Chapter 11
The Distribution of Responsibility and Economic Voting
[from Duch and Stevenson, Voting in Context: How Political and Economic Institutions Condition the Economic Vote]

Our model of rational retrospective economic voting suggests that the status-quo distribution of administrative responsibility should be related both to the overall size of the economic vote and its distribution across parties. Two theoretical propositions come out of the discussion of administrative responsibility, each of which produces a straightforward hypothesis. The first concerns the distribution of the economic vote across parties: Parties with a greater share of the status-quo distribution of administrative responsibility will receive a greater share of the economic vote than parties with a smaller share. The second concerns the overall size of the economic vote across all parties in an election: As the status-quo distribution of administrative responsibility over parties is more equal, the smaller the overall economic vote.

The main task in testing these empirical hypotheses is the measurement of voters’ beliefs about the share of administrative responsibility that each party holds. A variety of indicators of the status quo distribution of policymaking and administrative responsibility have been discussed in the political science literature: the current distribution of cabinet membership, the current distribution of cabinet portfolios, the coalition status of the government, the majority status of the government, the influence of the opposition on the government, the extent of collective cabinet responsibility, the distribution of legislative seats, the distribution of ministries specifically dealing with economic matters, and the role of the president. Further, at any given time the values of these variables are so widely reported and so well known that we can assume voters’ beliefs about them closely mirror the empirical reality, at least on average. Thus, in this chapter, we will examine how these different indicators of the distribution of responsibility are related to both the overall economic vote and its distribution across parties.

Of course, we are not the first to examine the empirical relationship between administrative responsibility and economic voting. As we emphasized in Chapter 1, Powell and Whitten (1993) used aggregate electoral data to explore whether coalition and minority cabinets experienced less economic voting than their single-party and/or majority counterparts. Using a different sample of aggregate data, Powell (2005) explored the impact of a number of institutional features of presidential regimes on the magnitude of the economic vote (e.g., concurrent versus

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1 Their composite measure of “clarity of responsibility” also included measures such as bicameralism, federalism, and the influence of the opposition via committee systems, but Stevenson (1996) shows that the majority status and coalition status variables drive their composite measure and the results.
non-concurrent presidential elections, governing with a coalition or minority cabinet). Anderson (1995) examined how a party’s share of cabinet portfolios conditions the relationship between the macro-economy and aggregate party popularity in five countries. Stevenson (1996, 2000) examined the impact of majority status, coalition status, and role in the cabinet on the economic vote of individual parties using aggregate data. At the individual level, Andersen (2000) has examined the effect of the incumbent party’s share of cabinet portfolios in an interactive model using survey data for 13 European surveys. Hellwig (2001) estimated the impact of the effective number of parliamentary parties on individual level economic voting using nine surveys from the Comparative Study of Electoral Systems project. Lewis-Beck offered an explanation for cross-country differences in individual level economic voting in his five-country study that was based on variation in the number of parties in the cabinet. The results of each of these previous studies provide support for one or both of the hypotheses given above. Taken together with these previous analyses, the results in this chapter leave little room to doubt that the distribution of administrative responsibility is an important factor conditioning both the magnitude of the economic vote across elections as well its distribution across parties. The rest of this chapter is divided into two main sections corresponding to the two empirical hypotheses described above.

Administrative Responsibility and the Distribution of the Economic Vote Across Parties

Our first hypothesis suggests that parties with a greater share of the status-quo distribution of administrative responsibility will receive a greater share of the economic vote than parties with a smaller share. There are many ways that a party can gain such administrative responsibility. Accordingly, in testing this hypothesis we adopt a number of different approaches to measuring each party’s administrative responsibility.² First, there are institutional factors that affect the distribution of administrative responsibility between the executive and the legislature. In presidential systems, administrative responsibility will be shaped by whether or not the presidential party commands a legislative majority and whether it competes for executive power with other executive parties. Because of the fusion of legislative and executive powers in parliamentary systems and their institutional separation in presidential systems, the level of administrative responsibility of the typical prime minister is likely to be greater than that of the typical president (in a presidential system), even when the later controls a majority in the

² More precisely the theory is about the voter’s beliefs about the distribution of administrative responsibility across parties. In using measures of the actual distribution of administrative responsibility in place of these beliefs, we assume that these beliefs reflect the real distribution.
legislature. Secondly, in parliamentary systems, the distribution of administrative responsibility should reflect characteristics of the incumbent cabinet: The administrative responsibility of a Prime Ministerial party which controls all the cabinet seats and/or commands a legislative majority will typically be greater than the administrative responsibility of Prime Ministerial parties that do not. Thirdly, a typical party’s share of administrative responsibility should be closely connected, in parliamentary systems, to its position within or outside of the cabinet. Whether the party is the prime ministerial party, a coalition partner, or an opposition party will affect its distribution of administrative responsibility and hence its economic vote. One useful gauge of a parliamentary party’s level of administrative responsibility is its share of cabinet portfolios, which according to our theory should be strongly correlated with its share of the economic vote. In the sections that follow, we present empirical tests of these propositions using either the size of the share of the economic vote for individual parties as the dependent variable in the our analyses.

**Presidential Parties and the Distribution of the Economic Vote**

There are only two countries in our sample that have directly-elected presidents who have significant administrative responsibility: the United States and France. We begin, then, with an analysis of economic voting for presidential parties in these cases. For the United States, the available data include both surveys that ask voters about their presidential vote and those that ask them about their legislative vote. We can explore economic voting for the party of the president in either case. Likewise, surveys exist that ask French voters both which parties they support in the legislature and which for president. However, because the surveys that include the presidential vote question have not also included an appropriate economic perceptions question, our analysis of French economic voting for the party of the president only includes cases in which voters were asked about their legislative vote.

**Economic Voting for Presidential vs. Non-Presidential Parties**

If we assume that voters think administrative responsibility is disproportionately in the hands of presidents, our first hypotheses translates directly into the expectation that presidential parties will have a greater share of the economic vote than non-presidential parties. Since in two-party systems the economic vote of one party is just the opposite of the economic vote for the other, in the two-party U.S. system we simply expect changes in party support due to worsening of economic perceptions will be negative for presidential parties but positive (and the same size) for non-presidential parties. This has certainly been the prevailing wisdom in the U.S. case,
where estimates of economic voting have typically found that the President’s party is hurt by poor economic performance (Kramer 1971; Norpoth 2001; Erikson 1989; 1990). Similarly, our own estimates of the economic vote of the Chief Executive in the United States (reported in Figure 3.2 in Chapter 3) were consistently negative. Figure 11.1 reports our estimates of the magnitude of the economic vote for French parties in legislative elections. This chart allows us to compare the size (or with some work the share) of the economic vote of French presidential parties to the size of the economic vote for all other parties. The estimated changes in support due to worsening economic perceptions for presidential parties are listed first and have gray colored bars.

**Figure 11.1**
The Economic Vote of French Presidential Parties versus Non-Presidential Parties

This figure makes it clear that, like the U.S. case, the size of the economic vote for French presidential parties is typically larger than the economic vote of other parties. ³ The

³ We have also examined the share of the economic vote more directly by showing percentages of the economic vote rather than its size. However, we save the presentation of this analysis for a later section in which we present the French results along with those of other systems.
economic vote of the president’s party is negative in nine of eleven cases and is the largest negative economic vote in six of those cases. Of course, there are exceptions to this trend. Most prominently, in 1986, 1987, 1993, and 1994 the RPR (as well as other parties in 1993) experienced more negative economic voting than did President Mitterrand’s Socialist Party. Interestingly, these are exactly the periods in which Mitterrand was forced to cohabitate with a prime minister from the RPR. We will come back to this fact below, when ask how the economic vote of prime ministerial parties compares to that of presidential parties. However, for now, the main message from Figure 11.1 is that economic vote of the French presidential party is typically greater than the economic vote of other parties in the same elections, with the possible exception of prime-ministerial parties during periods of cohabitation.

Economic Voting for Presidential Parties under Divided vs. Unified Government

The sharing of administrative responsibilities in presidential systems is usually referred to as “divided government.” This occurs when different parties control the executive and legislative branches of government (Elgie 1999; Shugart and Carey 1992). There is evidence that divided government weakens the economic vote for presidential parties. For example, Lewis-Beck and Nadeau (2000) produce such evidence for French presidential voting. Powell (2005) finds that divided government reduces the magnitude of the economic vote in his sample of 23 presidential democracies. There is convincing evidence from the U.S. that divided government either at the national or state level results in a smaller economic vote for the executive (president or governor). Leyden and Borrelli (1995) find that state unemployment impacts vote choice more strongly in states with unified as opposed to divided government. Lowry, Alt and Ferree (1988) demonstrate that the impact of a state’s fiscal condition on vote choice (for both gubernatorial and state legislative candidates) is more pronounced after periods of unified party control of the state government. On the other hand, Norpoth’s analysis of individual-level data from the 1992 and 1996 U.S. national elections suggests that divided government does not “divert” the economic vote from the presidential party to the majority party in Congress (Norpoth 2001). Our estimates of the size of the economic vote in different electoral contexts in both the U.S. and France allow us to assess the impact of divided government on economic vote magnitudes.

Divided government has been the norm in the US during the period under study here (only the short period of unified Democratic government in the early 90’s is an exception) and
has occasionally occurred in France.⁴ In France these periods also produce shared control of the executive in a situation referred to as “cohabitation.” Unlike in the US, divided government in France also means that an opposition prime minister and cabinet will be installed and this locus of executive authority will compete with the president for control. Indeed, with no legislative majority and the government ministries controlled by the opposition, French presidents during periods of cohabitation may be especially powerless.⁵ This contrasts sharply with the experience of divided government in the United States, in which the president’s party retains control of the executive apparatus even when faced with a majority opposition in the legislature. Our expectation is that voters will attribute less administrative responsibility to presidents under periods of divided government than during periods of unified government and that this difference should be more severe for French presidents who must also “cohabitate” with the opposition within the executive.

In order to test these expectations it was necessary not only to compare the average economic vote of presidential parties under unified and divided government, but also to control for whether the election study asked voters about their presidential or legislative vote. The results of these tests are in Table 11.1. The table reports the average economic vote for presidential parties in each indicated context and the accompanying tests are from an appropriately specified dummy variable regression (see the footnote to the table).

⁴ The current era of divided government in the U.S. began in 1956 when the Republicans won the presidency but failed to carry Congress (Fiorina 1992). See also Brady (1993) for a discussion of divided government in the U.S.

⁵ During the time period covered in our analysis there were two periods of cohabitation: 1986-1988 when Mitterrand (Socialist) was President and Chirac (RPR) was his prime minister; and 1993-1995 when Mitterrand was president and Edouard Balladur (RPR) was prime minister.
Table 11.1
Average Economic Vote for Presidential Parties in Different Contexts

<table>
<thead>
<tr>
<th></th>
<th>Divided Government or Cohabitation (C1)</th>
<th>Unified Government (C2)</th>
<th>p-value for rejecting the hypothesis that C1 = C2</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Presidential Election</td>
<td>-0.06 (0.02) n = 5</td>
<td>-0.10 -- -- n = 1</td>
<td>0.29</td>
</tr>
<tr>
<td>French Legislative Election</td>
<td>0.01 (0.03) n = 4</td>
<td>-0.05 (0.03) n = 8</td>
<td>0.004</td>
</tr>
<tr>
<td>US Legislative Election</td>
<td>0.012 (0.038) n = 9</td>
<td>-0.016 (0.03) n = 2</td>
<td>0.19</td>
</tr>
</tbody>
</table>

Tests are F-tests for equality of the coefficients in a dummy variable regression in which each cell represents a separate indicator variable in the regression (with appropriate handling of the constant and robust standard errors). In cases in which difference of means tests (with unequal variances) could be calculated (i.e., with more than one observation in a cell) the results from these tests are essentially identical to the F-tests. ⁶

The results in the table tell us that while we have limited data on presidential parties, the data we do have generally support the proposition that economic voting for presidential parties will be muted under periods of divided government. Consistent with our hypotheses, in each type of election considered, the average economic vote for presidential parties under divided government is smaller (less negative) than under unified control. Further, the biggest difference in the average economic vote between unified and divided control is, as we expected, in the French case (where divided government also implies executive cohabitation). Of course, the small number of cases forces us to be cautious in our interpretation. While the difference between periods of divided and unified government for the French case is both large and statistically different from zero, the two results for the US case are not as large and are not statistical significant at conventional levels. Given the small number of cases, however, one could interpret these tests as being “close” to statistical significance and, given the directional consistency of the result across the cases, decide that this evidence tends to support the view that in the U.S. divided

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⁶ The differences between the averages in the first and third rows of the table are statistically significant (as are those between the first and second). This supports the often-noted idea that economic voting is more important in presidential elections than in legislative elections (Kiewiet 1983 and Erikson 1998; 1990 for the US and Lewis-Beck and Nadeau 2000 for France). This was clear in the description of U.S. economic voting provided in Chapter 3. However, since we lack data on economic voting in French presidential elections the evidence provided here does not contribute much strength to what is already the common wisdom. It is worth noting, however, that if voters think administrative responsibility is disproportionately in the hands of presidents and thus question the utility of casting economic votes in legislative races, this result supports our argument.
government suppresses the economic vote. However, a more pessimistic view (which is consistent with Norpoth’s 2001 claim) is certainly possible. Specifically, one could look at these results and conclude that they provide little evidence for the importance of divided government on economic voting in the US case. Ultimately, strong conclusions must wait until more presidential systems can be examined. However, in our opinion, a balanced view is that the evidence presented here (including the evidence from France) supports the importance of divided government in conditioning the vote choice.

**Economic Voting for Presidential versus Prime Ministerial Parties**

The principal institutional difference between presidential and parliamentary systems is the formal sharing of administrative responsibility between the executive and the legislature in the former case and the fusion of these responsibilities in the latter case. We expect that the combining of legislative and executive functions in the parliamentary case will result in higher levels of economic voting for prime ministerial parties compared to presidential parties, even in the case when the president’s party commands a majority in the legislature. First, a number of scholars who compare the institutional powers of prime ministers to those of presidents have noted that single-party prime ministers controlling a legislative majority of seats in the legislature tend to be more powerful than presidents (e.g., Sartori 1994; Linz 1990; 1994). In these situations, prime ministers can not only dictate the administration of public policy but also, because of the strong party discipline in most parliamentary systems, dominate the legislative agenda to an extent that is unobtainable by most presidents (Ogg 1936).\(^7\)

Second, even when single party prime ministers do not control a majority in the legislature, they retain considerable agenda setting powers in most parliamentary systems—most importantly the more or less exclusive right to initiate legislative proposals (Dorring 1995). In contrast, the presidents in our sample are largely dependent on legislative parties to pursue their legislative agenda and so without a parliamentary majority the president’s agenda is unlikely to move easily through the legislature.

The evidence comparing the economic vote of single party prime ministerial parties to that of presidential parties is presented in Table 11.2 and, while mixed, favors the hypotheses that the economic vote of prime ministerial parties is larger than that of presidential parties. Specifically, when we compare the economic vote of single party prime ministerial parties and U.S. presidential parties in cases in which the U.S. voters are asked about their vote for the

\(^7\) A clear exception here is the presidential regime in Russia where the rules regarding presidential vetoes and decrees give him almost unchallengeable power (Parrish 1998)
president, we find no real difference under either divided or unified government (i.e., the F-tests in column 2). In contrast, when we compare the economic vote of presidential parties and prime ministerial parties in elections in which voters were asked about their legislative vote choice, all the evidence (from either the US or France and for both unified and divided government) indicates that the economic vote of single party prime ministerial parties is larger than that of presidential parties.\(^8\)

There are two reasons that we think this mixed evidence favors the hypothesis that the economic vote of prime ministerial parties is larger than that of presidential parties. First, the evidence in favor of the hypothesis is based on many more cases than the evidence against it (23 vs. 6 cases, respectively). Second, while the evidence in favor of the hypothesis from a comparison of election studies of the same type (i.e., all legislative elections), the evidence against the hypothesis comes from a comparison between the economic vote for prime ministerial parties when voters are asked about her choice in the legislative election studies and the economic vote of U.S. presidential parties when voters are asked about their choice in the presidential election. Clearly this conflates differences in office (presidential or prime ministerial parties) with differences in the type of vote choice question – thus, leaving us uncertain about the source of the result.

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\(^8\) Data on the majority status of government are from Mueller and Strom (2000) and, for more current cases, press-reports.
Table 11.2
Average Economic Vote for Presidential and Prime Ministerial Parties

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td></td>
<td>Economic Vote for Presidents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>All are Legislative Election Studies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Divided Government/ Cohabitation</td>
<td>-0.052</td>
<td>-0.060</td>
<td>0.01</td>
<td>0.012</td>
</tr>
<tr>
<td></td>
<td>(0.03)</td>
<td>(0.02)</td>
<td>(0.03)</td>
<td>(0.038)</td>
</tr>
<tr>
<td>p-value for difference in means test between column 1 and each other column</td>
<td>-- --</td>
<td>p &lt; 0.76</td>
<td>p &lt; 0.015</td>
<td>p &lt; 0.001</td>
</tr>
<tr>
<td>Unified Government</td>
<td>-0.068</td>
<td>-0.0996</td>
<td>-0.053</td>
<td>-0.016</td>
</tr>
<tr>
<td></td>
<td>(0.04)</td>
<td>(0.03)</td>
<td>(0.03)</td>
<td>(0.03)</td>
</tr>
<tr>
<td>p-value for difference in means test between column 1 and each other column</td>
<td>-- --</td>
<td>-- --</td>
<td>p &lt; 0.11</td>
<td>p &lt; 0.10</td>
</tr>
</tbody>
</table>

- Numbers in cells are mean *economic vote of the Chief Executive*, the standard deviation of this variable (in parenthesis), and the number of observations for the case, respectively.
- Only cases of presidential parties or parties of single-party majority prime ministers are included. For France, which has a PM and president, only the economic vote of the presidential party is included.
- “Unified Government” for parliamentary systems means the party of the prime minister controls a majority in the legislature. “Divided Government” for parliamentary systems means that the party of the prime minister does not control a majority in the legislature.
- The p-value is from a difference in means test allowing for unequal variances. Specifically, it is a test that value in the first column is smaller (more negative) than the corresponding row value in each of the other columns.

Another way to examine the question of whether presidential or prime ministerial parties have a larger economic vote is by looking more closely at the one case in which these kinds of parties can exist in the same system at the same time. If our hypothesis is true, then we would expect the party holding the prime ministry to capture a larger share of the economic vote in a given election than the party of the president, when these two offices are controlled by different parties. The relevant data is provided in Figure 11.2. This figure shows the total share of the negative economic vote that was captured by prime ministerial, presidential and non-executive
parties for each of the election studies we have for France. The “negative economic vote” is just the sum of the economic vote for all parties that experienced a decline in their support when the economy worsened (all the parties with negative projecting bars in Figure 11.1). If a party type does not appear in one of the pie graphs, no party of that type experienced a negative economic vote (and following the discussion in Chapter 2, we can think of the economic vote in these cases as zero).

There are four cases in our data in which there was an incumbent French president that was from a different party than the incumbent prime minister (at the time of the survey). These were in 1986, 1987, 1993, and 1994. Notice first that in each of these four cases (and, indeed, in all eleven cases) the prime ministerial party experienced a negative economic vote as expected. In contrast, during two of the cases of cohabitation (1987 and 1993), the presidential party did not experience a negative economic vote at all. Further, in the other two cases (in which the prime ministerial and the presidential parties were the only two to have a negative economic vote) the
prime ministerial party’s share of the economic vote was almost three times larger than that for the presidential party. Thus, in the head to head competition for economic votes that the French cases highlights, we find evidence consistent with the idea that French voters see the prime minister as more responsible for economic policy and concentrate their economic votes accordingly.\(^9\)

In sum, if we make the plausible assumption that single-party prime ministers have more administrative responsibility than presidents, our evidence about the relative level of economic voting for prime ministerial parties and presidential parties tends to supports our first hypothesis – that a greater share of administrative responsibility should lead to a greater share of the economic vote. Only when the type of election survey is conflated with the type of executive office do we find evidence that presidential parties experience the same (or larger) level of economic voting as prime ministerial parties.

**The Economic Vote of Prime Ministerial Parties Leading Different Types of Cabinets**

We have seen that the magnitude of the economic vote responds, as expected, to differences in the distribution of responsibility in different kinds of presidential systems and between presidential parties and single-party prime ministers. Following the same logic, we can look within parliamentary systems, and examine whether the economic vote for prime ministers varies with the degree to which administrative responsibility is concentrated on them or distributed to other parties as well. Our assumption is that single-party prime ministers hold a greater share of administrative responsibility than prime ministers who head coalition cabinets. Further, prime ministers that do not control a majority in the legislature hold less administrative responsibility than those who do. If these assumptions are correct (and voters beliefs actually reflect the distribution of administrative responsibility), our theory implies that the economic vote for prime ministers should be highest for single party prime minister that command a legislative majority and lowest for coalition prime ministers that do not command a legislative majority. The order of the intermediate cases (i.e., single-party minority prime ministers and majority

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\(^9\) In a related finding, Lewis-Beck and Nadeau (2000) find that in two French presidential elections under cohabitation (1988 and 1995), the economic vote on the second ballot is much higher when an incumbent prime minister (whose party controlled the cabinet) was running – this was the case in 1988 but not in 1995. This suggests that under cohabitation, voters recognize the PM party as responsible for economic management and are more likely to include the economy in their vote choice decision if the PM candidate is actually one of the presidential candidates. In general, Lewis-Beck and Nadeau (2000) conclude that economic voting is moderated under cohabitation. Likewise, in a poll of 400 French voters aimed at accessing the distribution of responsibility for economic outcomes to the president or prime minister, Lewis-Beck (1997b) finds the economy to have a greater influence on approval for the prime minister than for the president.
coalition prime ministers) will depend on which effect (coalition government or majority status of the government) impacts the distribution of administrative responsibility more.

We begin by examining how the size of the economic vote for prime ministers varies by majority and coalition status separately. The data are provided in Figure 11.3 and, as we expected, they show that the economic vote for prime ministers leading coalition cabinets is muted relative to that of prime ministers ruling alone (the right hand panel). Likewise, majority cabinets tend to have a bigger economic vote than minority cabinets, though this difference is not large (the left hand panel).

**Figure 11.3**  
Economic Voting for Prime Ministers by Majority and Coalition Status

![Boxplot of Economic Vote of Prime Ministers by Majority and Coalition Status](image)

Shaded areas of boxplots include the 25-75 percentiles and the “whiskers” extend to 1.5 the interquartile range. The centerline is the median.

In order to better understand how the coalition and the majority status of the cabinet affects the prime minister’s retrospective economic vote, we regressed the economic vote of prime ministers on dummy variables for the coalition and majority status of the cabinet. Further, we examined if the relationship changed when we allowed these variables to interact. This
produced the coefficients and standard errors in Table 11.3 and the predicted values and p-values for significant differences in Table 11.4.

Table 11.3  
**Economic Voting for Prime Ministerial Parties: The Impact of Coalition and Majority Status**

<table>
<thead>
<tr>
<th>Dependent Variable: Negative of the Economic Vote</th>
<th>OLS Coefficient (t-ratio)</th>
<th>OLS Coefficient (t-ratio)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coalition Government (1 = “yes”, 0 = “no”)</td>
<td>-0.023 (-2.38)</td>
<td>-0.026 (-2.31)</td>
</tr>
<tr>
<td>Minority Government (1 = “yes”, 0 = “no”)</td>
<td>-0.014 (-2.11)</td>
<td>-0.021 (-2.32)</td>
</tr>
<tr>
<td>Coalition Government * Minority Government</td>
<td>-- --</td>
<td>0.017 (1.19)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.067 (9.93)</td>
<td>0.069 (7.85)</td>
</tr>
</tbody>
</table>

Number of Observations 146 146  
Adjusted R-Squared 0.08 0.09

OLS regression with standard errors robust to heteroscedasticity and to non-independence between observations of the same party in different surveys.

These results make at least one conclusion unequivocally clear: the support of single party majority cabinets depends more heavily on the economy than any other cabinet type. Not only are the coefficients on coalition and minority status negative and highly significant in both equations, but the corresponding predicted values for the economic vote of single party majority prime ministerial parties are also statistically different from (and larger than) the economic votes of all the other kinds of prime ministerial parties (Table 11.4).

Beyond this, the estimates can also tell us something about differences in the magnitude of the economic vote between other types of parties, though these contrasts are not nearly as clear as the difference between single party majority prime ministers and all the other kinds of parties. Specifically, while the estimates of the magnitude of the economic vote for the four different cabinet types are in the same order in both model specifications, the statistical significance of these differences depends on the specification. If one is willing to make the restriction that the insignificant interaction term in Table 11.3 is really zero then we find that leading a coalition cabinet dampens the economic vote of the prime ministerial party more than leading a minority cabinet. This is reflected both in the differences in the size of the coefficient estimates for minority and coalition status in Table 11.3 and in the larger differences in the predicted values between the rows of Table 11.4 versus differences between the the columns.
Table 11.4
Predicted Size of the Economic Vote:
Different Types of Parliamentary Cabinets

<table>
<thead>
<tr>
<th></th>
<th>Single Party, Majority</th>
<th>Single Party, Minority</th>
<th>Coalition, Majority</th>
<th>Coalition, Minority</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.067</td>
<td>0.053</td>
<td>0.044</td>
<td>0.030</td>
</tr>
<tr>
<td></td>
<td>0.069</td>
<td>0.048</td>
<td>0.042</td>
<td>0.038</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>19</td>
<td>66</td>
<td>11</td>
</tr>
</tbody>
</table>

The first and second numbers in each cell are the predicted sizes of the economic vote for the type of party based on the coefficients in columns 1 and 2, respectively, of Table 11.4. The last number is the number of cases in the category. Italicized numbers are p-values for rejecting the hypothesis that the predicted values in the adjacent columns or rows are equal. The p-values for the difference in the northwest and southeast cells are 0.005 and 0.008 respectively and for the northeast and southwest cells are 0.41 and 0.57, respectively.

The fact that in both specifications prime ministerial parties leading single party minority cabinets have the second largest economic vote is perhaps surprising given the much discussed difficulty that minority cabinets have in policy making, relative to majority cabinets. However, an examination of the specific cases of single party minority government on which these estimates are based may suggest an explanation. Specifically, these cases are all large parties that hold a dominant position on at least one side of the political spectrum in each country. Some are “almost majority” governments, while others (like the Scandinavian Socialists) tend to rule when they face a badly divided opposition. Laver and Shepsle (1990) provide one explanation for the existence of such governments, which suggests that parties who hold a very strong bargaining position in with respect to post election policy making will sometimes be able to rule alone even when they only hold a minority of seats. Thus, our sample of single party minority governments may be “self selected” so that they are exactly those parties that are well-positioned vis-à-vis other parties to dominate policymaking. Some evidence for this comes from the fact that all of our single party minority cabinets except one hold a plurality of seats in the legislature as well as the median position on at least one of the two policy dimensions described in Mueller and Strom (2000). More convincing evidence, however, comes from our use of Laver and Benoit’s Winset...
program to calculate whether these cabinets tend to be the kind of “strong” cabinets that Laver and Shepsle’s theory identifies as capable of ruling alone despite holding a minority of seats. When we make this calculation for each case, we find that twelve of the nineteen single party minority cabinets in our sample are formally “strong” parties by Laver and Shepsle’s criteria.\(^{10}\)

Thus, when we look closely at these single party minority cabinets, it is less surprising that they should mimic their majority counterparts. What is perhaps more surprising is that voters seem to be aware of this strength and so treat these parties in a way that is similar to majority governments.

**The Distribution of the Economic Vote among Parties Playing Different Roles in (and out of) Government**

In the previous analyses, we have so far only compared the economic vote of different kinds of prime ministerial parties. However, our hypothesis that a party’s share of administrative responsibility should impact its share of the economic vote applies to parties playing various roles in government and opposition. In this section, we examine whether the parties playing different roles have systematically different shares of the economic vote.

**The Distribution of the Economic Vote Among Prime Minister, Partner and Opposition Parties**

We assume that voters attribute more administrative responsibility to prime ministerial parties than they do to other cabinet parties, and more to these parties than to opposition parties, our theory implies that economic voting should be more important for prime ministerial parties than it is for their partners and more important for these partners than it is for opposition parties.

In order to assess these hypotheses empirically our focus must shift from comparing the economic vote for prime ministerial parties in different election contexts to exploring differences in economic voting among different kinds of parties that compete with each other in the same election.\(^{11}\) When we look at the economic vote for parties within the same election, however, we face a practical problem in examining the data: the economic vote must sum to zero across parties in an election. Clearly, if there are only two parties in the system the size of the economic vote for

\(^{10}\) Specifically, in a two dimensional space defined by economic policy on one hand and social policy on the other, no party preferred any possible alternative cabinet to the one in which the ruling party controlled all the portfolios (we used positioning data from the manifestos project but in some cases substituted it for Laver and Benoit (2005) or Laver and Hunt’s (1990) data when the case was close to the period to which that data applied).

\(^{11}\) As in the other parts of this book, whenever we refer to “cabinet partners” or a “cabinet partner” we mean non-prime ministerial parties who hold seats in the cabinet. When we need to refer generically to any party in the cabinet (including the PM), we use the term cabinet party or government party.
the prime ministerial party and the opposition party must necessarily be equal (in absolute value) and so there is little point to examining the share of the economic vote that each party received (they will always have equal shares). In contrast, in the multiparty case there is room for the total economic vote to be distributed among different parties in various patterns. Our hypothesis is that the lion’s share of the negative economic vote should go to the prime ministerial party, followed by other cabinet parties, with the least economic voting going to opposition parties. When examining distributional hypotheses of this sort, we want to rely on techniques that focus our attention on the shares of the overall economic vote that different parties receive and that are sensitive to the compositional nature of economic voting (i.e., that shares sum to one).

Thus to examine these data, we first divide the parties in each election into two groups: those that experienced a negative economic vote and those that experienced a positive economic vote. As shown earlier, the prime ministerial party will usually be included in the group of parties that has a negative economic vote, as will the cabinet partners though not as reliably. In the data examined below (which excludes two-party cases and multiparty cases in which only one party had a negative economic vote) the economic vote was negative for 80% of the prime ministers and 65% of the cabinet partners. Of course opposition parties also experience negative economic voting in some of our cases, but this is much less common (41% of opposition parties).

Below we compare the extent of negative economic voting for prime ministers, cabinet partners, and opposition parties in two different ways. First, we simply examine the average size of the negative economic vote for parties of each type that are in comparable electoral situations. Specifically, we can only make this kind of comparison if we control for the number of parties in a given election that have a negative economic vote (e.g., if four parties are splitting -10 percent of the vote then they will tend to have smaller shares than if two parties split this same change). Figure 11.4 provides the relevant data for elections in which the negative economic vote was split among two, three, and four, parties respectively.

---

12 These shares will either both be equal to 0 (if change in the support for the prime minister due to a worsening economy are in the “wrong” direction or are really zero) or both equal to 1 (when changes in support for the prime minister are non-zero and in the expected direction).
13 Recall that as we developed the theory in chapter 10, we successively relaxed the definition of “incumbency” until it was possible for the theory to predict negative economic voting for opposition parties that had some role in policy making. Nevertheless, if this responsibility is less than that of cabinet partners the hypothesis here follows.
14 As discussed above a “negative economic vote” is just a negative change in support due to a worsening in economic perceptions. By definition the negative economic vote in a given electoral situation will equal the positive economic vote and so we examine only the negative half here. Further, as we have shown, the economic vote for prime ministers is overwhelmingly negative so this is the most relevant comparison.
Figure 11.4  
Share of the Negative Economic Vote:  
Prime Ministers vs. Cabinet Partners and Opposition Parties.

The results convincingly confirm our expectation that prime ministers will have a larger economic vote than other parties and that cabinet partners have a larger negative economic vote than opposition parties.

We can also examine the data in a different way that separates information on the overall size of the economic vote from the distributional information about the share of the economic vote held by each party. To do this we calculated the sum of the negative economic vote in each election study and then calculated the share of that total that accrued to each party (assigning zero to parties whose votes were positive). Figure 11.5 shows the average of these shares for parties playing different roles in (or out of) the cabinet. Since only cases with the same number of parties receiving a negative economic vote can be so compared, we provide a separate graph for each set of cases.
This graph reveals that whatever the overall size of the negative economic vote in an election, most of it goes to the prime ministerial party - no matter whether the opposition, other cabinet partners, or both also get a negative economic vote. Further, this evidence also shows that cabinet partners get a bigger share of the economic vote than opposition parties. Assuming that voters attribute more administrative responsibility to cabinet partners than to opposition parties, this clearly supports the hypothesis that the distribution of the economic vote is a function of the distribution of administrative responsibility across parties.

We can also examine a statistical model of the relationship in Figure 11.5. To do so, we need to account for the compositional nature of the vote choice in the statistical model, which we can do by applying the techniques of compositional data analysis to the problem (Aitchison 1986, King and Katz 1999). Specifically, for each of the four situations in Figure 11.5, we can create a dependent variable that corresponds to the percent of the negative economic vote that each party received (so each dependent variable is a vector with elements that are the percent of the vote the each party type received in a given electoral situation). Each of these dependent variable vectors
will necessarily sum to one across party types and, consequently, they will not even approximate the assumptions necessary to use regression reliably. Fortunately, however, if we transform the elements of these vectors by forming ratios of the shares for different party types (just choosing an arbitrary type as the denominator of the ratio) and then taking logs of these ratios, we can reliably use regression on the transformed variables. We have done this by estimating regressions of these log-ratios on a set of constants.\(^\text{15}\) This exercise provides a test of whether the apparent differences in the proportions Figure 11.5 are statistically different from zero. The result of these tests confirm, with high levels of confidence, that the differences are indeed different from zero (even the apparently small difference between the shares for opposition and partner parties in the lower left graph can be statistically distinguished from zero, with a p-value of .056).

**Parties with Control of the Economic Affairs and Finance Ministries**

Our theory suggests that the importance of retrospective economic voting to a party support depends on the ability of voters to discern that party’s competence from movements in the economy. This only follows, however, because in our theory competence in economic management is ultimately consequential for economic outcomes. Thus, it is really not the distribution of administrative responsibility in general (which of course concerns a variety of policy outcomes unrelated to the economy) that should condition retrospective economic voting, but rather the distribution of administrative responsibility for economic management specifically. The recognition that our use of the term “administrative responsibility” is really just a short-hand for “administrative responsibility for economically consequential decisions” allows us to propose that the voter should attribute more administrative responsibility to parties that hold key positions in economic management than to those holding other positions. Concretely, we expect that parties controlling ministries such as finance, economic affairs, and the treasury will have a larger economic vote than other parties, even if these others have parties have significant administrative responsibility in other areas.

In this section we explore whether parties that hold these positions have a systematically different economic vote than similar parties that do not. Clearly, this will not be an interesting question for single-party governments in which the same party holds all the cabinet ministries, including the prime ministry. Likewise, it would not be an interesting question if prime ministerial parties in coalition cabinets also consistently controlled the finance portfolios. In fact, the prime minister’s party frequently does not control the finance ministry: if we look at all

\(^{15}\) For the case in which there are three party types there are two log-ratios, so we need to estimate a system of two equations. We use seemingly unrelated regression to do so.
coalition cabinets from 1960 to 2002 (for the countries in our sample), the prime minister’s party controlled the finance ministry 59% of the time.\textsuperscript{16} When, in addition to the finance ministry, there was also an economic affairs ministry it was controlled by the PM’s party 34% of the time.\textsuperscript{17} Figure 11.6 shows (for coalitional governments) the extent of economic voting for finance ministers compared to other cabinet partners, controlling for whether the party also held the prime ministry. The economic vote of parties that hold the finance ministry is greater (more negative) than other parties, which clearly supports our hypothesis and suggests that voters make rather subtle distinctions in the distribution of administrative responsibility.\textsuperscript{18}

![Figure 11.6](image)

**Figure 11.6**
Economic Vote for Parties Holding the Finance Ministry, Coalition Governments

Shaded areas of boxplots include the 25-75 percentiles and the “whiskers” extend to 1.5 the interquartile range. The centerline is the median.

\textsuperscript{16} This is calculated over months thereby allowing for changes in the composition of cabinets.
\textsuperscript{17} Cabinets almost always include a finance ministry, but have a separate economic affairs ministry only about half the time.
\textsuperscript{18} The regression results for Figure 11.6 are as follows: Economic Vote for Parties Holding Finance Ministry in a Coalition Government = 0.005 (1.96) + 0.023 (1.74) X Dummy Variable Indicating Party Holds Prime Ministry + 0.015 (2.84) X Dummy Variable Indicating Party Holds Finance Ministry - 0.0004 (-0.03) Prime Ministry*Finance Ministry. $R^2=.19$. Observations=156.
The predicted values and significance tests provided in Table 11.5 show that there is always a larger economic vote for parties holding the finance ministry compared to those who do not, regardless of whether the party also holds the prime ministry. However, this difference is only statistically significant for cabinet partners. These results suggest an interesting modification to our earlier conclusions about the impact of holding the prime ministry on a party’s economic vote. Specifically, while in the last section we saw that prime ministers have a substantially larger economic vote than their cabinet partners (a conclusion widely shared by students of comparative economic voting), the analysis in this section suggests that this difference may be due in part to the fact that most prime ministerial parties also control the finance ministry. In contrast, when different parties hold these two positions the electoral fate of the finance minister is almost as dependent on the economy (an economic vote of .02) as is the electoral fortunes of the prime minister (an economic vote of .028).19

Table 11.5
Predicted Size of the Economic Vote:
Parties Holding the Finance Ministry, the Prime Ministry, or Both

<table>
<thead>
<tr>
<th></th>
<th>Not PM, Not Finance Ministry</th>
<th>PM, Not Finance Ministry</th>
<th>Not PM, Finance Ministry</th>
<th>PM, Finance Ministry</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.005</td>
<td>.028</td>
<td>.020</td>
<td>.043</td>
</tr>
<tr>
<td></td>
<td>(.0001, .011)</td>
<td>(.002, .053)</td>
<td>(.012, .03)</td>
<td>(.024, .061)</td>
</tr>
</tbody>
</table>

Numbers in the cells are predicted amount of economic voting for the type of party based on the coefficients in Table 11.6. Italicized numbers are p-values for rejecting the hypothesis that the predicted values in the adjacent columns or rows are equal. The p-value for the difference in the northwest and southeast cells is 0.0001 and for the northeast and southwest cells is 0.51

19 An interesting implication for future research is that if prime ministers recognize this, they should use it when negotiating the distribution of cabinet portfolios. They should offer the finance ministry to other parties when they expect the economy to decline and keep it for themselves when the economy is likely to be strong.
Given the strength of our results for the importance of the position of finance minister in the distribution of the economic vote, one may wonder whether there is any evidence that voters actually appreciate the different roles that different parties play in economic policymaking. While the best evidence would ask voters directly about these beliefs, some indirect evidence can be gleaned from a new data set on newspaper reporting of economic news that we are currently developing for the larger research project of which this study is a part. That dataset codes newspaper stories about the economy for a variety of variables, including references and attributions of responsibility to different political actors. With these data we can examine how often newspaper stories in different countries mention the prime minister and/or the finance minister in connection with economic news. This provides direct evidence about the availability of the kinds of information that would be necessary for voters understand the relative influence of parties holding the prime ministry and finance ministry on policymaking, though, of course, it can not tell us about those beliefs directly.

Thus far in the project, we have collected data from twenty newspapers (four papers each in Canada, Belgium, Norway, US, UK, France, and Ireland) from 1980-2002. We distinguished two types of newspaper stories: 1) all stories concerning the economy and 2) other kinds of stories that mentioned the incumbent government. Our measure of the extent to which voters receive information about the finance minister’s connection to the economy is the relative frequency that the finance minister is mentioned in economic stories compared to all stories (including non-economic ones).\textsuperscript{20} Table 11.6 summarizes the results and shows that newspapers are four times more likely to mention the finance minister in a story about the economy than they are to mention the prime minister. Further, this is in contrast to other kinds of stories in which the incumbent government is mentioned, where the PM is slightly more likely than the finance minister to be mentioned.

<table>
<thead>
<tr>
<th></th>
<th>Prime Minister Mentioned</th>
<th>Finance Minister Mentioned</th>
<th>Neither Mentioned</th>
<th>Newspaper Stories</th>
</tr>
</thead>
<tbody>
<tr>
<td>All stories in which</td>
<td>2,012 (49%)</td>
<td>1,836 (45%)</td>
<td>608 (6%)</td>
<td>4,068 (100%)</td>
</tr>
<tr>
<td>a member of cabinet</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>is mentioned</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Economic Stories</td>
<td>50 (3%)</td>
<td>113 (16%)</td>
<td>1,685 (91%)</td>
<td>1,848 (100%)</td>
</tr>
</tbody>
</table>

The 4456 mentions in the first row come from 4068 stories (in some stories both are mentioned).

\textsuperscript{20} Since this analysis is only meant to be illustrative, we forego a detailed discussion of the methodology for this extensive project. In short, however, we sampled newspaper stories from the front page of the four leading newspapers in each country. We coded all the stories that appeared either the day of or the business day after the official release of either monthly or quarterly economic statistics on unemployment, inflation, or GDP/GNP. A full analysis of these data awaits their completion and out next book.
This evidence suggests that the finance minister tends to be highlighted in media discussions of the government (about half the stories mentioning anyone in the government mention the finance minister) and is the dominant government figure associated with reporting about the economy. In our view, this gives some credence to the notion that the finance ministry is not just an important institutional player in the making of economic policy, but that the media provides the kind of information that would allow voters to understand this as well.

Overall this section provides convincing evidence that is consistent with the idea that voters attribute more responsibility for economic policy making to this party than to others and that it has a correspondingly larger economic vote.

**The Distribution of Cabinet Seats**

Voters appear to establish their assessment of party competence – which in turn conditions their economic vote – based on reasonably sophisticated assessments of the administrative roles of parties within the governing coalition. Each party’s share of cabinet seats strikes us as indicator of a party’s administrative responsibility that is even more accessible to voters. We have already established that prime ministerial parties register a greater economic vote than other parties. Hence what is of particular interest here is whether the economic vote of cabinet partners is positively related to their share of cabinet seats. Figure 11.7 plots the relationship between the economic vote for cabinet partners (excluding prime minister parties) and their share of cabinet seats. The relationship is in the predicted direction with a statistically significant slope coefficient and so is consistent with our hypothesis.21

**Figure 11.7**

Economic Vote and Share of Cabinet Seats, Cabinet Partner Parties Only

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21 As readers might expect, if we include the PM parties in the plot and regression the relationship is much stronger.
Economic Vote for Cabinet Partners = 0.007 (1.25) - 0.057 (2.42) X % of Cabinet Seats Held. R²=.10. Observations=84.²²

In this section we have examined how four different dimensions of administrative responsibility impact the distribution of the economic vote across parties. For presidential systems, we found that presidential parties that commands a legislative majority have a greater economic vote than presidential parties that do not. Similarly, we found that the economic vote of prime ministerial parties is largest when the prime minister leads a majority single-party cabinet, smaller when the prime minister leads a majority coalition or minority single-party cabinet, and smallest when the prime ministerial party leads a minority coalition cabinet. Likewise, we showed that a party’s share of the economic vote is tied closely to its role in government: Prime ministerial parties experience the most economic voting, coalition partners less, and opposition parties the least.²³ Further, control of the finance ministry increases a party’s...

²² OLS regression with standard errors robust to heteroscedasticity and to non-independence between observations of the same party in different surveys. Numbers in parentheses are t-ratios.
²³ Of course, here we mean only those opposition parties that experience a “negative economic vote” when the perceptions worsen. Other opposition parties may (and usually do) have large “positive economic votes”.
economic vote. Finally, we found that each party’s share of cabinet portfolios, a summary gauge of a party’s level of administrative responsibility, impacts its economic vote.

The Distribution of Administrative Responsibility and Overall Economic Voting

The previous section was concerned with how the distribution of the economic vote across parties depends on the distribution of administrative responsibility. In this section we change our focus: instead of trying to explain the distribution of the economic vote across parties, we ask how aggregate features of the distribution of administrative responsibility (i.e., how concentrated or diffuse it is) impact the overall level of economic voting in an election.

Specifically, the second general hypothesis that we proposed at the beginning of this chapter was that as the status-quo distribution of administrative responsibility over parties becomes more equal, the smaller the overall economic vote.

To test this hypothesis we construct a measure of the concentration of administrative responsibility, where we initially use each party’s share of cabinet ministries to indicate its share of administrative responsibility and later construct a more general measure that accounts for opposition influence on policymaking. Specifically, given \( n \) parties in an election, we can define an associated hypothetical distribution of responsibility in which all parties get equal shares of responsibility. Formally, this is just a vector – call it \( \delta \) - in which each party’s share of responsibility is \( \frac{1}{n} \). Our theory suggests that this vector of equal shares is the distribution of responsibility that will lead to the least amount of economic voting in an election. With \( \delta \) defined as the hypothetical vector of equal shares, we can then define a corresponding vector, which are the real shares of administrative responsibility for each party in a given case. If we call this vector \( \lambda \), then the vector distance between \( \lambda \) and \( \delta \) is an intuitive measure of the degree to which responsibility is concentrated in the system.\(^{24}\) If administrative responsibility is equally shared across parties, then the elements of \( \lambda \) will be equal to the elements of \( \delta \) and the vector distance will be zero no matter how many parties are in the election. Likewise the distance between the two vectors will be greatest when administrative responsibility is concentrated on one party. One potential drawback of the measure is that while its lower bound is always zero, its upper bound – which, again, occurs when one party has all the administrative responsibility - will differ depending on the number of parties. Specifically, the more parties in the system, the bigger this upper bound will be. If one thinks that voters see power as more concentrated as the number of parties excluded from power is bigger, then this differing upper bound is appropriate. However,

\(^{24}\) The vector distance is just the square root of the summed squared differences in the elements of the two vectors.
if (for example) voters perceive power as equally concentrated when one party holds all the power in a two-party system and when one party holds all the power in a five-party system, then we need to normalize this distance by dividing by the upper bound. Below, we report results using the second strategy, though the choice is not empirically consequential. We call this measure concentration of responsibility and it can take values between zero (equality) and one (complete concentration of responsibility in one party).
The flatter regression line corresponds to the following regression: Economic Vote for PM = -0.002 (0.08) -0.066 (2.81)*Concentration of Responsibility. R²=.10. Observations=152.25 The steeper line excludes the cases in which concentration of responsibility equals one.

The results of our analysis of the impact the concentration of responsibility on the economic vote of the prime minister is provided graphically, along with the corresponding bivariate regression results, in Figure 11.8. The results of the analysis support the hypothesized negative relationship – more concentrated responsibility results in higher levels of economic voting. The flatter of the two regression lines includes all the cases and the steeper one excludes the cases on the right hand side of the figure in which power is completely concentrated in a single party.

This evidence thus supports our second hypothesis. However, it is based on a measure of the concentration of responsibility that is built from the distribution of cabinet portfolios.

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25 Estimates are from OLS regression with standard errors robust to heteroscedasticity and to non-independence between observations of the same party in different surveys. Numbers in parentheses are t-ratios. For the U.S. case, the presidential party is coded as holding all administrative responsibility and only presidential election studies are used.
exclusively. Consequently, it does not capture dispersion in the distribution of administrative responsibility that is due to an institutionally strong opposition or the majority/minority status of the government.\(^{26}\) With respect to the first of these factors, we would expect administrative responsibility to be more widely shared when legislative institutions give the opposition significant power over policy making and an institutional ability to review and alter the decisions of the executive. With respect to the second factor, we have already discussed the idea that oppositions may be empowered relative to the executive when the cabinet does not control a majority of seats in the legislature. This general expectation, as per our previous discussion, may be different for single-party minority governments versus coalition minority governments, since the former may obtain sole control of the government exactly because they occupy an unassailable bargaining position in the legislature.

With these ideas in mind, we seek to develop a measure akin to the concentration of authority measure used above, but one that weights opposition parties more heavily in situation of single-party minority or coalition minority government and institutionally powerful oppositions. We do so in two steps. First, we construct an index of opposition influence that combines information on the institutional strength of the opposition in each of our countries with the majority status of the government. Next, we normalize this measure to vary between zero and one and use it to build a linear combination of the cabinet seat share and legislative seat share of each party. The justification for the second step is simply that the distribution of policymaking power in a system in which the executive was powerless relative to the legislature would be well approximated by the distribution of legislative seats. In contrast, in a system in which the cabinet had all the power, legislative seats would be meaningless and only the distribution of cabinet seats would be relevant. Thus, for intermediate cases in which opposition influence is between these extremes, we combine these two distributions, mixed by an appropriate weight for the extent of opposition influence.

We develop an appropriate weight for mixing the cabinet seat and legislative seat distributions by focusing on two institutional distinctions. First we distinguish three kinds of cabinets and give them decreasing scores for susceptibility to opposition influence: coalition minority governments (the most susceptible to opposition influence), single-party minority governments (the next most susceptible to opposition influence) and all majority governments (the least susceptible to opposition influence). Secondly, we measure the institutional strength of the opposition using information from Powell (2000), which is itself based on data from the Inter-

\(^{26}\) In contrast, the coalition status of the government is captured in the distribution of cabinet portfolios, since single-party cabinets will necessarily have all portfolios held by a single party.
parliamentary Union and Dorring (1995). Powell (2000) uses four institutional features of legislatures to assign countries to High, Medium, and Low categories of institutional strength of the opposition. The four features are (1) whether the legislature has a large number of standing committees that mirror the government ministries, (2) whether committee chairs are controlled by the government or shared by the opposition, (3) whether the government controls the legislative agenda, and (4) whether the government limits the ability of the committees to amend proposed legislation. The resulting classification of countries is provided in Table 11.7. It is identical to Powell’s classifications except for Italy, since our coding of Powell’s four variables for our cases gave Italy a score that put it in the “High” category as opposed to “Medium” (where Powell has classified it).

Table 11.7
Classification of Institutional Strength of the Opposition

<table>
<thead>
<tr>
<th>High</th>
<th>Medium</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium, Denmark, Germany, Italy, Netherlands, Norway, Spain, Sweden</td>
<td>Canada, United States</td>
<td>Australia, France, Greece, Ireland, New Zealand, United Kingdom</td>
</tr>
</tbody>
</table>

With these data and the data on the majority status of the government, we created a weight for each case in the data that took a value of one when the strength of the opposition was High and the cabinet was a minority coalition and zero when the strength of the opposition was Low and the cabinet was a majority (either coalition or single party). Intermediate cases fell between these extremes. The distribution of this weight for the countries included in the analyses below is in the appendix to this chapter. To create our new measure of the concentration of administrative responsibility, we used this weight, as described above, to form a linear combination of the vector of cabinet seat shares and legislative seat shares for the parties. Specifically, if $c_i$ is party $i$’s cabinet seat share, $s_i$ is its legislative seat share, and $\varphi$ is the opposition influence weight for the case, then the party’s share of administrative responsibility is $(1-\varphi)c_i + \varphi s_i$. This measure will sum to one across all the parties and can be used in the procedure described in the last section to create a measure of the extent to which the real

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27 These institutional features vary little over our period and so we classify each country for the whole period.
28 Giving the four factors equal weight gives Italy the same score as most the other countries in the “High” category and a greater score than the others in the “Medium”.
29 Institutional strength of opposition was coded 0 for Low, 1 for Medium, and 2 for High. Majority Status of the government was coded 0 for majority, 1 for single-party minority, and 2 for coalition minority. The opposition influence weight was calculated as follows: (institutional strength of opposition score + majority status score)/4.
distribution of responsibility differs from an equal distribution. This new measure of concentration of responsibility is graphed against the economic vote of the prime minister in Figure 11.9.

Figure 11.9
Concentration of the Distribution of Administrative Responsibility and Economic Voting for the PM, Opposition Influence Included

Economic Vote for PM = -0.015 (1.18) - 0.057 (3.40) X Concentration of Responsibility with Opposition Influence. R²=0.10. Observations=137.³⁰

This graph looks similar to Figure 11.8, as it should since the variable on the x-axis is constructed, in part, from the one used in that figure. The result of accounting for opposition influence in our measure of the concentration of responsibility is reflected in the differences between the figures. Specifically, the current graph includes cases with considerably more dispersed responsibility than the previous one. For example, all of the Norwegian cases in our sample had single-party minority governments and a strong legislative committee system, but

³⁰ Estimates are from an OLS regression with standard errors robust to heteroscedasticity and to non-independence between observations of the same party in different surveys. We could not calculate the measure for the Portuguese cases and one case from Iceland. For the U.S. case, the presidential party is coded as holding all administrative responsibility and only presidential election studies are used.
score a one on our previous measure of concentration of responsibility because one party holds all
the cabinet portfolios. However, the current measure scores the four Norwegian cases around 0.5.

Despite these (and other) differences in the data, the impact of using this index on the
relationship is not large and the implied substantive effect of concentration of responsibility on
the economic vote is not significantly different in the two cases. However, the new measure is
directionally consistent with our expectations – that is, the impact of an empowered opposition on
the distribution of administrative responsibility is to make it more equal and that this depresses
the magnitude of economic voting in the system. Overall, however, this impact is quite small
compared to the impact of the distribution of responsibility that stems from the role that parties
play in cabinet.

The Concentration of Responsibility in an Interactive Model

As we discussed in Chapter 4, the two-stage analysis reported above can be replicated
employing a one-step approach in which we combine our individual level datasets and estimate a
random coefficients, multi-level model with a more limited, uniform, specification of the
individual level vote choice models. By including interactions between economic perceptions
and concentration of responsibility we can capture how differences in this contextual variable
impact the individual decision to vote for the chief executive’s party. We estimate the same core
model described for the random coefficient model in Chapter 9. We also estimated some of the
models including a variable, size, which is simply the average support for the chief executive’s
party in the survey. This is constant for each survey and essentially allows the constant-only
model (which captures the probability that an ideologically average voter will vote for the chief
executive’s party) to vary based on the general level of support for the chief executive’s party in
the population.\textsuperscript{31} More specifically, the basic form of the model, with the size variable, is:

\begin{equation}
\nu_{ik} \sim Bin(\pi_{ik})
\end{equation}

\begin{equation}
\logit(\pi_{ik}) = \beta_{0k} + \beta_{1k} \text{Worse}_{ik} + \beta_{2k} \text{Better}_{ik} + \\
+ \phi_1 \text{Ideology}_{ik} + \phi_2 (\text{Ideology}_{ik} \ast \text{CR Ideology}_{ik})
\end{equation}

\begin{align}
\beta_{0k} &= \gamma_{00} + \gamma_{01} \text{Size}_{ik} + \gamma_{02} \text{CR}_{ik} + \omega_{0k} \\
\beta_{1k} &= \gamma_{10} + \gamma_{11} \text{CR}_{ik} + \omega_{1k} \\
\beta_{2k} &= \gamma_{20} + \gamma_{21} \text{CR}_{ik} + \omega_{2k}
\end{align}

\textsuperscript{31} We measure concentration of responsibility using the first of the two measures that were described in the
last section because we wanted to maximize the number of cases in this analysis.
where Bin just indicates the dependent variable is distributed according to an appropriate binomial distribution with parameter $\pi_j$. CR is concentration of responsibility and we assume the errors are distributed according to a multivariate normal distribution, with variances $\sigma^2_{e_{11}}, \sigma^2_{e_{22}}, \text{and } \sigma^2_{e_{33}}$ and covariances $\sigma^2_{e_{11}, e_{22}}, \sigma^2_{e_{11}, e_{33}}, \text{and } \sigma^2_{e_{22}, e_{33}}$. Since we expect support for the chief executive to be negatively related to economic perceptions, we expect $\gamma_{10} < 0$ and $\gamma_{20} > 0$ (recall that the baseline category is voters who think the economy has stayed the same). Further, since greater concentration of responsibility is expected to increase the size of the economic vote, we expect $\gamma_{11} < 0$ and $\gamma_{21} > 0$ (since this will increase the difference between the overall impact of better versus worse perceptions).

Table 11.8 provides the estimates.\textsuperscript{32} Model 4 in the table is exactly Equations (11.1) – (11.4) and the other models are minor variations on this specification.

\textsuperscript{32} The estimates were obtained using the PQL second-order linearization method outlined in Goldstein (1995). Diagnostics on estimated residuals at Level 2 suggest that the assumption of normal variance in the level two coefficients is not violated.
### Table 11.8
**Multi-Level Model of Concentration of Responsibility and Economic Voting**

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left-Right Self Placement (dev. from mean)</td>
<td>0.459, 0.005</td>
<td>0.479, 0.005</td>
<td>0.473, 0.005</td>
<td>0.482, 0.005</td>
</tr>
<tr>
<td>Left-Right Self Placement * Leftist Chief Executive (Leftist CE is an indicator variable)</td>
<td>-0.691, 0.007</td>
<td>-0.721, 0.007</td>
<td>-0.725, 0.007</td>
<td>-0.741, 0.007</td>
</tr>
<tr>
<td>Voter Perceives Economy got Better (indicator variable)</td>
<td>0.428, 0.028</td>
<td>0.428, 0.028</td>
<td>0.454, 0.028</td>
<td>0.449, 0.028</td>
</tr>
<tr>
<td>Voter Perceives Economy got Worse (indicator variable)</td>
<td>-0.56, 0.033</td>
<td>-0.534, 0.033</td>
<td>-0.590, 0.028</td>
<td>-0.575, 0.028</td>
</tr>
<tr>
<td>Concentration of Executive Responsibility (deviation from mean)</td>
<td>--, --</td>
<td>1.961, 0.185</td>
<td>0.838, 0.144</td>
<td></td>
</tr>
<tr>
<td>Voter Perceives Economy got Better * Concentration of Executive Responsibility</td>
<td>--, --</td>
<td>0.568, 0.144</td>
<td>0.565, 0.144</td>
<td></td>
</tr>
<tr>
<td>Voter Perceives Economy got Worse * Concentration of Executive Responsibility</td>
<td>--, --</td>
<td>-0.976, 0.144</td>
<td>-0.952, 0.144</td>
<td></td>
</tr>
<tr>
<td>Size of Chief Executive’s Party</td>
<td>--, 5.252</td>
<td>--, --</td>
<td>4.552, 0.240</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-0.920, 0.046</td>
<td>-2.396, 0.067</td>
<td>-0.883, 0.036</td>
<td>-2.184, 0.072</td>
</tr>
<tr>
<td>( \sigma^2_{\text{e1}} )</td>
<td>0.285, 0.090</td>
<td>.163, .068</td>
<td>.068, .065</td>
<td></td>
</tr>
<tr>
<td>( \sigma^2_{\text{e2}} )</td>
<td>0.121, 0.119</td>
<td>.066, .066</td>
<td>.065, .072</td>
<td></td>
</tr>
<tr>
<td>( \sigma^2_{\text{e3}} )</td>
<td>0.073, 0.081</td>
<td>.066, .038</td>
<td>-.020, -.034</td>
<td></td>
</tr>
<tr>
<td>( \sigma_{\text{e1}, \text{e2}} )</td>
<td>-0.110, -0.048</td>
<td>-.038, -0.012</td>
<td>-.034, -.034</td>
<td></td>
</tr>
<tr>
<td>( \sigma_{\text{e1}, \text{e3}} )</td>
<td>0.030, -0.023</td>
<td>-.012, -.034</td>
<td>-.034, -.034</td>
<td></td>
</tr>
<tr>
<td>( \sigma_{\text{e2}, \text{e3}} )</td>
<td>-0.053, -0.052</td>
<td>-.032, -.032</td>
<td>-.031, -.031</td>
<td></td>
</tr>
<tr>
<td>Level 2 variance for those who think economy is better (other vars at mean)</td>
<td>0.418, 0.125</td>
<td>.205, .072</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 2 variance for those who think economy is same</td>
<td>0.285, 0.09</td>
<td>.163, .068</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 2 variance for those who think economy is worse</td>
<td>0.186, 0.113</td>
<td>.153, .093</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Standard Errors listed below logit coefficients. All coefficients are statistically significant at \( p < .001 \) unless indicated by “ns”. In the case of the US, the dependent variable is vote for the party of the president. Congressional election studies are excluded.

This estimates clearly support the hypothesis, since all the coefficients are statistically significant and in the expected direction. Thus, this pooled, multi-level model tells exactly the same story as the second-stage estimates from the two-stage method – shared power decreases the economic vote of the Chief Executive. A more intuitive presentation of the effect of concentration of responsibility is given in Figure 11.10. These estimates are calculated from the estimates for
Model 4 and for a voter with the sample mean for left-right self-placement and Chief executive party size and whose economic perceptions move from same to worse.

**Figure 11.10**

**Impact of the Concentration of Executive Responsibility on the Magnitude of the Economic Vote for the Party of the Prime Minister**

![Graph](image)

Graphed Results are based on coefficients from Model 4 in Table 11.9. Confidence bounds are simulated assuming multivariate normality of the estimated coefficients.

The other models included in Table 11.8 are slight variations on equations (11.1)-(11.4) and provide estimates with and without the size variable and for the model without concentration of responsibility (Model 1). Comparing the models with and without concentration of responsibility can tell us how much of the variation in the level-2 coefficients is accounted for by the concentration of responsibility variables. Specifically, the multi-level model does not assume that concentration of responsibility captures all the contextual variation in economic voting. Instead, it allows for random variation in the estimated coefficients for economic voting even after accounting for the impact of concentration of responsibility. These level-2 variances are estimated along with the coefficients and can be used to calculate the overall variation in the
level-2 coefficients that remains once the systematic variation (captured by concentration of responsibility and, in some cases, size). These estimates are provided at the bottom of Table 11.8. In all cases, we find less random variation in the economic voting coefficients when differences in the concentration of responsibility across cases are explicitly included in the model. We can be sure, then, that some of the election-to-election variation in the importance of economic voting is due to differences in the concentration of responsibility.

Summary

This purpose of this chapter was to explore the influence of the distribution of administrative responsibility on both the extent of economic voting and its distribution across parties. Our contextual theory of rational retrospective economic voting suggests that voters know the distribution of administrative responsibility and that, along with other information in the responsibility augmented competency signal, this information alters the weight that voters give movements in the previous economy in their vote calculus. These theoretical expectations were expressed in two general empirical hypotheses relating the distribution of the economic vote across parties to each party’s share of the economic vote as well as to the overall size of the economic vote.

The empirical results in this chapter are uniformly consistent with these hypotheses. Specifically, we find that in presidential systems economic voting is higher under unified as opposed to divided government; single party prime ministers tend to experience more economic voting than presidents, prime ministers leading single party majority cabinets have a larger share of the economic vote than prime ministers leading coalition or minority cabinets; in coalition cabinets, prime ministerial parties receive the lion’s share of the overall economic vote and their cabinet partners most of the rest; parties that control the finance ministry have a larger economic vote than parties who do not, and the size of this effects is almost as large as the impact of holding the prime ministry; and that a governing party’s economic vote is closely tied to its share of cabinet seats. Finally, consistent with our second hypotheses about the distribution of responsibility and the overall level of the economic vote, we find that there will be more economic voting in an election in which the distribution of administrative responsibility is more concentrated around a small number of parties.

33 Since the variance calculation depends on the values of the data, they are provided for several different cases (see Goldstein, Browne and Rasbash 2002).
All these empirical results support what has become an impressive body of empirical evidence (at both the aggregate and individual level) linking administrative responsibility to economic voting (e.g., Anderson 2000; Powell and Whitten 1993). Indeed, our result fills one of the most important gaps in that literature – a comprehensive examination of the individual level evidence. Given the strength of our results and its consistency with previous work, we think it is safe to conclude that the distribution of responsibility is simply one of the most important factors conditioning the economic vote in western democracies.

Our results are also consistent with the theoretical model described in Chapter 10 and so may lend some support to the view of economic voting described there. However, we recognize that the empirical work in this chapter does nothing to distinguish our explanation from other theoretical possibilities. Most of these possibilities build informally on the clarity of responsibility argument, which assumes that the main factor that prevents economic voting in situations of diffuse responsibility is the voter’s inability to determine who is responsible for policy making. Our theoretical story differs in that we assume voters are full informed about the distribution of responsibility across parties and they use this information in a rational fashion to condition the magnitude of their economic vote. Thus the economic vote is depressed when responsibility is diffuse, not because of the voter’s ignorance about the roles that parties play in government but because they must use the same amount of information (observed movements in the economy) to make more complicated inferences about party competence. Of course, the existence of these different theoretical possibilities does nothing to detract from the strength and importance of the empirical result itself, but simply argue for future work that seeks different kinds of empirical leverage that would allow us to distinguish between them.
Appendix to Chapter 11

Influence of the Opposition weight Used to Construct Concentration of Responsibility Measure that was used in Table 11.12 and Figure 11.10

<table>
<thead>
<tr>
<th>Country</th>
<th>0</th>
<th>0.25</th>
<th>0.5</th>
<th>0.75</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Belgium</td>
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<td>0</td>
<td>12</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Canada</td>
<td>0</td>
<td>4</td>
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<td>0</td>
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<tr>
<td>Denmark</td>
<td>0</td>
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<td>1</td>
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<tr>
<td>France</td>
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<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Germany</td>
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<td>0</td>
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<td>0</td>
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<tr>
<td>Greece</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Ireland</td>
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<td>0</td>
<td>0</td>
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<tr>
<td>Italy</td>
<td>0</td>
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<tr>
<td>Netherlands</td>
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<tr>
<td>New Zealand</td>
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<tr>
<td>Norway</td>
<td>0</td>
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<td>0</td>
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<tr>
<td>Spain</td>
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<td>4</td>
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<tr>
<td>Sweden</td>
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<td>0</td>
<td>4</td>
<td>0</td>
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<tr>
<td>United Kingdom</td>
<td>16</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>52</td>
<td>10</td>
<td>52</td>
<td>13</td>
<td>10</td>
</tr>
</tbody>
</table>