

The finding that French and Italian speakers tend to support social democratic and liberal parties, while having lower probabilities of voting for conservative and right wing parties is in line with historical election results. The effects are particularly strong Italian speakers, whose probability of voting for conservative and right-wing parties is reduces by 3 and 5 percentage points, respectively, while that of voting for social democratic parties is higher by 6 percentage points. Finally, higher household income tends to increase people's probability to vote for liberal and other parties, while reducing their probability to vote for most other groups.

5.4.2 Being Unemployed and Voting

The results in this subsection aim to answer the second question of interest, whether being unemployed has an effect on a person's voting behavior. The model as well as the set of control variables I use to estimate this effect is the same as in the previous subsection. Table 5.3 presents the result from four different models, each of which corresponds to a distinctly shaded gray box: the first box presents the baseline model, in which I check for the relationship between employment status and the probabilities of voting for different party groups. The subsequent boxes present results from three extensions, which check, in turn, whether this relationship depends on the change in the unemployment rate, the income difference between being unemployed and working, or whether having become unemployed just recently has a distinctive effect. The key variable in the first three models is the binary variable "unemployed", which is equal to one if at the time of the SHP interview, a person was unemployed and zero otherwise. In the fourth model, the binary variable "became unemployed" is equal to one if at the time of the interview an individual was unemployed but was working the year before, and zero otherwise. To enhance clarity, I only show the estimates for the key variables of interest and omit those of the control variables. These estimates are relatively stable across all models and similar to the results from the previous section, where I have discussed them in detail. The full results for all four models are presented in appendix C.3.

In the baseline specification, the only discernible and weakly significant impact of being unemployed is on the probability of voting for christian democratic parties, which is reduced by about 3 percentage points. Can we explain this result? If it were driven by the economic voting channel, this would mean that people blame the government for their job loss and deem the CVP, the christian democratic government party, as the driving force behind the government's economic policy. This seems unlikely. More likely, then, is a change in the expressive voting channel. One interpretation could be that once people

Table 5.3: Effect of Being Unemployed on Voting

	Chr	Con	Eco	Lib	Oth	Right	Soc
Unemployed	-0.031*	-0.002	-0.001	0.013	-0.008	-0.001	0.027
	(0.016)	(0.008)	(0.011)	(0.017)	(0.008)	(0.015)	(0.019)
Unemployed	-0.039	0.024	0.041	0.024	-0.039*	-0.018	0.060
	(0.052)	(0.016)	(0.028)	(0.048)	(0.021)	(0.039)	(0.048)
ΔCantonal Unemployment Rate	0.004	0.006	-0.010*	-0.001	-0.016***	-0.003	0.018**
	(0.006)	(0.004)	(0.005)	(0.006)	(0.004)	(0.006)	(0.008)
Unemployed×ΔCant. Unemp. Rate	0.004	-0.010**	-0.011	-0.003	0.008*	0.006	-0.011
	(0.016)	(0.005)	(0.008)	(0.012)	(0.005)	(0.012)	(0.014)
Unemployed	-0.004	-0.001	-0.000	0.004	-0.012	0.011	0.008
	(0.010)	(0.005)	(0.013)	(0.015)	(0.011)	(0.010)	(0.021)
Income Difference in % (if Unemployed)	0.000*	-0.000*	-0.000**	-0.000	-0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Unemployed×Income Difference	0.000	0.000	-0.000	0.000	-0.000	0.001***	-0.001**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Became Unemployed	-0.026	-0.008	0.013	0.014	-0.015	0.012	0.036*
	(0.022)	(0.011)	(0.013)	(0.020)	(0.012)	(0.017)	(0.021)

Standard errors in parentheses. $^{*}p < 0.1$,$^{**}p < 0.05$,$^{***}p < 0.01$. Each color block presents estimation results of the key variables from a different model. Estimates of control variables are omitted. The dependent variable is an individual's choice for one of eight exhaustive and mutually exclusive voting choices, seven of which correspond to the seven columns of the table, the eight, "no vote", serves as the base category. Coefficients are average marginal effects from a multinomial logit model. The model was estimated with a full set of canton and year dummies, and with standard errors clustered by individuals. The number of observations for the four models are, respectively, 34,651, 33,356, 2,917, and 28,788.

are unemployed, they become more concerned with economic issues and thus change their party preferences away to parties with more economic policy oriented platforms. If this were true, a reduction in the support for christian democratic parties would make intuitive sense, but we would expect to see the opposite effect on party groups like the social democrats or liberal parties. That we do not observe such effects may be a result of the caveats discussed in the introduction, but as it stands, the result is hard to interpret intuitively.[2]

An obvious question is whether the effect of being unemployed on voting depends on certain external and personal circumstances. One important conditioning effect might be the direction of the labor market. It seems plausible that being unemployed in an environment of falling unemployment and correspondingly better changes to find new work has a different effect on a person's voting behavior than when she is unemployed in an environment of rising unemployment, where finding a new job is relatively difficult. To test for such an effect, the second block of results includes into the baseline specification the change in the cantonal unemployment rate from the previous section as well as an interaction term between employment status and said change in the unemployment rate. There are two interesting messages. Consider first the marginal effect of being unemployed. The results suggest that with increasing changes in the cantonal unemployment rate, a

[2]An imaginative interpretation that has been suggested during a discussion of the results is that upon becoming unemployed, people may loose their faith in God. While not altogether impossible, pursuing this question further would go beyond the scope of this thesis.

person's probability of voting for conservative parties decreases. Quantitatively, the effect is again weak; each additional percentage point increase in the cantonal unemployment rate reduces an unemployed person's probability of voting for conservative parties by an additional percentage points. Qualitatively, however, this is interesting because it is the opposite of what we would expect from both our results in the previous chapter and from the zero-sum argument in Friedman (2005). Both of these would suggest that becoming unemployed in a high unemployment environment would increase people's support for conservative and right-wing parties. I this light, the second interesting message from the model is even more surprising. Contrary to the previous section, where an increase in the cantonal unemployment rate did not have a significant effect on the probability of voting for social democratic parties, in this model it does. Each additional percentage point increase in the unemployment rate increases an individual's probability of voting for such parties by 1.8 percentage points. The model also finds a significant relationship between changes in cantonal unemployment rates and the support for green and other parties, both of which are negative and of smaller order than that on social democratic parties.

Another factor that may condition the effect of being unemployed on voting behavior is the income change associated with being unemployed. To test for such an effect, the third block of results includes a variable that proxies this income difference at the household level as well as an interaction between said variable and the unemployment status. I use household income rather than personal income because the former seems a better indicator for a person's living standard and the change thereof, which is what I want to capture. The income difference variable is defined as the percentage change in an individual's average income in times of unemployment and times of employment, and calculated such that positive values indicate an income loss from unemployment. The results show that neither being unemployed nor the income difference by themselves do have an effect. That the income difference by itself does not have an effect is intuitive, since we would expect it to matter in times of unemployment, while it should be of little concern otherwise. Where we find significant effects is for the interaction term. Here, the results are qualitatively in line with the results from the previous chapter; the higher the income loss from unemployment, the higher the probability that an individual votes for right-wing parties in times of unemployment, and the lower the probability of voting for social democratic parties. Yet while both of these effects are significant, their magnitudes are inconsequential; the probability that an unemployed individual who suffers a 20 percent income loss from unemployment votes for right-wing parties increases by a mere 2 percentage points, while the probability that the same individual votes for social democratic parties drops by the same amount.

Oesch and Lipps (2011) find that having been unemployed for an extended period of time does not reduce the detrimental effect of being unemployed. Conversely, one may ask whether having become unemployed just recently has an effect on voting behavior distinct

from being unemployed for an extended time. To test for this, variable of interest in the final block of results is a binary variable that is one in case an individual has become unemployed over the last year and zero otherwise. The results show that having recently become unemployed increases an individual's probability of voting for social democratic parties by 3.6 percentage points. All by itself, this result is intuitive if we think that being unemployed rises ones enthusiasm for welfare policies and a generous social safety net. Yet in light of the previous results, it is not clear why support for such policies should abate over the course of being unemployed.

5.4.3 Unemployment and Support for the Government

In this final section, I test the effect of all the explanatory variables from the previous two sections on the support for the government. The way I do this is by estimating binomial random-effects logit models, where the dependent variable is one if a person votes for any of the five government parties and zero if the person does not. Standard errors are calculated using the bootstrap method, and coefficients are presented as odds-ratios, so that we can interpret them as the change in the ratio between voting for the government and not voting for the government. The effect of changes in economic variables—or changes in the perception thereof—on incumbent government support is, as we have seen above, one of the key questions in the economic voting literature. Furthermore, recent research suggests that this effect might be particularly strong for those people who have suffered from economic hardship themselves. Anderson and Hecht (2012), for instance, find that in the 2009 German election, people did punish the government electorally if they have themselves suffered from the recent economic downturn, while those we were merely gloomy about their future prospects did not show such a reaction. Given this finding, it would be reasonable to expect that being unemployed tends to reduce people's support of incumbent governments.

But I have discussed above why given the Swiss institutional setting, finding such an effect is unlikely. In essence, the executive has the form of a quasi-permanent coalition of the countries four major parties plus the BDP, which considerably reduces political polarization with regard to incumbent voting, since "punishing" the incumbent for poor performance and electing an opposition government instead is not an option. As a consequence, then, we would expect the effect of unemployment on the support for the government to be weak, at best. This is what we find. The results in table 5.4 show that non of the various unemployment variables have any significant effect on government support. At the same time, the estimates of the remaining variables suggest that the model as such does have explanatory power; most control variables are highly significant, with signs that are in line with both intuition and established findings. Increasing age, right-ideology and satisfaction with democracy tend to increase support for the government, while being female, having a university education, right-ideology of ones father and

increasing household income tend to reduce it. Variables that do not seem to matter are marital status, the degree of interest in politics and interview language.

Table 5.4: Effect of Unemployment and Being Unemployed on Government Support

	(1)	(2)	(3)	(4)	(5)
ΔCantonal Unemployment Rate	-0.099				
	(0.103)				
Unemployed		0.017	0.680	0.084	
		(0.207)	(0.600)	(0.222)	
Unemployed×ΔCant. Unemp. Rate			-0.207		
			(0.155)		
Income Difference in % (if Unemployed)				0.008**	
				(0.004)	
Unemployed×Income Difference				0.001	
				(0.005)	
Became Unemployed					0.000
					(0.265)
Age	0.016***	0.015***	0.016***	0.041***	0.014***
	(0.004)	(0.003)	(0.004)	(0.014)	(0.004)
Female	-0.459***	-0.435***	-0.461***	-0.668*	-0.461***
	(0.113)	(0.110)	(0.113)	(0.365)	(0.120)
University Education	-0.765***	-0.717***	-0.768***	0.034	-0.697***
	(0.124)	(0.121)	(0.124)	(0.351)	(0.132)
Married	-0.026	-0.024	-0.024	-0.275	-0.050
	(0.095)	(0.092)	(0.095)	(0.310)	(0.102)
Left/Right Self-Placement	0.204***	0.190***	0.202***	0.163***	0.214***
	(0.018)	(0.017)	(0.018)	(0.058)	(0.019)
Left/Right Placement of Father	-0.048**	-0.048**	-0.048**	-0.028	-0.051**
	(0.023)	(0.022)	(0.023)	(0.071)	(0.024)
Interest in Politics	-0.018	-0.012	-0.015	0.001	-0.012
	(0.018)	(0.018)	(0.018)	(0.056)	(0.020)
Satisfaction with Democracy	0.068***	0.069***	0.065***	0.169***	0.071***
	(0.019)	(0.018)	(0.019)	(0.056)	(0.021)
Interview Language French	0.255	0.294	0.250		-0.140
	(0.826)	(0.823)	(0.826)		(0.993)
Interview Language Italian	-0.092	-0.058	-0.091	-1.190	0.122
	(0.256)	(0.251)	(0.256)	(0.791)	(0.284)
Household Net Income (Log)	-0.167**	-0.132*	-0.161**	-0.139	-0.157**
	(0.071)	(0.069)	(0.070)	(0.219)	(0.077)
Obervations	24270	25493	24569	2199	21255
Groups	5206	5404	5219	451	4764

Standard errors in parentheses. $^{*}p < 0.1,^{**}p < 0.05,^{***}p < 0.01$. Each column shows the result from a binary random-effects logit model, where the dependent variable is an individual's choice to vote for one of the government parties or not. All models were estimated with a full set of canton and year dummies, and standard errors are calculated using the bootstrap method. Coefficients are reported as e^{β_k}, so that they can be interpreted as the average marginal effect of a change in regressor k on the odds ratio of voting for the government and not voting for the government.

5.5 Conclusion

Overall, the results of the macro analysis in the previous chapter were broadly in line with the conventional story in the economic voting literature: economic turmoil benefits right-wing extremist parties at the expense of incumbents. The results of this chapter add nuance to such a worldview. When looking at the effect of changes in the unemployment rate on voting behavior, the baseline results are in line with the conventional story; additional increases in unemployment rise the probability that an individual votes the right-wing parties. But when we control for unemployment status, the effect vanishes, and increasing unemployment rates now raise the probability of voting for social democratic parties. In terms of magnitude, both increases in voting probabilities are small and in the order of 1 and 2 percentage points, a fact that, as I have discussed above, is likely to result from low levels and low variation of Swiss unemployment rates. Throughout the sample period, cantonal unemployment rates have rarely been above 4 percent and are thus at levels at which they are predicted to have little effect on voting behavior in the macro section above.

With regard to the effect of being unemployed, the results are equally mixed. On the one hand, the unemployed become increasingly more likely to vote for right-wing parties, and less likely to vote for social democratic parties, with increasing income losses from being unemployment. Intuitively, these results are in line with the conventional view that support for right-wing parties increases along with economic hardship. On the other hand, however, if we control for changes in the unemployment rate, then the results suggest that the unemployed are increasingly less likely to vote for conservative parties at higher increases in the unemployment rate. In addition to that, when we focus on those that have been unemployed for less than one year, we find that they are more likely to vote for social democratic parties.

Finally, I test whether changes in unemployment rates or employment status have an effect on people's probability to vote for the incumbent government. Given the quasi-permanent coalition government in Switzerland, voting for the incumbent means voting for any of the five parties that have representatives in the Federal Council, the Swiss executive body. Given the non-polarized political environment in Switzerland that results from this unique form of government, I have argued above that finding such an effect would have been surprising. And in fact the results indicate that people to not "punish" the government for either increases in the unemployment rate of their own job losses, most likely because the government is not perceived by voters as a single entity to support or not support. However, the results suggest that the model has predictive power and could thus be usefully applied to more competitive political systems.

Chapter 6

Conclusion and Discussion

Armed with the results from the previous two chapters, we are now in a position to revisit and answer the research questions from the introductory chapter. I do this in the first part of this final chapter, before discussion the implications of the results in a broader context.

The first of the three research questions was what the effect of the unemployment rate on voting behavior is. The conventional view in the economic voting literature is that economic turmoil, be it negative growth or increasing unemployment, tends to benefit right-wing extremist parties at the expense of incumbent governments. My results from the macro analysis in chapter 4 are in line with this conventional view. The findings from the macro analysis in chapter 4 show that across OECD countries, both of these effects do exist, and are considerably magnified in times of high unemployment as well as during the Great Recession. In addition to that, the results from the macro analysis, though not the micro analysis, suggest that high unemployment not only tends to lead to an increase in right-wing support, but in a political shift towards the right more broadly, as conservative parties tend to be the other main beneficiaries of increasing unemployment. The results from the micro analysis in chapter 5 more ambiguous. While in the baseline specification, increasing unemployment raises people's probability to vote for right-wing parties, this effect vanishes once we control for employment status. In fact, in this case, increasing unemployment rates raise the probability of voting for social democratic parties.

Results from Swiss data are equally ambiguous with regard to the second research question, the effect of being unemployed on voting behavior. The unemployed become more likely to vote for right-wing parties, and less likely to vote for social democratic parties, the higher their income loss from being unemployment is, a result that would be in line with the results from the macro analysis and the conventional economic voting story. Yet rather contrary to this, they become increasingly less likely to vote for conservative parties the higher the increase in unemployment was, and more likely to vote for social democratic parties, if they have just become unemployed over the last year. Finally, and less surprising, I do not find an effect of either unemployment rates or being unemployed

on voting for government parties, a result that is most likely driven by the unique structure of the Swiss executive.

It is clear from the discussion of all these results that the answer to the third question, whether the effects of unemployment rates and employment status on voting behavior depend on certain conditioning variables, is a clear "yes". In fact, the finding that the effects of both increasing unemployment and employment status depend considerably on external circumstances—the level of the unemployment rate or being in a crisis—as well as on personal ones—whether one suffers a large income loss from being unemployed or has a good chance of finding a new job—is one of the two main messages from this thesis. Understanding such mechanisms is important all by itself. But, as I have argued in the introductory chapter, they are of particular importance in a current times, where unemployment rates are at high levels throughout the developed world and where many of the unemployed lack a perspective of a brighter future—a situation that bears the risk of turning into political and social instability.

For the same reason, and this is the second key message, understanding the effect of economic hardship on the unemployed themselves is all the more relevant in times such as these simply because the unemployed are a larger fraction of the electorate. The results from my analysis suggest that voting behavior is not as mechanic as the conventional economic voting results might let one believe. The conceptual framework I have used as a guide for my empirical analysis is able to capture some of these nuances. By taking into account the degree to which incumbent governments can be held responsible for economic conditions it can, for instance, help us understand why, during the Great Depression, incumbents are found to be electorally punished only once unemployment increases by more than 2 percentage points. At the same time, however, the framework is no guide in understanding much that apparently motivates voting decisions. In particular, the framework's non-economic or expressive voting element is, essentially, a black box, and does not help us understand why, for instance, people are more likely to vote for social democratic parties in their early months of being unemployed but not once they have been unemployed for some time.

A final issue of interest is whether we can interpret the results of this thesis as causal. The short answer is: "probably not". In the macro section, I include dummy variables for both time and country effects to capture all unobserved effects that are constant across these two dimensions. In addition to that, theory and previous research suggest that the set of control variables captures all relevant time and country specific effects. So, there is a good case to be made that omitted variable bias is not an issue. In principal, reverse causality could be an issue if the level of electoral support in one election leads to a substantial change in a party group's influence on economic policy and, through that, feeds back into the change of the unemployment rate in the next election. I did not take care of such effects, but results from Brückner and Grüner (2010) and Golder (2003) suggest that they are not an issue. Yet despite of this, prudence and humility are

in order. Carrying out macro level analysis on 23 countries has the benefit of uncovering general patters, but the disadvantage to miss out at least some factors that are relevant to understand in depth the electoral behavior in specific countries. As for the micro-level results, their ambiguity suggests that there is much we do not understand about the relationship between being unemployed and voting, so that interpreting results as causal effects seems premature. Overall, then, we might think of the results of important and interesting correlations that—by a little bit—enhance our understanding of issues about which we still know quite little.

Appendix A

Appendix to Chapter 3

A.1 Derivations

Derivation of equation 3.9 In general, $E[x|y] = \rho_{xy}\frac{y-E[y]}{\sigma_y}\sigma_x + E[x]$, where ρ_{xy} is the correlation between x and y. Thus:

$$\begin{aligned}
E[\mu_{gt}|k_{gt}] &= \rho_{\mu_{gt}k_{gt}}\frac{k_{gt}-E[k_{gt}]}{\sigma_\mu+\sigma_\xi}\sigma_\mu + E[\mu_{gt}] \\
&= \frac{E[\mu_{gt}k_{gt}]-E[\mu_{gt}]E[k_{gt}]}{\sigma_\mu(\sigma_\mu+\sigma_\xi)}\frac{k_{gt}-E[k_{gt}]}{\sigma_\mu+\sigma_\xi}\sigma_\mu + E[\mu_{gt}] \\
&= \frac{E[\mu_{gt}k_{gt}]}{\sigma_\mu(\sigma_\mu+\sigma_\xi)}\frac{k_{gt}}{\sigma_\mu+\sigma_\xi}\sigma_\mu \\
&= \frac{E[\mu_{gt}k_{gt}]}{(\sigma_\mu+\sigma_\xi)^2}k_{gt} \\
&= \left(\frac{\sigma_\mu^2}{\sigma_\mu^2+\sigma_\xi^2}\right)(\Delta u_{gt} - \Delta\bar{u}_t - \mu_{gt-1})
\end{aligned}$$

Derivation of equation 3.10

$$\begin{aligned}
E[v_{gt+1}|vote_g] &= E[v(\pi_{gt+1}, \Delta u_{gt+1})] \\
&= -\frac{1}{2}E[\pi_{gt+1}^2] - bE[\Delta u_{gt+1}] \\
&= -b(\Delta\bar{u}_t + E[\eta_{gt+1}]) \\
&= -b(\Delta\bar{u}_t + E[\xi_{t+1}] + E[\epsilon_{gt+1}]) \\
&= -b(\Delta\bar{u}_t + E[\epsilon_{gt+1}]) \\
&= -b\left(\Delta\bar{u}_t + \left(\frac{\sigma_\mu^2}{\sigma_\mu^2+\sigma_\xi^2}\right)(\Delta u_{gt} - \Delta\bar{u}_t - \mu_{gt-1})\right) \\
&= -b\Delta\bar{u}_t - b\left(\frac{\sigma_\mu^2}{\sigma_\mu^2+\sigma_\xi^2}\right)(\Delta u_{gt} - \Delta\bar{u}_t - \mu_{gt-1})
\end{aligned}$$

Derivation of equation 3.11

$$\begin{aligned} E[v_{kt+1}|vote_k)] &= E[v(\pi_{kt+1}, \Delta u_{kt+1}] \\ &= -\frac{1}{2}E[\pi^2_{kt+1}] - bE[\Delta u_{kt+1}] \\ &= -0 - b(\Delta \bar{u}_t + E[\eta_{kt+1}]) \\ &= -b(\Delta \bar{u}_t + E[\xi_{t+1}] + E[\epsilon_{kt+1}]) \\ &= -b\Delta \bar{u}_t \end{aligned}$$

Appendix B

Appendix to Chapter 4

B.1 Data Details

Table B.1: Countries and Elections

Country	Elections	Country	Elections
Australia	3	Japan	9
Austria	9	Luxembourg	6
Belgium	11	Netherlands	11
Canada	2	New Zealand	3
Denmark	13	Norway	9
Estonia	1	Portugal	10
Finland	9	Slovenia	2
France	7	Spain	7
Hungary	4	Sweden	11
Iceland	2	Switzerland	7
Ireland	3	United Kingdom	7
Italy	9		

Table B.2: Summary Statistics

Variable	Mean	Std. Dev.	Min.	Max.	Obs.
ΔUnemployment Rate	0.07	1.05	-4.08	6.57	2720
Foreign Population	6.08	7.02	0.15	43.84	1984
Gini Index	28.32	4.05	20.08	39.68	2608
Per Capita GDP (Log)	9.91	0.45	8.25	11.21	3056
Right Incumbent	0.45	0.50	0.00	1.00	2488
Trade-to-GDP Ratio	72.14	42.31	15.63	291.05	2416
Partliamentary System	0.88	0.32	0.00	1.00	2496
Executive constraints	-9.47	98.00	0.00	1.00	2472
Gov't Spending (%GDP)	18.87	4.00	7.21	29.45	2976
Age Incumbent Party	56.33	43.14	1.00	152.00	2432
Voteshare Last Election	16.67	18.74	0.00	90.91	3104

Table B.3: Variable Details

Description	Source
Unemployment rate	OECD (2013a) and OECD (2013c)
Foreign Population (Share of Immigrants in Country)	OECD (2013b) (Main), Golder (2003) (Substitute 1), Azevedo (2011) (Substitute 2)
Gini Index of Household Disposable Income	Teorell et al. (2013)
GDP per capita, PPP Converted, Laspeyres index, at 2005 constant prices	Heston et al. (2012)
Incumbent government has right ideology	Beck et al. (2001)
Trade-to-GDP Ratio (calculated as the sum of imports and exports over GDP)	OECD (2013a)
Parliamentary system (country has a parliamentary (rather than a presidential) system)	Beck et al. (2001)
Executive constraints (indicates whether the executive party has control of all lawmaking houses of the legislative)	Beck et al. (2001)
Government consumption spending as a share of GDP	OECD (2013a)
Age incumbent party (in case of coalitions, age of largest party is being used).	Beck et al. (2001)
Party group voteshare in last Election	Döring and Manow (2013)

B.2 Detail on Parties and Party groups

Table B.4: Parties and Party Groups by Country

Country	Party Group	Party Name
Australia	Agrarian (Agr)	Farmers and Settlers (NSW)
Australia	Agrarian (Agr)	Liberal Country Party (Vic)
Australia	Agrarian (Agr)	Victorian Farmers' Union
Australia	Christian democracy (Chr)	Christian Democratic Party
Australia	Communist/Socialist (Com)	Communist
Australia	Communist/Socialist (Com)	State Labor Party (NSW)
Australia	Conservative (Con)	Australian Country Party (Vic)
Australia	Conservative (Con)	Country Progressive Party (Vic)
Australia	Conservative (Con)	Country-National Party (Qld)
Australia	Conservative (Con)	Family First Party
Australia	Conservative (Con)	Liberal Party of Australia
Australia	Conservative (Con)	National (Country) Party – National Party of Australia
Australia	Conservative (Con)	Nationalist
Australia	Conservative (Con)	Protectionist Party
Australia	Conservative (Con)	Queensland Country Party
Australia	Conservative (Con)	United Australia Party
Australia	Conservative (Con)	United Country Party (Vic)
Australia	Green/Ecologist (Eco)	Australian Greens
Australia	Liberal (Lib)	Australia Party
Australia	Liberal (Lib)	Country Liberal Party
Australia	Liberal (Lib)	Free Trade Party
Australia	Liberal (Lib)	Liberal Democratic Party (New South Wales)
Australia	Liberal (Lib)	Liberal National Party of Queensland
Australia	Liberal (Lib)	Western Australian Party
Australia	Right-wing (Right)	Nationalist Party of Australia
Australia	Right-wing (Right)	One Nation Party
Australia	Social democracy (Soc)	Australian Democrats
Australia	Social democracy (Soc)	Australian Labor Party
Australia	Social democracy (Soc)	Australian Labor Party (Non-Communist)
Australia	Social democracy (Soc)	Democratic Labour Party
Australia	Social democracy (Soc)	Independet Labor Party (Qld)
Australia	Social democracy (Soc)	Lang Labour Party
Australia	Social democracy (Soc)	Liberal and Country League
Australia	Special issue (Spec)	Social Credit Party
Austria	Christian democracy (Chr)	Austrian People's Party
Austria	Communist/Socialist (Com)	Communist Party of Austria
Austria	Green/Ecologist (Eco)	Alternative List Austria
Austria	Green/Ecologist (Eco)	The Greens – The Green Alternative
Austria	Green/Ecologist (Eco)	United Greens Austria
Austria	Liberal (Lib)	Liberal Forum
Austria	Right-wing (Right)	Alliance for the Future of Austria
Austria	Right-wing (Right)	Federation of Independents
Austria	Right-wing (Right)	Freedom Party of Austria
Austria	Social democracy (Soc)	Social Democratic Party of Austria
Austria	Social democracy (Soc)	The Citizens'Forum Austria
Austria	Special issue (Spec)	Democratic Progressive Party
Austria	Special issue (Spec)	Hans-Peter Martin's List
Austria	Special issue (Spec)	No – Citizens' Initiative against EU membership
Austria	Special issue (Spec)	The Independents – Lugner's List
Belgium	Christian democracy (Chr)	Christian Democrats and Flemish
Belgium	Christian democracy (Chr)	Christian-Democrat and Flemish / New Flemish Alliance
Belgium	Christian democracy (Chr)	Flemish Christian Peoples Party
Belgium	Christian democracy (Chr)	Francophone Christian Social Party
Belgium	Christian democracy (Chr)	Francophone Christian Social Party and Flemish Christian People's Party
Belgium	Communist/Socialist (Com)	Communist Party
Belgium	Communist/Socialist (Com)	Independent Socialists
Belgium	Communist/Socialist (Com)	Walloon Labour Party
Belgium	Communist/Socialist (Com)	Workers' Party of Belgium
Belgium	Conservative (Con)	New Flemish Alliance
Belgium	Conservative (Con)	People's Party
Belgium	Green/Ecologist (Eco)	Agalev – Groen
Belgium	Green/Ecologist (Eco)	Confederated ecologists for the organisation of original struggles
Belgium	Liberal (Lib)	Alive
Belgium	Liberal (Lib)	Brussels Liberal Party
Belgium	Liberal (Lib)	Liberal Party
Belgium	Liberal (Lib)	Liberal Reformation Party / Francophone Democratic Front
Belgium	Liberal (Lib)	Liberal Reformist Party
Belgium	Liberal (Lib)	List Dedecker
Belgium	Liberal (Lib)	Party of Liberty and Progress
Belgium	Liberal (Lib)	Radical Reformers Fighting for an Upright Society
Belgium	Liberal (Lib)	Reformist Movement
Belgium	Right-wing (Right)	Flemish Block
Belgium	Right-wing (Right)	National Front

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Country	Party Group	Party Name
Belgium	Right-wing (Right)	People's Union
Belgium	Right-wing (Right)	Respect for Labour
Belgium	Social democracy (Soc)	Belgian Socialist Party
Belgium	Social democracy (Soc)	Cartel of Liberals and Socialists
Belgium	Social democracy (Soc)	Francophone Socialist Party
Belgium	Social democracy (Soc)	Socialist Party
Belgium	Social democracy (Soc)	Socialist Party Different / Social Liberal Party
Belgium	Special issue (Spec)	Catholics Lists
Belgium	Special issue (Spec)	Francophone Democratic Front
Belgium	Special issue (Spec)	Walloon Rally
Canada	Communist/Socialist (Com)	Communist Party
Canada	Conservative (Con)	Conservative Party of Canada
Canada	Conservative (Con)	Progressive Conservative Party of Canada
Canada	Conservative (Con)	Reform Party of Canada
Canada	Conservative (Con)	Social Credit Party of Canada
Canada	Green/Ecologist (Eco)	Green Party of Canada
Canada	Liberal (Lib)	Liberal Party of Canada
Canada	Liberal (Lib)	Liberal-Labour
Canada	Liberal (Lib)	Liberal-Progressive
Canada	Social democracy (Soc)	National Party of Canada
Canada	Social democracy (Soc)	New Democratic Party
Canada	Social democracy (Soc)	Quebec Bloc
Canada	Special issue (Spec)	Rhinoceros Party
Canada	Special issue (Spec)	Social Credit Rally
Canada	Special issue (Spec)	Union of Electors
Denmark	Christian democracy (Chr)	Christian People's Party
Denmark	Communist/Socialist (Com)	Common Course
Denmark	Communist/Socialist (Com)	Communist Party of Denmark
Denmark	Communist/Socialist (Com)	Community of the People
Denmark	Communist/Socialist (Com)	Left Socialists
Denmark	Communist/Socialist (Com)	Red-Green Alliance
Denmark	Conservative (Con)	Centre Democrats
Denmark	Conservative (Con)	Conservatives
Denmark	Conservative (Con)	Union Party (Faroe Islands)
Denmark	Green/Ecologist (Eco)	Greens
Denmark	Green/Ecologist (Eco)	Socialist Peoples Party
Denmark	Liberal (Lib)	Danish Social-Liberal Party
Denmark	Liberal (Lib)	Independents Party
Denmark	Liberal (Lib)	Justice Party
Denmark	Liberal (Lib)	Liberal Centre
Denmark	Liberal (Lib)	Liberal Party of Denmark
Denmark	Liberal (Lib)	Liberals of the Capital
Denmark	Liberal (Lib)	New/Liberal Alliance
Denmark	Liberal (Lib)	Progress Party
Denmark	Right-wing (Right)	Danish Peoples Party
Denmark	Right-wing (Right)	Danish Union
Denmark	Social democracy (Soc)	Forward (Greenland)
Denmark	Social democracy (Soc)	Social Democratic Party (Faroe Islands)
Denmark	Social democracy (Soc)	Social Democrats
Denmark	Special issue (Spec)	Schleswig Party
Estonia	Agrarian (Agr)	Estonian Farmers Party
Estonia	Agrarian (Agr)	People's Union of Estonia
Estonia	Agrarian (Agr)	Union of Farmers
Estonia	Communist/Socialist (Com)	
Estonia	Conservative (Con)	/ ERSP
Estonia	Conservative (Con)	Pro Patria Union
Estonia	Conservative (Con)	Res Publica Party
Estonia	Conservative (Con)	Right-wingers
Estonia	Conservative (Con)	Union of Pro Patria and Res Publica
Estonia	Green/Ecologist (Eco)	Estonian Greens
Estonia	Liberal (Lib)	Estonian Coalition Party
Estonia	Liberal (Lib)	Estonian Reform Party
Estonia	Right-wing (Right)	Estonian Citizens
Estonia	Right-wing (Right)	Future's Estonia Party
Estonia	Social democracy (Soc)	Estonian Centre Party
Estonia	Social democracy (Soc)	Social Democratic Party – Moderates
Estonia	Special issue (Spec)	Constitution Party – Estonian United People's Party
Estonia	Special issue (Spec)	Estonian Country People's Party
Estonia	Special issue (Spec)	Our Home is Estonia!
Finland	Agrarian (Agr)	Centre Party
Finland	Agrarian (Agr)	Finnish Party – True Finns
Finland	Christian democracy (Chr)	Finnish Christian Union
Finland	Communist/Socialist (Com)	Communist Party of Finland (Yhtenaisyys)
Finland	Communist/Socialist (Com)	Democratic Alternative
Finland	Communist/Socialist (Com)	Finish Peoples Democratic Union
Finland	Communist/Socialist (Com)	Left Alliance
Finland	Communist/Socialist (Com)	Swedish Left
Finland	Conservative (Con)	Constitutional People's Party
Finland	Conservative (Con)	Finnish People's Unity Party
Finland	Conservative (Con)	National Coalition Party

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Country	Party Group	Party Name
Finland	Green/Ecologist (Eco)	Ecological Party
Finland	Green/Ecologist (Eco)	Green League
Finland	Liberal (Lib)	Liberal League
Finland	Liberal (Lib)	Liberals
Finland	Liberal (Lib)	Swedish People's Party
Finland	Liberal (Lib)	Young Finns
Finland	Social democracy (Soc)	Social Democratic League of Workers and Smallholders
Finland	Social democracy (Soc)	Social Democratic Party of Finland
Finland	Special issue (Spec)	Finnish Pensioners Party
Finland	Special issue (Spec)	League for Free Finland
Finland	Special issue (Spec)	Reform Group
France	Agrarian (Agr)	Hunting, Fishing, Nature, Tradition
France	Christian democracy (Chr)	Centre Democracy and Progress
France	Christian democracy (Chr)	Democratic Centre
France	Christian democracy (Chr)	Popular Republican Movement
France	Christian democracy (Chr)	Reformers Movement
France	Communist/Socialist (Com)	Citizens' Movement
France	Communist/Socialist (Com)	French Communist Party
France	Communist/Socialist (Com)	Revolutionary Communist League
France	Communist/Socialist (Com)	Unified Socialist Party
France	Communist/Socialist (Com)	Workers' Struggle
France	Conservative (Con)	Conservatives
France	Conservative (Con)	Gaullists
France	Conservative (Con)	Independent Republicans
France	Conservative (Con)	Movement for France
France	Conservative (Con)	Radical Socialist Party
France	Conservative (Con)	Rally for France
France	Conservative (Con)	Rally for the Republic
France	Conservative (Con)	Rally of Republican Lefts
France	Conservative (Con)	Union for French Democracy
France	Conservative (Con)	Union for a Popular Movement
France	Conservative (Con)	Union for the Defence of Traders and Artisans – Poujadists
France	Green/Ecologist (Eco)	Ecologists
France	Green/Ecologist (Eco)	Greens
France	Liberal (Lib)	Centrist Alliance
France	Liberal (Lib)	Democratic Movement
France	Liberal (Lib)	New Centre
France	Liberal (Lib)	Radical Party
France	Right-wing (Right)	National Front
France	Right-wing (Right)	National Republican Movement
France	Social democracy (Soc)	Radical Party of the Left
France	Social democracy (Soc)	Socialist Party
Hungary	Agrarian (Agr)	Agrarian Alliance
Hungary	Christian democracy (Chr)	Christian Democratic People's Party
Hungary	Communist/Socialist (Com)	Hungarian Communist Workers' Party
Hungary	Conservative (Con)	Fidesz – Hungarian Civic Party / Christian Democratic People's Party
Hungary	Conservative (Con)	Fidesz – Hungarian Civic Party / Hungarian Democratic Forum
Hungary	Conservative (Con)	Fidesz – Hungarian Civic Union
Hungary	Conservative (Con)	Hungarian Democratic Forum
Hungary	Green/Ecologist (Eco)	Politics Can Be Different
Hungary	Liberal (Lib)	Alliance of Free Democrats
Hungary	Liberal (Lib)	Entrepreneurs' Party
Hungary	Right-wing (Right)	Hungarian Justice and Life Party
Hungary	Right-wing (Right)	Hungarian Justice and Life Party – Jobbik and Third Way Alliance
Hungary	Social democracy (Soc)	Hungarian Socialist Party
Hungary	Special issue (Spec)	Independent Small Holders Party
Iceland	Agrarian (Agr)	Association for Equality and Justice
Iceland	Agrarian (Agr)	National Party
Iceland	Agrarian (Agr)	Progressive Party
Iceland	Communist/Socialist (Com)	People's Alliance
Iceland	Communist/Socialist (Com)	Rainbow
Iceland	Communist/Socialist (Com)	Socialist Party
Iceland	Communist/Socialist (Com)	Union of Liberals and Leftist
Iceland	Conservative (Con)	Citizens' Party
Iceland	Conservative (Con)	Independence Party
Iceland	Conservative (Con)	Republican Party
Iceland	Green/Ecologist (Eco)	Icelandic Movement – Living Country
Iceland	Green/Ecologist (Eco)	Left-Green Movement
Iceland	Green/Ecologist (Eco)	Pirate Party
Iceland	Liberal (Lib)	Bright Future
Iceland	Liberal (Lib)	Citizens' Movement – The Movement
Iceland	Liberal (Lib)	Humanist Party
Iceland	Liberal (Lib)	Liberal Party
Iceland	Liberal (Lib)	Liberals
Iceland	Liberal (Lib)	National Preservation Party
Iceland	Social democracy (Soc)	Independent Democratic Party
Iceland	Social democracy (Soc)	People's Movement
Iceland	Social democracy (Soc)	Social Democratic Alliance
Iceland	Social democracy (Soc)	Social Democratic Federation
Iceland	Social democracy (Soc)	Social Democratic Party

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Country	Party Group	Party Name
Iceland	Special issue (Spec)	Candidature Party
Iceland	Special issue (Spec)	Dawn – Organization of justice, fairness and democracy
Iceland	Special issue (Spec)	Households Party
Iceland	Special issue (Spec)	Iceland Democratic Party
Iceland	Special issue (Spec)	RIght-Green People's Party
Iceland	Special issue (Spec)	Womens Alliance
Ireland	Agrarian (Agr)	Party of the Land
Ireland	Christian democracy (Chr)	Fine Gael (Familiy of the Irish)
Ireland	Communist/Socialist (Com)	Democratic Left
Ireland	Communist/Socialist (Com)	National Progressive Democrats
Ireland	Communist/Socialist (Com)	People Before Profit Alliance
Ireland	Communist/Socialist (Com)	Provisional Sinn Fein
Ireland	Communist/Socialist (Com)	Sinn Fein
Ireland	Communist/Socialist (Com)	Socialist Labour Party
Ireland	Communist/Socialist (Com)	Socialist Party
Ireland	Conservative (Con)	Fianna Fail (Soldiers of Destiny)
Ireland	Conservative (Con)	National Party
Ireland	Conservative (Con)	Republican Party
Ireland	Green/Ecologist (Eco)	Green Party
Ireland	Liberal (Lib)	Progressive Democrats
Ireland	Social democracy (Soc)	Democratic Socialist Party
Ireland	Social democracy (Soc)	Labour Party
Ireland	Social democracy (Soc)	National Labour Party
Ireland	Special issue (Spec)	Anti H-Block
Italy	Agrarian (Agr)	Agrarian Party
Italy	Christian democracy (Chr)	Christian Democracy for the Autonomies
Italy	Christian democracy (Chr)	Christian Democratic Centre
Italy	Christian democracy (Chr)	Christian Democratic Centre / United Christian Democrats
Italy	Christian democracy (Chr)	Christian Democrats
Italy	Christian democracy (Chr)	Democratic Alliance
Italy	Christian democracy (Chr)	European Democracy
Italy	Christian democracy (Chr)	Italian People's Party
Italy	Christian democracy (Chr)	Movement for Autonomy
Italy	Christian democracy (Chr)	Popular Party for Prodi
Italy	Christian democracy (Chr)	Social Christians
Italy	Christian democracy (Chr)	The Network / Movement for Democracy
Italy	Christian democracy (Chr)	Union / Centre
Italy	Christian democracy (Chr)	Union of Democrats for Europe
Italy	Communist/Socialist (Com)	Action Party
Italy	Communist/Socialist (Com)	Civil Revolution
Italy	Communist/Socialist (Com)	Communist Party
Italy	Communist/Socialist (Com)	Communist Refoundation Party
Italy	Communist/Socialist (Com)	Italian Socialist Party (2007)
Italy	Communist/Socialist (Com)	Left Ecology Freedom
Italy	Communist/Socialist (Com)	Party of the Italian Communists
Italy	Communist/Socialist (Com)	Popular Democratic Front
Italy	Communist/Socialist (Com)	Proletarian Democracy
Italy	Communist/Socialist (Com)	Proletarian Unity Party
Italy	Communist/Socialist (Com)	Socialist Party of Proletarian Unity
Italy	Communist/Socialist (Com)	Socialist Renewal
Italy	Conservative (Con)	Brothers of Italy – National Centre-right
Italy	Conservative (Con)	Centre Right
Italy	Conservative (Con)	For Italy in the World
Italy	Conservative (Con)	Front of the Ordinary Man
Italy	Conservative (Con)	Go Italy – Freedom Pole
Italy	Conservative (Con)	Italian Democratic Party of Monarchist Unity
Italy	Conservative (Con)	Italian Unionist Movement
Italy	Conservative (Con)	National Alliance
Italy	Conservative (Con)	National Democratic Union
Italy	Conservative (Con)	Popular Monarchist Party
Italy	Green/Ecologist (Eco)	Federation of the Greens
Italy	Green/Ecologist (Eco)	Five Star Movement
Italy	Green/Ecologist (Eco)	Green Lists
Italy	Liberal (Lib)	Autonomy Liberty Democracy
Italy	Liberal (Lib)	Civic Choice – with Monty for Italy
Italy	Liberal (Lib)	Community Front
Italy	Liberal (Lib)	Democracy is Freedom – The Daisy
Italy	Liberal (Lib)	Democratic Centre
Italy	Liberal (Lib)	Democratic Union of the Centre
Italy	Liberal (Lib)	Dini List – Italian Renewal
Italy	Liberal (Lib)	Italian Liberal Party
Italy	Liberal (Lib)	Italy of Values
Italy	Liberal (Lib)	Liberal Democratic Pole
Italy	Liberal (Lib)	Republican Democratic Concentration
Italy	Liberal (Lib)	Republican Party
Italy	Liberal (Lib)	Stop the Decline
Italy	Right-wing (Right)	Fiamma Tricolore
Italy	Right-wing (Right)	Italian Social Movement
Italy	Right-wing (Right)	Monarchist National Party
Italy	Right-wing (Right)	National Bloc

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Country	Party Group	Party Name
Italy	Right-wing (Right)	North League
Italy	Right-wing (Right)	Southern Action League
Italy	Social democracy (Soc)	Centre Left
Italy	Social democracy (Soc)	Democratic Party
Italy	Social democracy (Soc)	Italian Democratic Socialist Party
Italy	Social democracy (Soc)	Italian Socialist Party
Italy	Social democracy (Soc)	Labour Democratic Party
Italy	Social democracy (Soc)	Left-Wing Democrats
Italy	Social democracy (Soc)	Lista per Trieste
Italy	Social democracy (Soc)	New PSI
Italy	Social democracy (Soc)	Radicals
Italy	Social democracy (Soc)	Republican Progressive Democratic Front
Italy	Social democracy (Soc)	Sardinian Action Party
Italy	Social democracy (Soc)	Social Christian Party
Italy	Social democracy (Soc)	The Union-Prodi
Italy	Social democracy (Soc)	Unified Socialist Party
Italy	Special issue (Spec)	Associative Movement Italians Abroad
Italy	Special issue (Spec)	Federalism
Italy	Special issue (Spec)	Italian Associations in Latin America
Italy	Special issue (Spec)	Lombard League
Italy	Special issue (Spec)	Movement for the Independence of Sicily
Italy	Special issue (Spec)	National Pensioners' Party
Italy	Special issue (Spec)	South Tyrol Peoples Party
Italy	Special issue (Spec)	Valdotanian Union
Italy	Special issue (Spec)	Venetian League
Japan	Communist/Socialist (Com)	Japan Communist Party
Japan	Communist/Socialist (Com)	Labour Farmer Party
Japan	Communist/Socialist (Com)	Left Wing Socialist Party
Japan	Communist/Socialist (Com)	Social Reform Party
Japan	Conservative (Con)	Democratic Party
Japan	Conservative (Con)	Democratic Party of Japan
Japan	Conservative (Con)	Japan Democratic Party
Japan	Conservative (Con)	Japan Liberal Party
Japan	Conservative (Con)	Japan Renewal Party
Japan	Conservative (Con)	Japan Restoration Party
Japan	Conservative (Con)	Komeito Party
Japan	Conservative (Con)	Liberal Democratic Party
Japan	Conservative (Con)	Liberal Party
Japan	Conservative (Con)	New Conservative Party
Japan	Conservative (Con)	New Frontier Party
Japan	Conservative (Con)	New Liberal Club
Japan	Conservative (Con)	New Party Sakigake
Japan	Conservative (Con)	People's New Party
Japan	Conservative (Con)	Progressive Party
Japan	Conservative (Con)	Separatists' Liberal Party
Japan	Green/Ecologist (Eco)	Tomorrow Party of Japan
Japan	Liberal (Lib)	Japan New Party
Japan	Liberal (Lib)	Liberal League
Japan	Liberal (Lib)	New Party Daichi
Japan	Liberal (Lib)	New Party Nippon
Japan	Liberal (Lib)	Your Party
Japan	Right-wing (Right)	Reform Party
Japan	Social democracy (Soc)	Cooperative Party
Japan	Social democracy (Soc)	Democratic Reform Party
Japan	Social democracy (Soc)	Democratic Socialist Party
Japan	Social democracy (Soc)	Japan Socialist Party
Japan	Social democracy (Soc)	Right Wing Socialist Party
Japan	Social democracy (Soc)	Socialist Democratic Federation
Luxembourg	Christian democracy (Chr)	Christian Social People's Party
Luxembourg	Communist/Socialist (Com)	Communist Party of Luxembourg
Luxembourg	Communist/Socialist (Com)	The Left
Luxembourg	Conservative (Con)	Action Committee Pensions / Alternative Democratic Reform Party
Luxembourg	Green/Ecologist (Eco)	Green Alternative
Luxembourg	Green/Ecologist (Eco)	Green Left Ecological Initiative
Luxembourg	Green/Ecologist (Eco)	Green and Liberal Alliance
Luxembourg	Green/Ecologist (Eco)	The Greens
Luxembourg	Liberal (Lib)	Democratic Party
Luxembourg	Liberal (Lib)	Liberal Party
Luxembourg	Right-wing (Right)	National Movement
Luxembourg	Social democracy (Soc)	Jean Gremling List – Independent Socialists
Luxembourg	Social democracy (Soc)	Luxembourg Socialist Workers' Party
Luxembourg	Social democracy (Soc)	Social Democratic Party
Luxembourg	Special issue (Spec)	Coerced Conscripts
Luxembourg	Special issue (Spec)	Independent Party of the Middle Class
Luxembourg	Special issue (Spec)	Popular Independent Movement
Netherlands	Agrarian (Agr)	Farmers Party
Netherlands	Christian democracy (Chr)	Anti-Revolutionary Party
Netherlands	Christian democracy (Chr)	Catholic National Party
Netherlands	Christian democracy (Chr)	Catholic Peoples Party
Netherlands	Christian democracy (Chr)	Christian Democrats

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Country	Party Group	Party Name
Netherlands	Christian democracy (Chr)	Christian Historical Union
Netherlands	Christian democracy (Chr)	ChristianUnion – Reformed Political Party
Netherlands	Christian democracy (Chr)	Evangelical Peoples Party
Netherlands	Christian democracy (Chr)	Reformatory Political Federation
Netherlands	Communist/Socialist (Com)	Communist Party of the Netherlands
Netherlands	Communist/Socialist (Com)	Pacifist Socialist Party
Netherlands	Communist/Socialist (Com)	Socialist Party
Netherlands	Conservative (Con)	Democratic Middle Part
Netherlands	Conservative (Con)	Democratic Socialists 70
Netherlands	Conservative (Con)	New Middle Party
Netherlands	Conservative (Con)	Party for Freedom
Netherlands	Conservative (Con)	Political Reformed Party
Netherlands	Conservative (Con)	Proud of the Netherlands
Netherlands	Conservative (Con)	Reformed Political League
Netherlands	Green/Ecologist (Eco)	GreenLeft
Netherlands	Green/Ecologist (Eco)	Radical Political Party
Netherlands	Liberal (Lib)	50PLUS
Netherlands	Liberal (Lib)	Libertarians
Netherlands	Liberal (Lib)	People's Party for Freedom and Democracy
Netherlands	Right-wing (Right)	Centre Democrats
Netherlands	Right-wing (Right)	Centre Party
Netherlands	Right-wing (Right)	Fortuyn List
Netherlands	Right-wing (Right)	Livable Netherlands
Netherlands	Right-wing (Right)	One NL
Netherlands	Social democracy (Soc)	Labour Party
Netherlands	Special issue (Spec)	General Senior Union / United Seniors Party
Netherlands	Special issue (Spec)	Party for the Animals
Netherlands	Special issue (Spec)	Roman Catholic Party
Netherlands	Special issue (Spec)	Union 55+
New Zealand	Christian democracy (Chr)	Christian Democrat Party
New Zealand	Christian democracy (Chr)	Christian Heritage Party of New Zealand
New Zealand	Communist/Socialist (Com)	Communist Party of New Zealand
New Zealand	Conservative (Con)	Conservatice Party of New Zealand
New Zealand	Conservative (Con)	National Party
New Zealand	Conservative (Con)	New Zealand First Party
New Zealand	Conservative (Con)	United New Zealand
New Zealand	Green/Ecologist (Eco)	Green Party
New Zealand	Green/Ecologist (Eco)	Values Party
New Zealand	Liberal (Lib)	ACT New Zealand
New Zealand	Liberal (Lib)	New Zealand Party
New Zealand	Liberal (Lib)	United Future New Zealand
New Zealand	Social democracy (Soc)	Alliance
New Zealand	Social democracy (Soc)	Labour Party
New Zealand	Social democracy (Soc)	New Labour Party
New Zealand	Social democracy (Soc)	Progressive Party
New Zealand	Special issue (Spec)	Aotearoa Legalise Cannabis Party
New Zealand	Special issue (Spec)	Mana Party
New Zealand	Special issue (Spec)	Maori Party
New Zealand	Special issue (Spec)	Outdoor Recreation New Zealand
New Zealand	Special issue (Spec)	Social Credit / Democratic Party
Norway	Agrarian (Agr)	Centre Party
Norway	Christian democracy (Chr)	Christian Democratic Party
Norway	Communist/Socialist (Com)	Communist Party of Norway
Norway	Communist/Socialist (Com)	Red Electoral Alliance
Norway	Communist/Socialist (Com)	Socialist Left Party
Norway	Communist/Socialist (Com)	Socialist People's Party
Norway	Conservative (Con)	Coastal Party
Norway	Conservative (Con)	Conservative Party
Norway	Conservative (Con)	Electoral lists conservatives
Norway	Conservative (Con)	Progress Party
Norway	Liberal (Lib)	Liberal Party of Norway
Norway	Liberal (Lib)	Liberal People's Party
Norway	Social democracy (Soc)	Norwegian Labour Party
Norway	Special issue (Spec)	Pensioners Party
Portugal	Christian democracy (Chr)	Christian Democratic Peoples Party
Portugal	Christian democracy (Chr)	Democratic and Social Centre – People's Party
Portugal	Communist/Socialist (Com)	Bloc of the Left
Portugal	Communist/Socialist (Com)	Communist Party of the Portuguese Workers / Reorganizative Movement of the Party of the Proletariat
Portugal	Communist/Socialist (Com)	Popular Democratic Union
Portugal	Communist/Socialist (Com)	Portuguese Communist Party
Portugal	Communist/Socialist (Com)	Reformists
Portugal	Communist/Socialist (Com)	Revolutionary Socialist Party
Portugal	Communist/Socialist (Com)	Unified Democratic Coalition
Portugal	Communist/Socialist (Com)	United People Alliance
Portugal	Communist/Socialist (Com)	Workers Party of Socialist Unity
Portugal	Conservative (Con)	Popular Monarchist Party
Portugal	Green/Ecologist (Eco)	Ecology Party – Greens
Portugal	Green/Ecologist (Eco)	Party for Animals and Nature
Portugal	Liberal (Lib)	Democratic Alliance

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Country	Party Group	Party Name
Portugal	Liberal (Lib)	Social Democratic Party
Portugal	Social democracy (Soc)	Democratic Intervention
Portugal	Social democracy (Soc)	Democratic Movement
Portugal	Social democracy (Soc)	Democratic Renewal Party
Portugal	Social democracy (Soc)	Independent Social Democrats
Portugal	Social democracy (Soc)	Leftwing Union for the Socialist Democracy
Portugal	Social democracy (Soc)	Republican and Socialist Front
Portugal	Social democracy (Soc)	Socialist Party
Portugal	Special issue (Spec)	National Solidarity Party
Slovenia	Christian democracy (Chr)	Christian Socialists
Slovenia	Christian democracy (Chr)	New Slovenia – Christian People's Party
Slovenia	Christian democracy (Chr)	Slovenian Christian Democrats
Slovenia	Christian democracy (Chr)	Slovenian People's Party
Slovenia	Communist/Socialist (Com)	Socialist Party of Slovenia
Slovenia	Conservative (Con)	National Democratic Party
Slovenia	Green/Ecologist (Eco)	Greens of Slovenia
Slovenia	Green/Ecologist (Eco)	Youth Party of Slovenia
Slovenia	Liberal (Lib)	Active Slovenia
Slovenia	Liberal (Lib)	Citizens' List
Slovenia	Liberal (Lib)	Liberal Democracy of Slovenia
Slovenia	Liberal (Lib)	Liberal Democratic Party of Slovenia
Slovenia	Liberal (Lib)	Liberal Party
Slovenia	Liberal (Lib)	Social Liberal Party
Slovenia	Right-wing (Right)	Party Lime Tree
Slovenia	Social democracy (Soc)	Democratic Party of Slovenia
Slovenia	Social democracy (Soc)	Party for Sustainable Development of Slovenia
Slovenia	Social democracy (Soc)	Slovenian Democratic Party
Slovenia	Social democracy (Soc)	United List – Social Democrats
Slovenia	Social democracy (Soc)	Zares
Slovenia	Social democracy (Soc)	Zoran Jankovic's List – Positive Slovenia
Slovenia	Special issue (Spec)	Democratic Party of Retired People of Slovenia
Slovenia	Special issue (Spec)	Hungarian national community
Slovenia	Special issue (Spec)	Italian national community
Slovenia	Special issue (Spec)	Party of Independence
Slovenia	Special issue (Spec)	Slovenia is Ours
Spain	Christian democracy (Chr)	Basque National Party
Spain	Christian democracy (Chr)	Democratic and Social Centre
Spain	Communist/Socialist (Com)	Basque Left
Spain	Communist/Socialist (Com)	Canary Peoples Union
Spain	Communist/Socialist (Com)	Party of Labour of Spain
Spain	Communist/Socialist (Com)	United Left / Communist Party
Spain	Conservative (Con)	Asturian Forum
Spain	Conservative (Con)	Convergence and Union
Spain	Conservative (Con)	Navarrese Peoples Union
Spain	Conservative (Con)	Popular Party
Spain	Green/Ecologist (Eco)	Initiative for Catalonia Greens
Spain	Liberal (Lib)	Union of the Democratic Centre
Spain	Liberal (Lib)	Union, Progress and Democracy
Spain	Right-wing (Right)	National Union
Spain	Social democracy (Soc)	Andalusian Party
Spain	Social democracy (Soc)	Socialists' Party of Catalonia
Spain	Social democracy (Soc)	Spanish Socialist Workers Party
Spain	Special issue (Spec)	Amaiur
Spain	Special issue (Spec)	Aragonese Council
Spain	Special issue (Spec)	Aragonese Regionalist Party
Spain	Special issue (Spec)	Basque Solidarity
Spain	Special issue (Spec)	Canary Coalition
Spain	Special issue (Spec)	Canary Islands Group
Spain	Special issue (Spec)	Commitment Coalition
Spain	Special issue (Spec)	Galician Coalition
Spain	Special issue (Spec)	Galician Nationalist Block
Spain	Special issue (Spec)	Navarre Yes
Spain	Special issue (Spec)	Republican Left of Catalonia
Spain	Special issue (Spec)	Ruiz-Mateos List
Spain	Special issue (Spec)	United Extremadura
Spain	Special issue (Spec)	United People
Spain	Special issue (Spec)	Valencian Union
Spain	Special issue (Spec)	Yes to the future
Sweden	Agrarian (Agr)	Centre Party
Sweden	Christian democracy (Chr)	Christian Democrats
Sweden	Communist/Socialist (Com)	Left Party (Communists)
Sweden	Conservative (Con)	Citizens Coalition
Sweden	Conservative (Con)	Moderate Party
Sweden	Green/Ecologist (Eco)	Greens
Sweden	Liberal (Lib)	Liberals
Sweden	Liberal (Lib)	Middle Parties
Sweden	Right-wing (Right)	New Democracy
Sweden	Right-wing (Right)	Sweden Democrats
Sweden	Social democracy (Soc)	Social Democrats
Sweden	Special issue (Spec)	Pirate Party

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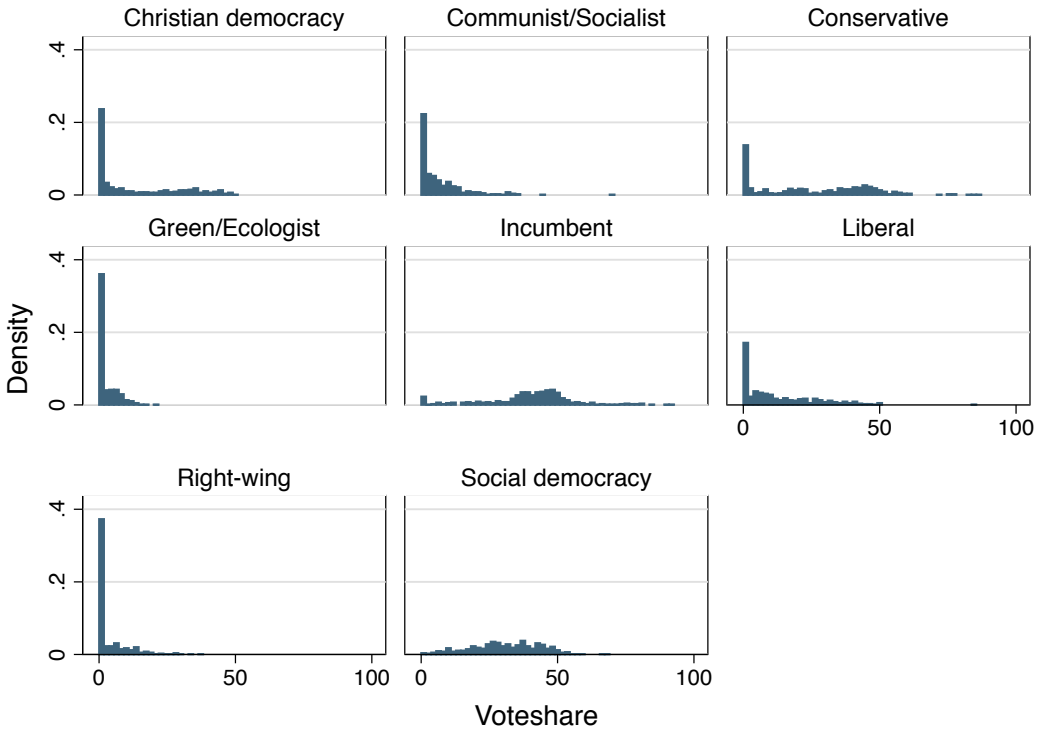
Country	Party Group	Party Name
Sweden	Special issue (Spec)	Swedish Senior Citizen Interest Party
Switzerland	Agrarian (Agr)	Peasant Union
Switzerland	Christian democracy (Chr)	Christian Social Party
Switzerland	Christian democracy (Chr)	Christian Social Party Obwalden
Switzerland	Christian democracy (Chr)	Conservative Peoples Party
Switzerland	Christian democracy (Chr)	Protestant Peoples Party
Switzerland	Communist/Socialist (Com)	Autonomous Socialist Party
Switzerland	Communist/Socialist (Com)	Communist Party Opposition
Switzerland	Communist/Socialist (Com)	Progressive Organisations of Switzerland
Switzerland	Communist/Socialist (Com)	Socialist Peoples List
Switzerland	Communist/Socialist (Com)	Solidarity
Switzerland	Communist/Socialist (Com)	Swiss Party of Labour
Switzerland	Conservative (Con)	Conservative Democratic Party of Switzerland
Switzerland	Conservative (Con)	Democratic Party
Switzerland	Conservative (Con)	Federal Democratic Union of Switzerland
Switzerland	Conservative (Con)	Peasant Party / Protestants / Democrats / Independents
Switzerland	Green/Ecologist (Eco)	Free List
Switzerland	Green/Ecologist (Eco)	Green Liberal Party
Switzerland	Green/Ecologist (Eco)	Greens
Switzerland	Green/Ecologist (Eco)	Young Peasants Movement
Switzerland	Liberal (Lib)	FDP.The Liberals
Switzerland	Liberal (Lib)	Liberal Party of Switzerland
Switzerland	Liberal (Lib)	Liberal Socialist Party
Switzerland	Liberal (Lib)	Radical Democratic Party
Switzerland	Right-wing (Right)	Geneva Citizens' Movement
Switzerland	Right-wing (Right)	National Action against Foreign Domination
Switzerland	Right-wing (Right)	National Front
Switzerland	Right-wing (Right)	National Progressive Party
Switzerland	Right-wing (Right)	National Union
Switzerland	Right-wing (Right)	Republican Movement
Switzerland	Right-wing (Right)	Swiss People's Party
Switzerland	Right-wing (Right)	Ticino League
Switzerland	Social democracy (Soc)	Independents Alliance
Switzerland	Social democracy (Soc)	Social Democratic Party of Switzerland
Switzerland	Special issue (Spec)	Feminist Green Alternative
Switzerland	Special issue (Spec)	Freedom Party of Switzerland
Switzerland	Special issue (Spec)	Unity Jura
United Kingdom	Communist/Socialist (Com)	Communist Party of Great Britain
United Kingdom	Communist/Socialist (Com)	Sinn Fein
United Kingdom	Conservative (Con)	Conservatives
United Kingdom	Conservative (Con)	Conservatives and National Liberals
United Kingdom	Conservative (Con)	Democratic Unionist Party
United Kingdom	Conservative (Con)	Ulster Unionist Party
United Kingdom	Conservative (Con)	United Kingdom Unionist Party
United Kingdom	Green/Ecologist (Eco)	Green Party
United Kingdom	Liberal (Lib)	Alliance Party of Northern Ireland
United Kingdom	Liberal (Lib)	Liberal Democrats
United Kingdom	Liberal (Lib)	Liberals
United Kingdom	Liberal (Lib)	National Liberal Party
United Kingdom	Right-wing (Right)	British National Party
United Kingdom	Right-wing (Right)	National Front
United Kingdom	Right-wing (Right)	Vanguard Unionist Progressive Party
United Kingdom	Social democracy (Soc)	Labour
United Kingdom	Social democracy (Soc)	Social Democratic Party
United Kingdom	Social democracy (Soc)	Social Democratic and Labour Party
United Kingdom	Special issue (Spec)	Plaid Cymru
United Kingdom	Special issue (Spec)	Referendum Party
United Kingdom	Special issue (Spec)	SDP-Liberal Alliance
United Kingdom	Special issue (Spec)	Scottish National Party
United Kingdom	Special issue (Spec)	United Kingdom Independence Party

B.3 Distribution of Party Group Voteshares

Figure B.1: Distribution of Voteshare by Party Group



B.4 Robustness Checks

Table B.5: Robustness

	Inc	Inc	Inc	Inc	Right	Right	Right	Right
model								
Foreign Population	-0.012**	0.029***	0.067***	0.013**	0.694***	0.659***	0.688***	0.706***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.004)	(0.004)	(0.004)	(0.004)
Gini Index	-0.048***	-0.022***	0.017***	-0.024***	-0.548***	-0.584***	-0.566***	-0.555***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
Per Capita GDP (Log)	12.140***	12.858***	10.225***	9.773***	12.496***	13.868***	13.929***	14.483***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)
Right Incumbent	-2.169***	-1.787***	-1.775***	-1.720***	-1.684***	-1.742***	-1.957***	-2.147***
	(0.055)	(0.058)	(0.056)	(0.058)	(0.029)	(0.028)	(0.033)	(0.041)
Trade-to-GDP Ratio	0.036***	0.030***	0.028***	0.032***	-0.143***	-0.137***	-0.139***	-0.147***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Partliamentary System	99.625***	100.048***	99.088***	99.714***	-1.483***	-1.191***	-1.170***	-1.278***
	(0.038)	(0.039)	(0.038)	(0.039)	(0.034)	(0.033)	(0.033)	(0.032)
Executive constraints	-10.525***	-10.784***	-11.016***	-11.575***	-9.033***	-8.573***	-8.639***	-8.697***
	(0.088)	(0.093)	(0.086)	(0.090)	(0.127)	(0.134)	(0.134)	(0.125)
Gov't Spending (%GDP)	0.876***	0.845***	1.075***	0.914***	-1.031***	-1.109***	-1.154***	-1.138***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Age Incumbent Party	0.044***	0.048***	0.048***	0.039***	0.034***	0.030***	0.033***	0.040***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.001)
Voteshare Last Election	-0.026***	-0.022***	-0.031***	-0.040***	0.231***	0.234***	0.226***	0.217***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.004)	(0.004)	(0.004)	(0.004)
Δ Unemployment Rate (1 Quarter)	-6.235***				2.499***			
	(0.148)				(0.130)			
Δ Unemployment Rate (2 Quarters)		-2.889***				2.082***		
		(0.067)				(0.065)		
Δ Unemployment Rate (4 Quarters) (Used in Analysis above)			-2.628***				1.111***	
			(0.058)				(0.045)	
Δ Unemployment Rate (8 Quarters)				-1.143***				0.708***
				(0.045)				(0.035)
Decade dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obervations	155	155	155	154	155	155	155	154
Pseudo R2	0.10	0.10	0.11	0.10	0.38	0.38	0.38	0.38

B.5 Full Results for Section 4.4.2

Table B.6: High Unemployment

	Chr	Com	Con	Eco	Inc	Lib	Right	Soc
model								
Δ Unemployment Rate	1.018***	0.646	-0.398***	-0.434***	-4.294***	-0.039	-2.479***	-0.433
	(0.102)	(0.663)	(0.142)	(0.071)	(0.209)	(1.558)	(0.164)	(1.012)
Unemployment Rate	0.408***	0.194	0.126***	0.100***	0.403***	-0.703***	0.180***	-0.274
	(0.005)	(0.147)	(0.007)	(0.002)	(0.010)	(0.258)	(0.005)	(0.191)
Δ Unemp*Unemp	-0.117***	-0.073	0.161***	0.051***	0.212***	-0.134	0.513***	0.026
	(0.012)	(0.056)	(0.014)	(0.008)	(0.024)	(0.167)	(0.024)	(0.100)
Foreign Population	0.058***	-0.142	-0.203***	-0.177***	0.082***	0.718*	0.731***	-0.215
	(0.003)	(0.171)	(0.003)	(0.001)	(0.005)	(0.413)	(0.004)	(0.539)
Gini Index	-0.236***	-0.071	0.446***	0.016***	-0.014***	0.342	-0.371***	0.397*
	(0.001)	(0.122)	(0.001)	(0.000)	(0.002)	(0.409)	(0.001)	(0.231)
Per Capita GDP (Log)	3.057***	6.514*	5.444***	6.746***	13.833***	-11.525	13.728***	-2.403
	(0.002)	(3.773)	(0.002)	(0.001)	(0.004)	(7.150)	(0.003)	(9.675)
Right Incumbent	-0.628***	0.770	-0.297***	0.102***	-1.697***	0.374	-1.703***	-0.337
	(0.028)	(0.609)	(0.050)	(0.017)	(0.066)	(0.774)	(0.033)	(0.849)
Trade-to-GDP Ratio	-0.019***	0.018	0.028***	0.023***	0.012***	-0.105**	-0.181***	0.001
	(0.000)	(0.029)	(0.000)	(0.000)	(0.001)	(0.043)	(0.000)	(0.054)
Partliamentary System	28.286***	-2.231**	-9.237***	-2.353***	99.204***	-8.198***	-2.814***	7.938***
	(0.016)	(1.048)	(0.026)	(0.011)	(0.041)	(1.411)	(0.027)	(2.332)
Executive constraints	-7.926***	0.401	9.032***	-0.486***	-11.252***	0.668	-9.007***	1.055
	(0.088)	(0.702)	(0.030)	(0.032)	(0.079)	(3.246)	(0.126)	(2.229)
Gov't Spending (%GDP)	-0.053***	-0.083	0.172***	0.084***	1.005***	-0.262	-1.114***	0.015
	(0.001)	(0.164)	(0.001)	(0.001)	(0.002)	(0.300)	(0.001)	(0.376)
Age Incumbent Party	-0.001***	0.009	-0.042***	-0.014***	0.049***	0.032*	0.042***	-0.040***
	(0.000)	(0.015)	(0.000)	(0.000)	(0.001)	(0.017)	(0.000)	(0.015)
Voteshare Last Election	0.555***	0.678***	0.551***	0.380***	-0.030***	0.380***	0.183***	0.426***
	(0.001)	(0.045)	(0.001)	(0.004)	(0.001)	(0.099)	(0.004)	(0.123)
Decade dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obervations	155	155	155	155	155	155	155	155
Pseudo R2	0.40	0.28	0.36	0.37	0.11	0.30	0.39	0.19

Standard errors in parentheses. $^{*}p < 0.1$,$^{**}p < 0.05$,$^{***}p < 0.01$. In each column, dependent variable is the voteshare of the indicated party group.

Appendix C

Appendix to Chapter 5

C.1 Summary Statistics

Table C.1: Summary Statistics

Variable	Mean	Std. Dev.	Min.	Max.	Obs.
Age	47.92	16.43	18	96	63026
Female	0.55	0.5	0	1	63026
University Education	0.14	0.35	0	1	63026
Married	0.6	0.49	0	1	63026
Left/Right Self-Placement	4.36	2.46	0	10	63026
Left/Right Placement of Father	5.52	2.42	0	10	39397
Interest in Politics	5.94	2.62	0	10	63026
Satisfaction with Democracy	5.98	2.01	0	10	63026
Interview Language French	0	0.03	0	1	63026
Interview Language Italian	0.25	0.43	0	1	63026
Household Net Income (Log)	10.98	0.55	7	15.45	54969

C.2 Effects of Unemployment on Income and Life Satisfaction

Figure C.1: Effect of Being Unemployed on Income and Life Satisfaction

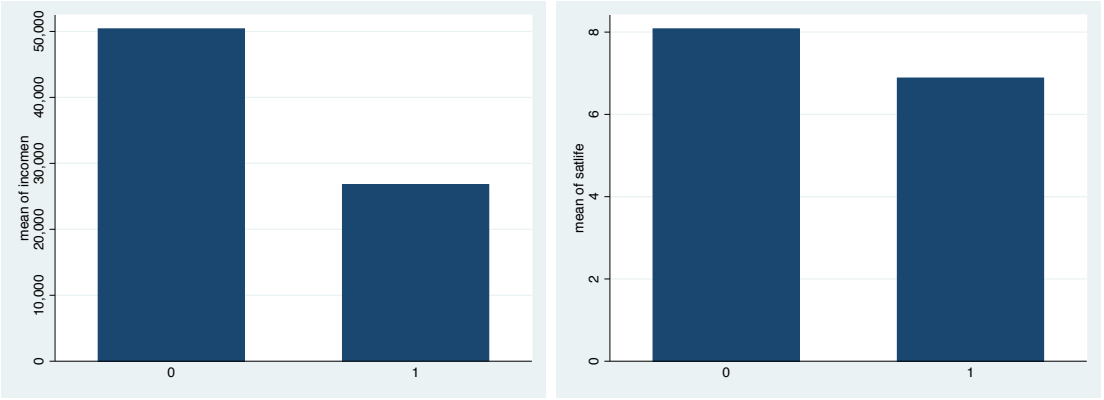
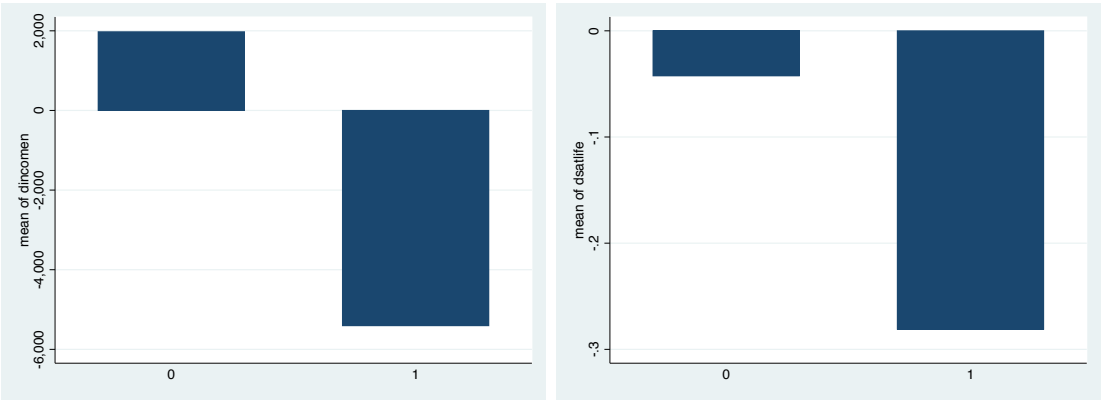


Figure C.2: Effect of Becoming Unemployed on Income and Life Satisfaction



C.3 Full Results from Section 5.4.2

Table C.2: Effect of Being Unemployed on Voting

	Chr	Con	Eco	Lib	Oth	Right	Soc
Unemployed	-0.031*	-0.002	-0.001	0.013	-0.008	-0.001	0.027
	(0.016)	(0.008)	(0.011)	(0.017)	(0.008)	(0.015)	(0.019)
Age	-0.000	-0.000	-0.001***	0.001***	-0.000***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female	0.006	-0.002	0.016***	-0.007	-0.001	-0.018***	0.010
	(0.007)	(0.002)	(0.006)	(0.007)	(0.003)	(0.006)	(0.009)
University Education	0.009	0.001	0.016**	0.030***	0.014***	-0.081***	0.021*
	(0.009)	(0.004)	(0.007)	(0.009)	(0.003)	(0.011)	(0.011)
Married	0.024***	0.004	-0.012**	-0.016**	-0.001	-0.002	-0.004
	(0.007)	(0.003)	(0.005)	(0.007)	(0.003)	(0.006)	(0.009)
Left/Right Self-Placement	0.012***	0.003***	-0.021***	0.044***	-0.005***	0.046***	-0.068***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)
Left/Right Placement of Father	0.006***	-0.000	0.002**	0.003**	-0.001**	-0.001	-0.017***
	(0.001)	(0.000)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)
Interest in Politics	0.001	0.000	0.003***	0.002	0.003***	-0.000	0.018***
	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)
Satisfaction with Democracy	0.011***	-0.001**	-0.002*	0.015***	-0.002***	-0.014***	0.016***
	(0.002)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)
Interview Language French	0.047	-0.210***	-0.004	0.084*	0.015	0.042	0.021
	(0.056)	(0.017)	(0.038)	(0.051)	(0.029)	(0.053)	(0.062)
Interview Language Italian	-0.017	-0.028***	-0.011	0.035*	0.006	-0.051***	0.059***
	(0.018)	(0.005)	(0.010)	(0.021)	(0.006)	(0.015)	(0.021)
Household Net Income (Log)	-0.030***	-0.005**	-0.001	0.047***	0.006**	-0.029***	0.006
	(0.005)	(0.002)	(0.004)	(0.006)	(0.002)	(0.005)	(0.007)
Observations	34651	34651	34651	34651	34651	34651	34651

Standard errors in parentheses. $^{*}p < 0.1$,$^{**}p < 0.05$,$^{***}p < 0.01$. The dependent variable is an individual's choice for one of eight exhaustive and mutually exclusive voting choices, seven of which correspond to the seven columns of the table, the eight, "no vote", serves as the base category. Coefficients are average marginal effects from a multinomial logit model. The model was estimated with a full set of canton and year dummies, and with standard errors clustered by individuals.

Table C.3: Effect of Being Unemployed and Cantonal Unemployment Rate on Voting

	Chr	Con	Eco	Lib	Oth	Right	Soc
Unemployed	-0.039	0.024	0.041	0.024	-0.039*	-0.018	0.060
	(0.052)	(0.016)	(0.028)	(0.048)	(0.021)	(0.039)	(0.048)
ΔCantonal Unemployment Rate	0.004	0.006	-0.010*	-0.001	-0.016***	-0.003	0.018**
	(0.006)	(0.004)	(0.005)	(0.006)	(0.004)	(0.006)	(0.008)
Unemployed×ΔCant. Unemp. Rate	0.004	-0.010**	-0.011	-0.003	0.008*	0.006	-0.011
	(0.016)	(0.005)	(0.008)	(0.012)	(0.005)	(0.012)	(0.014)
Age	-0.000	-0.000	-0.001***	0.001***	-0.000***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female	0.005	-0.002	0.017***	-0.008	-0.001	-0.016***	0.007
	(0.007)	(0.002)	(0.006)	(0.007)	(0.003)	(0.006)	(0.009)
University Education	0.009	0.001	0.016**	0.032***	0.015***	-0.082***	0.020*
	(0.010)	(0.004)	(0.007)	(0.009)	(0.003)	(0.011)	(0.011)
Married	0.026***	0.004	-0.012**	-0.020***	-0.000	-0.001	-0.006
	(0.007)	(0.003)	(0.005)	(0.007)	(0.003)	(0.006)	(0.009)
Left/Right Self-Placement	0.011***	0.003***	-0.021***	0.043***	-0.005***	0.048***	-0.068***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)
Left/Right Placement of Father	0.007***	-0.000	0.003**	0.004**	-0.001*	-0.001	-0.017***
	(0.002)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)
Interest in Politics	-0.000	0.000	0.003***	0.002*	0.003***	-0.001	0.018***
	(0.001)	(0.000)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)
Satisfaction with Democracy	0.010***	-0.001**	-0.002*	0.015***	-0.002***	-0.014***	0.016***
	(0.002)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)
Interview Language French	0.047	-0.213***	-0.004	0.086*	0.015	0.043	0.021
	(0.056)	(0.018)	(0.039)	(0.051)	(0.030)	(0.053)	(0.062)
Interview Language Italian	-0.018	-0.030***	-0.011	0.038*	0.006	-0.050***	0.059***
	(0.018)	(0.005)	(0.011)	(0.021)	(0.006)	(0.015)	(0.022)
Household Net Income (Log)	-0.029***	-0.005**	-0.000	0.049***	0.006**	-0.031***	0.005
	(0.006)	(0.002)	(0.005)	(0.006)	(0.003)	(0.005)	(0.007)
Observations	33356	33356	33356	33356	33356	33356	33356

Standard errors in parentheses. $^{*}p < 0.1$,$^{**}p < 0.05$,$^{***}p < 0.01$. The dependent variable is an individual's choice for one of eight exhaustive and mutually exclusive voting choices, seven of which correspond to the seven columns of the table, the eight, "no vote", serves as the base category. Coefficients are average marginal effects from a multinomial logit model. The model was estimated with a full set of canton and year dummies, and with standard errors clustered by individuals.

Table C.4: Effect of Being Unemployed and Income Change on Voting

	Chr	Con	Eco	Lib	Oth	Right	Soc
Unemployed	-0.004	-0.001	-0.000	0.004	-0.012	0.011	0.008
	(0.010)	(0.005)	(0.013)	(0.015)	(0.011)	(0.010)	(0.021)
Income Difference in % (if Unemployed)	0.000*	-0.000*	-0.000**	-0.000	-0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Unemployed×Income Difference	0.000	0.000	-0.000	0.000	-0.000	-0.001***	0.001**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Age	-0.001	0.000	-0.001**	-0.000	-0.001***	-0.000	-0.001
	(0.001)	(0.000)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)
Female	-0.019	-0.008	0.045**	-0.054**	0.017**	0.031**	0.006
	(0.017)	(0.007)	(0.021)	(0.022)	(0.009)	(0.015)	(0.033)
University Education	-0.036	-0.016	-0.029	-0.019	0.024***	-0.082***	0.105***
	(0.023)	(0.013)	(0.024)	(0.028)	(0.009)	(0.031)	(0.035)
Married	0.017	-0.006	-0.003	0.047**	0.009	-0.002	-0.019
	(0.019)	(0.008)	(0.020)	(0.023)	(0.008)	(0.015)	(0.032)
Left/Right Self-Placement	0.006**	0.004***	-0.025***	0.044***	-0.006***	0.037***	-0.063***
	(0.003)	(0.001)	(0.004)	(0.005)	(0.002)	(0.003)	(0.006)
Left/Right Placement of Father	0.007**	0.001	-0.003	0.002	-0.000	0.001	-0.019***
	(0.003)	(0.001)	(0.004)	(0.004)	(0.002)	(0.003)	(0.007)
Interest in Politics	0.001	0.001	-0.005	0.003	0.005**	-0.001	0.019***
	(0.003)	(0.001)	(0.004)	(0.004)	(0.002)	(0.002)	(0.005)
Satisfaction with Democracy	0.007*	-0.001	-0.001	0.017***	-0.008***	-0.009***	0.018***
	(0.004)	(0.001)	(0.004)	(0.005)	(0.002)	(0.003)	(0.006)
Interview Language French	1.802***	-0.032*	-0.139***	-0.480***	-0.076***	-0.021	-0.629***
	(0.174)	(0.016)	(0.048)	(0.071)	(0.028)	(0.043)	(0.105)
Interview Language Italian	0.067	-0.196***	0.011	-0.014	0.045**	0.052*	-0.041
	(0.042)	(0.046)	(0.033)	(0.075)	(0.019)	(0.028)	(0.053)
Household Net Income (Log)	0.002	-0.005	-0.008	0.049**	0.020***	-0.019**	-0.029
	(0.010)	(0.003)	(0.015)	(0.019)	(0.008)	(0.010)	(0.024)
Observations	2917	2917	2917	2917	2917	2917	2917

Standard errors in parentheses. $^{*}p < 0.1$,$^{**}p < 0.05$,$^{***}p < 0.01$. The dependent variable is an individual's choice for one of eight exhaustive and mutually exclusive voting choices, seven of which correspond to the seven columns of the table, the eight, "no vote", serves as the base category. Coefficients are average marginal effects from a multinomial logit model. The model was estimated with a full set of canton and year dummies, and with standard errors clustered by individuals.

Table C.5: Becoming Unemployed and Voting

	Chr	Con	Eco	Lib	Oth	Right	Soc
Became Unemployed	-0.026	-0.008	0.013	0.014	-0.015	0.012	0.036*
	(0.022)	(0.011)	(0.013)	(0.020)	(0.012)	(0.017)	(0.021)
Age	-0.000	-0.000	-0.001***	0.001***	-0.000***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female	0.005	-0.002	0.018***	-0.009	-0.001	-0.018***	0.010
	(0.007)	(0.003)	(0.006)	(0.008)	(0.003)	(0.006)	(0.009)
University Education	0.011	0.000	0.016**	0.031***	0.016***	-0.077***	0.020*
	(0.010)	(0.004)	(0.007)	(0.010)	(0.003)	(0.011)	(0.012)
Married	0.024***	0.004	-0.012**	-0.020***	0.000	0.001	-0.004
	(0.008)	(0.003)	(0.006)	(0.008)	(0.003)	(0.006)	(0.009)
Left/Right Self-Placement	0.013***	0.003***	-0.022***	0.044***	-0.005***	0.046***	-0.068***
	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)
Left/Right Placement of Father	0.007***	-0.001	0.003**	0.003**	-0.001*	-0.001	-0.016***
	(0.002)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)
Interest in Politics	-0.000	0.000	0.003**	0.002	0.003***	-0.000	0.019***
	(0.001)	(0.000)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)
Satisfaction with Democracy	0.011***	-0.002***	-0.002	0.015***	-0.003***	-0.014***	0.016***
	(0.002)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)
Interview Language French	-0.040	-0.236***	0.007	0.115**	0.037	0.045	0.065
	(0.088)	(0.021)	(0.052)	(0.058)	(0.031)	(0.064)	(0.069)
Interview Language Italian	-0.016	-0.028***	-0.009	0.027	0.004	-0.051***	0.061***
	(0.019)	(0.006)	(0.011)	(0.022)	(0.007)	(0.016)	(0.022)
Household Net Income (Log)	-0.030***	-0.005**	-0.001	0.050***	0.006**	-0.031***	0.008
	(0.006)	(0.002)	(0.005)	(0.006)	(0.003)	(0.005)	(0.008)
Observations	28788	28788	28788	28788	28788	28788	28788

Standard errors in parentheses. $^{*}p < 0.1,^{**}p < 0.05,^{***}p < 0.01$. The dependent variable is an individual's choice for one of eight exhaustive and mutually exclusive voting choices, seven of which correspond to the seven columns of the table, the eight, "no vote", serves as the base category. Coefficients are average marginal effects from a multinomial logit model. The model was estimated with a full set of canton and year dummies, and with standard errors clustered by individuals.

C.4 Party Blocks and Voting

Kuhn (2009) categorizes Swiss political parties into three party blocks as follows:

Table C.6: Categorization of Party Blocks

Party block	Parties
Left	Social-Democratic Party (SP), Worker's Party (PdA), Green Party, Socialist Green Alternative and Women Groups
Center-right	Liberal Party (FDP and LPS), Christian-Democratic Party (CVP), Independent Alliance (LdU), Christian Social Party (CSP), Evangelical Party (EVP)
Conservative-right	Swiss People's Party (SVP), Federal Democratic Union (EDU), Freedom Party (PF), Swiss Democrats (SD), Lega dei Ticinesi (LEGA)

The following tables present results from regressions equivalent to those presented in section 5.4, but using these party blocks, rather than party groups, as the dependent variables.

Table C.7: Cantonal Unemployment Rate and Party Block Voting

	Left	CenterRight	ConsRight
ΔCantonal Unemployment Rate	0.016**	-0.001	0.010
	(0.008)	(0.008)	(0.006)
Age	-0.002***	0.001**	-0.001***
	(0.000)	(0.000)	(0.000)
Female	0.024***	-0.004	-0.018***
	(0.009)	(0.009)	(0.006)
University Education	0.050***	0.038***	-0.077***
	(0.011)	(0.012)	(0.011)
Married	-0.019**	0.005	0.003
	(0.009)	(0.009)	(0.006)
Left/Right Self-Placement	-0.093***	0.055***	0.051***
	(0.002)	(0.002)	(0.002)
Left/Right Placement of Father	-0.015***	0.011***	-0.001
	(0.002)	(0.002)	(0.001)
Interest in Politics	0.023***	0.002	-0.000
	(0.002)	(0.002)	(0.001)
Satisfaction with Democracy	0.012***	0.025***	-0.015***
	(0.002)	(0.002)	(0.001)
Interview Language French	-0.003	0.070	-0.018
	(0.061)	(0.075)	(0.056)
Interview Language Italian	0.055**	0.016	-0.075***
	(0.022)	(0.024)	(0.015)
Household Net Income (Log)	0.009	0.021***	-0.036***
	(0.007)	(0.007)	(0.005)
Observations	32981	32981	32981

Table C.8: Being Unemployed and Party Block Voting

	Left	CenterRight	ConsRight
Unemployed	0.010	-0.016	-0.003
	(0.020)	(0.021)	(0.015)
Age	-0.002***	0.001**	-0.001***
	(0.000)	(0.000)	(0.000)
Female	0.027***	-0.002	-0.020***
	(0.009)	(0.009)	(0.006)
University Education	0.051***	0.037***	-0.077***
	(0.011)	(0.012)	(0.011)
Married	-0.017**	0.008	0.002
	(0.009)	(0.009)	(0.006)
Left/Right Self-Placement	-0.093***	0.056***	0.050***
	(0.002)	(0.002)	(0.002)
Left/Right Placement of Father	-0.015***	0.010***	-0.001
	(0.002)	(0.002)	(0.001)
Interest in Politics	0.024***	0.003	-0.000
	(0.002)	(0.002)	(0.001)
Satisfaction with Democracy	0.012***	0.026***	-0.016***
	(0.002)	(0.002)	(0.001)
Interview Language French	-0.002	0.070	-0.018
	(0.061)	(0.074)	(0.056)
Interview Language Italian	0.053**	0.014	-0.075***
	(0.021)	(0.024)	(0.015)
Household Net Income (Log)	0.010	0.019***	-0.034***
	(0.007)	(0.007)	(0.005)
Observations	34651	34651	34651

Table C.9: Being Unemployed, Unemployment Rate and Party Block Voting

	Left	CenterRight	ConsRight
Unemployed	0.071	-0.020	-0.006
	(0.050)	(0.068)	(0.041)
Unemployed×ΔCant. Unemp. Rate	-0.018	0.002	0.001
	(0.015)	(0.020)	(0.012)
Age	-0.002***	0.001**	-0.001***
	(0.000)	(0.000)	(0.000)
Female	0.024***	-0.004	-0.018***
	(0.009)	(0.009)	(0.006)
University Education	0.051***	0.038***	-0.077***
	(0.011)	(0.012)	(0.011)
Married	-0.018**	0.005	0.002
	(0.009)	(0.009)	(0.006)
Left/Right Self-Placement	-0.093***	0.055***	0.051***
	(0.002)	(0.002)	(0.002)
Left/Right Placement of Father	-0.015***	0.011***	-0.001
	(0.002)	(0.002)	(0.001)
Interest in Politics	0.023***	0.002	-0.000
	(0.002)	(0.002)	(0.001)
Satisfaction with Democracy	0.012***	0.025***	-0.015***
	(0.002)	(0.002)	(0.001)
Interview Language French	-0.002	0.071	-0.018
	(0.061)	(0.074)	(0.056)
Interview Language Italian	0.055**	0.017	-0.076***
	(0.022)	(0.024)	(0.015)
Household Net Income (Log)	0.009	0.022***	-0.037***
	(0.007)	(0.007)	(0.005)
Observations	33356	33356	33356

Table C.10: Being Unemployed, Income Change and Party Block Voting

	Left	CenterRight	ConsRight
Unemployed	-0.007	-0.002	0.010
	(0.021)	(0.017)	(0.011)
Income Difference in % (if Unemployed)	-0.000	0.000	-0.000
	(0.000)	(0.000)	(0.000)
Unemployed×Income Difference	0.001*	0.000	-0.001***
	(0.000)	(0.000)	(0.000)
Age	-0.003**	-0.001	-0.000
	(0.001)	(0.001)	(0.001)
Female	0.065**	-0.075***	0.023
	(0.030)	(0.024)	(0.015)
University Education	0.095***	-0.059*	-0.095***
	(0.034)	(0.031)	(0.031)
Married	-0.023	0.065**	-0.006
	(0.030)	(0.026)	(0.016)
Left/Right Self-Placement	-0.092***	0.050***	0.040***
	(0.005)	(0.005)	(0.003)
Left/Right Placement of Father	-0.023***	0.009*	0.001
	(0.006)	(0.005)	(0.003)
Interest in Politics	0.017***	0.005	-0.000
	(0.005)	(0.005)	(0.003)
Satisfaction with Democracy	0.013**	0.023***	-0.010***
	(0.006)	(0.005)	(0.003)
Interview Language French	-1.127***	2.234***	-0.292***
	(0.113)	(0.125)	(0.050)
Interview Language Italian	-0.040	0.016	-0.032
	(0.064)	(0.067)	(0.026)
Household Net Income (Log)	-0.018	0.050***	-0.023**
	(0.024)	(0.019)	(0.010)
Observations	2917	2917	2917

Table C.11: Becoming Unemployed and Party Block Voting

	Left	CenterRight	ConsRight
Became Unemployed	0.032	-0.016	0.007
	(0.022)	(0.026)	(0.018)
Age	-0.002***	0.001**	-0.001***
	(0.000)	(0.000)	(0.000)
Female	0.029***	-0.006	-0.020***
	(0.009)	(0.009)	(0.007)
University Education	0.052***	0.039***	-0.073***
	(0.012)	(0.012)	(0.011)
Married	-0.018*	0.003	0.005
	(0.009)	(0.009)	(0.007)
Left/Right Self-Placement	-0.094***	0.057***	0.049***
	(0.002)	(0.002)	(0.002)
Left/Right Placement of Father	-0.014***	0.010***	-0.002
	(0.002)	(0.002)	(0.001)
Interest in Politics	0.025***	0.002	-0.000
	(0.002)	(0.002)	(0.001)
Satisfaction with Democracy	0.012***	0.026***	-0.016***
	(0.002)	(0.002)	(0.002)
Interview Language French	0.056	0.038	-0.024
	(0.070)	(0.084)	(0.067)
Interview Language Italian	0.056**	0.008	-0.075***
	(0.022)	(0.025)	(0.016)
Household Net Income (Log)	0.011	0.022***	-0.036***
	(0.008)	(0.008)	(0.005)
Observations	28788	28788	28788

C.5 Unemployment and Voting for Government (Probit Results)

Table C.12: Unemployment and Voting — Probit Estimation

	(1)	(2)	(3)	(4)	(5)
voteforgov					
ΔCantonal Unemployment Rate	-0.052				
	(0.057)				
Unemployed		0.018	0.394	0.064	
		(0.117)	(0.338)	(0.125)	
Unemployed×ΔCant. Unemp. Rate			-0.118		
			(0.087)		
Income Difference in % (if Unemployed)				0.005**	
				(0.002)	
Unemployed×Income Difference				0.001	
				(0.003)	
Became Unemployed					0.007
					(0.150)
Age	0.009***	0.009***	0.009***	0.023***	0.008***
	(0.002)	(0.002)	(0.002)	(0.008)	(0.002)
Female	-0.259***	-0.245***	-0.260***	-0.360*	-0.260***
	(0.064)	(0.062)	(0.064)	(0.205)	(0.068)
University Education	-0.429***	-0.400***	-0.429***	0.025	-0.388***
	(0.070)	(0.068)	(0.070)	(0.198)	(0.075)
Married	-0.014	-0.014	-0.013	-0.164	-0.029
	(0.054)	(0.052)	(0.054)	(0.176)	(0.058)
Left/Right Self-Placement	0.114***	0.106***	0.112***	0.092***	0.119***
	(0.010)	(0.010)	(0.010)	(0.033)	(0.011)
Left/Right Placement of Father	-0.026**	-0.026**	-0.026**	-0.019	-0.028**
	(0.013)	(0.013)	(0.013)	(0.040)	(0.014)
Interest in Politics	-0.010	-0.007	-0.009	0.002	-0.007
	(0.010)	(0.010)	(0.010)	(0.031)	(0.011)
Satisfaction with Democracy	0.038***	0.039***	0.036***	0.096***	0.040***
	(0.011)	(0.010)	(0.011)	(0.031)	(0.012)
Interview Language French	0.156	0.179	0.153		-0.076
	(0.472)	(0.470)	(0.472)		(0.572)
Interview Language Italian	-0.065	-0.048	-0.065	-0.655	0.061
	(0.142)	(0.139)	(0.142)	(0.420)	(0.160)
Household Net Income (Log)	-0.095**	-0.076**	-0.093**	-0.063	-0.091**
	(0.040)	(0.039)	(0.040)	(0.121)	(0.043)
Year dummies	Yes	Yes	Yes	Yes	Yes
Canton dummies	Yes	Yes	Yes	Yes	Yes
Obervations	24270	25493	24569	2199	21255
Groups	5206	5404	5219	451	4764

Standard errors in parentheses. $^{*}p < 0.1$,** $p < 0.05$,*** $p < 0.01$. The dependent variable is an individual's choice for one of eight exhaustive and mutually exclusive voting choices, seven of which correspond to the seven columns of the table, the eight, "no vote", serves as the base category. Coefficients are average marginal effects from a multinomial probit model. The model was estimated with a full set of canton and year dummies, and with standard errors clustered by individuals.

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Declaration of Sole Authorship

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Bern, 15. Februar 2014

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