

Nuffield College Working Papers in Politics 2006 #13

Competency Signals in a Crowded Political Context

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Version 2.0
January, 2007

We acknowledge the generous support of the National Science Foundation that funded this project with grant SBR-0215633.

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Abstract

Our results suggest that the net implications of globalization for democratic accountability depend on whether greater exposure to the international economy occurs in a context with an extensive as opposed to more limited state sector. A larger government sector may in fact moderate the negative social consequences of globalization but our competency theory suggests that broadening the scope of government's involvement in the economy reinforces the democratic deficit resulting from trade openness. Paradoxically, countries responding to increased exposure to global economic forces by privatizing and liberalizing their economies are more likely to counteract the erosion of democratic accountability associated with globalization. Our analyses suggest that democracies fall along a single dimension characterized by open economies with an expansive state sector at one extreme and closed economies and a limited state sector at the other. This implies that as globalization increases we can expect declining levels of economic voting and a growing crisis of democratic accountability.

Introduction

This article contributes to the growing literature on the relationship between globalization and democratic accountability in two ways. First, we offer an extension and reinterpretation of previous theories of economic voting that allow us to develop clearer theoretical answers to questions about how globalization and state responses to it might impact the extent of economic voting in modern democracies. Second, we offer tests of our theoretical propositions using a new dataset that first estimates the extent of economic voting in 163 different individual level voter preference surveys; we then use these estimates as the dependent variable in subsequent tests of whether differences in the extent of globalization (and state responses to it) across countries and over time are associated with variations in their economic vote – and by implication the extent of democratic accountability.

Efforts to understand the implications of globalization for democratic governance have focused on the macro-level: Does participation in the global economy represent a constraint on national government policy makers? The literature has two distinct perspectives on this question.⁶ Some have argued that globalization has undermined the effectiveness of democratic accountability because domestic governments have declining control over economic outcomes. The result, some argue, is the convergence of economic policies and outcomes (Cerny 1995; Rodrik 1997). But others (Garrett 1998, Hall and Soskice 2001; Steinmo 2002) contend that national governments retain considerably flexibility and autonomy in designing and implementing policies that respond to these global forces. They conclude that national economic policy outcomes can be quite distinct from one another.

¹Rodrik (1997) summarizes many of the arguments that make up this literature. Fischer (2003) provides a review and careful assessment of the debates regarding the impact of globalization.

These macro arguments regarding globalization and democratic accountability have important micro-level foundations. One implication of democratic accountability is that voting decisions are shaped by individual perceptions of economic outcomes. Constraints on national decision makers associated with open-economies and liberalization (or privatization) are typically seen as reducing the role of elected officials in shaping domestic economic outcomes and consequently the ability of voters to hold decision makers accountable for economic outcomes (Alvarez, Nagler, and Willette 2000; Hellwig 2006).

Freeman speculates that "... there is evidence that as privatization and globalization have progressed, democratic citizens have lost faith in their governments' capacities to manage their economies (Freeman 2006)." This suggests democratic accountability is at risk in the face of globalization and privatization.

This implies voters that are attentive to global economic influences on the domestic economy and that discount, in an appropriate fashion, the importance of economic performance in their vote decision. The notion that the general public is cognizant of global economic influences is not ill-founded. There is empirical evidence that the general public believes that global economic and political forces play an important role in shaping domestic economic outcomes. Elsewhere we have presented evidence that citizens, from a sample of six Europe countries, recognize that their domestic economic outcomes are highly dependent on the European economy (Duch and Stevenson 2007). Hellwig (2006) reports, for example, that in 2001 large majorities of citizens in each of the EU countries agreed with the notion that "globalization cannot be controlled by domestic governments".

The argument also suggests that voters are attentive to the types of actors generating economic policies and outcomes. If privatization of the economy undermines democratic accountability, as some claim, then presumably at the individual level voters somehow understand how the policy making context constrains their economic policy choices. The implication here is that a voter in a context with a relatively expansive state sector such as France would draw very different conclusions regarding the economic competency of the incumbent government than she would in a context such as the U.S. which more closely resembles a "privatized" economic context. This is an area in which we in fact have relatively little direct empirical evidence. Moreover, existing theories about the vote choice provide little

guidance as to what characteristics of these decision making contexts resonate with the voter. Our contextual theory of the economic vote described below attempts to fill this void.

These claims regarding global constraints and democratic accountability presume more than simple voter awareness of the constraints imposed on domestic economic policy making. They suggest that voters use information about the global and domestic economies to condition their individual vote choice. These globalization arguments imply that the importance of the economy in vote choice varies, either over time or across different economic or political contexts. The notion that voters have lost faith in the ability of their governments to manage the economy suggests that at least for some voters, and for some election contexts, economic performance should not matter – or carry much less weight – in the vote decision. And finally these arguments suggest that this variation in the importance of domestic economic outcomes for the vote decision (the economic vote) can be explained by aspects of globalization or the extent of privatization. Hence, claims regarding global constraints and democratic accountability cannot be answered without evidence regarding individual vote choice. But as Freeman (2006) and Kuklinski et al (2006) point out, much of the literature ignores the individual-level dynamics of the democratic accountability arguments.

Establishing that this relationship holds presumes a theory of individual vote choice that explains how information about global economic constraints or a privatized economy is incorporated into the vote calculus. Elsewhere we have proposed a contextual theory of the economic vote that provides the theoretical foundation for identifying contextual variables, such as the global economy, that condition the economic vote (Duch and Stevenson 2007). Voters in our theory are instrumentally rational and are motivated by selection: They want to elect competent managers of the macro-economy and hence use historical fluctuations in macro-economic shocks to establish the extent to which economic outcomes are the result of incumbent competency as opposed to exogenous factors. We will argue in this essay that the extent to which a country's economy is open to international trade and the degree to which the state sector is expansive in scope (as opposed to limited as would be the case in a privatized context) decrease the magnitude of this competency signal. Voters are fully informed about the competency signal and hence

economic voting, and democratic accountability, is predicted to be lower in contexts with trade openness and an expansive state sector.

The paper proceeds as follows. First, we describe our competency theory of how context affects economic voting. We then derive hypotheses from this theory regarding the impact of open-economies and liberalization (two key features of globalization) on economic voting (our indicator of democratic accountability). Following this is a brief description of the data and measurements (a complete description is at www.raymondduch.com/economicvoting). We then empirically test the propositions.

The Competency Model

Arguments regarding globalization and democratic accountability suggest that voters are informed about the competency of electorally accountable decision makers for economic outcomes. In our theory this translates into voters that know whether economic outcomes are the result of actions by electorally accountable decision makers as opposed to initiatives by economic and political actors who they cannot hold electorally accountable. Voters are able to sort out whether a shock to the domestic economy results from actions taken by electorally accountable decision makers (a tax cut) rather than by non-electorally accountable officials (trade barriers imposed by a foreign entity). This implies economic voting models in which the voter is using information about context (globalization or privatization) to assess the competency of incumbents for economic outcomes. In turn she uses this competency assessment to condition her economic vote – a more informed voter than one might observe in a typical economic voting model. The challenge here is specifying a model that explains how these contextual factors enter into the choice function of an instrumentally rational voter. We believe that a selection model in which rational voters are concerned with identifying competent types provides the theoretical leverage for accomplishing this. The formal foundations of this model have been developed by a number of scholars (most notably in political science, Alesina and Rosenthal 1995). Accordingly, we build our own theoretical model by expanding and reinterpreting theirs.

We begin, then, by examining Alesina and Rosenthal's model of rational retrospective voting as it was originally conceived and then suggest an extension and reinterpretation of one key component of the

model that makes it easier to use the model to generate predictions about the impact of specific changes in political and economic context on the extent of economic voting.⁷ The model assumes that two parties compete for unified control of the executive and that this executive can choose an inflation rate directly (their economic policy) that determines growth in the following expectations augmented Phillips curve:⁸

$$(1.1) \quad y_{it} = \bar{y} + \pi_{it} - \pi_{it}^e + \eta_{it}$$

Where y_{it} is the rate of economic growth in period t , under incumbent party i ; π_{it} is the inflation rate, the level of which is chosen directly by the incumbent party; π_{it}^e is the rate of inflation that voters expect the incumbent to choose, \bar{y} is the natural rate of growth, and η_{it} is a random shock to the economy.

The economic shock consists of two parts as follows:

$$(1.2) \quad \eta_{it} = \varepsilon_{it} + \xi_t$$

One part, ε_{it} , is simply an increment to growth that depends on the identity of the incumbent but not on her economic policy (which is captured in π_{it}). This increment to economic performance is meant to capture the economic impact of the incumbent administration's managerial competence. It is any unobserved economic impact of the incumbent administration that is not constant over time or administration.¹⁰ We refer to this as a "competency shock". The other part of the total shock to economic growth, ξ_t , though also unobserved and not constant over time, does not depend on the identity of the administration. We refer to it as an "exogenous" shock or sometimes as a "non-political" shock.

Voters cannot observe competence shocks or non-political shocks directly but can glean information about incumbent competence from the fact that the observed economy is partially dependent

⁷ We generally follow the notational conventions used in Alesina and Roubini (1997).

⁸ In other work we have generalized this model to cases of multiparty competition, cabinet governments, and situations in which oppositions participate in policy making (Duch and Stevenson 2007). In each of those cases, the essential logic that is used in this paper continues to hold. Consequently, we only present the two-party case here.

¹⁰ If voters observe the impact of this behavior it cannot be part of the shock but is part of the observed policy represented by π_{it} . Likewise, any unobserved impact of behavior on growth that is constant is subsumed in the natural rate of economic growth.

on it. They are able to infer level of competence from observed economic performance which provides a guide to the incumbent's future level of competence. Accordingly, we assume that competence is persistent over time in the following way:¹¹

$$(1.3) \quad \varepsilon_{it} = \mu_{it} + \mu_{it-1}$$

Thus, current competence is just a first-order moving average from a sequence of competency shocks. We assume that each of these competency shocks is drawn from identical distributions, with mean zero and finite variance σ_{μ}^2 . Likewise, we assume that the non-political shocks, ξ_t , are drawn from identical distributions each with zero mean and finite variance σ_{ξ}^2 . We assume voters know the expected values and variances of these distributions.

All voters in the model are identical and care about achieving the highest possible economic growth and lowest possible inflation in the next period. Since a voter's future utility will depend on choices she makes today, she must forecast the likely economic future under different possible incumbents. Our assumption is that these expectations are formed rationally based on all the information available at the time of the election. Politicians in the model all care only about being in office and understand that voters will vote to maximize their expected utility.¹²

Since voters form expectations about inflation and growth rationally they know that incumbent politicians will pick the level of inflation (and correspondingly growth) that will maximize the incumbent's expected utility. Voters are assumed to know current inflation and are never surprised by the government's inflation policy. Consequently, politicians have nothing to gain from doing anything but choosing the voter's optimal inflation rate (zero). Thus, in this simple version of the model, all politicians, no matter how competent, will choose the same economic policy and differences in growth associated with different politicians can only result from differences in their types (which are exogenous

¹¹ One can also discount the impact of past competence as long as it is at least partially persistent.

¹² We could allow politicians to differ in their policy preferences, for example leftist politicians might prefer a non-zero inflation rate. As we will see, however, economic voting in the model does not in any way depend on the policy choices of politicians and so we ignore this complication.

to the model). Clearly, then, the decisions of the politicians play no real role in the model and so it is equivalent to a reduced form, decision-theoretic version of the usual formulation that has been used to explore political business cycles. Since our focus is on the decision of voters given the observed economy and not on the decisions of politicians about policy, this seems an appropriate simplification.

With this, the growth rate from Equation (1.1) is just the natural rate plus any shock. Further, voters can actually observe the total shock, since they can calculate it via Equation (1.1). However, they cannot use that equation to parse out how much of the observed shock is due to the incumbent's competence, since they do not observe the two shock terms separately, but only overall growth.

The voters in the model form their expectations about the competence of the incumbent rationally and because of the moving average structure of the error term in Equation (1.3), growth rates at time t that differ from \bar{y} will provide voters with information regarding the competence of an incumbent re-elected for period $t + 1$. This follows from taking expectations in Equation (1.3) (recall that the unconditional expectation of μ_{it+1} is zero).

$$(1.4) \quad E[\varepsilon_{it+1}] = E[\mu_{it+1}] + E[\mu_{it} | y_{it}] = E[\mu_{it} | y_{it}]$$

Voters form their expectations about the competence of an incumbent re-elected in period $t+1$ by evaluating μ_{it} or, more precisely, the noisy signal provided by y_{it} . A key assumption of Alesina and Rosenthal's (1995) model is that voters learn the value of competency with a one-period delay – that is, in period t they know μ_{it-1} but not μ_{it} . Hence voters base their forecast of the economic competence of the incumbent on both y_{it} and μ_{it-1} . Specifically, in the current period voters know the competency of the incumbent in the last period, the natural rate of growth, the current realization of growth, and the current economic shock (which is composed of some unknown mix of the current competence of the incumbent and the non-political shock). Growth in the current period is thus:

$$(1.5) \quad \begin{aligned} y_{it} &= \bar{y} + \eta_{it} \\ &= \bar{y} + \mu_{it} + \mu_{it-1} + \xi_t \end{aligned}$$

In Alesina and Rosenthal's (1995) original formulation of the model, they use this set up to derive a solution to the voter's signal extraction problem that ultimately depends on the variances of the distribution of competency shocks (σ_μ^2) and exogenous shocks (σ_ξ^2), respectively.

Specifically, they show that the rational voter weights the impact of the economy in her vote choice by the ratio of the variance of the competency distribution to the variance of distribution of the total economic shock (just the sum of the variances of the distribution of competence and exogenous shocks). Since we derive a similar, but extended, result below, we forgo the details here. Ultimately, however, this signal takes the following form:

$$(1.6) \quad \left(\frac{\sigma_\mu^2}{\sigma_\mu^2 + \sigma_\xi^2} \right)$$

In many respects this signal encapsulates the debates concerning the implications of globalization and structural changes for the economic vote and, more generally, for democratic accountability. One might argue, as does Scheve (2004), that increased openness will decrease the size of the variance of exogenous shocks (σ_ξ^2) and so increase the extent of economic voting. The reasoning here is that increased integration into the world economy has the effect of moderating exogenous shocks to a national economy (σ_ξ^2) which would have the effect of making this signal larger. In general though we find a great deal of theoretical slack in speculations about how features of the political and economic context impact the variances of distributions of shocks.

What causes the distribution of competency shocks and their variance (σ_μ^2) to vary across political contexts? For example, what is it about the political and economic context of a country like Germany that might systematically affects its distribution of competency shocks so that the variance of these competency shocks is very different than other European countries? Similarly, and simultaneously, we need to understand what causes variances in exogenous or non-political, shocks (σ_ξ^2) to vary across

national contexts. Why, for example, might voters perceive variance in exogenous macro-economic shocks in Belgium as being much higher than those perceived by voters in Canada? In fact the overall variance in macro-economic shocks ($\sigma_{\mu}^2 + \sigma_{\xi}^2$) in the two countries might be quite similar but they may get partitioned very differently between competency and exogenous sources. One might expect the Belgian economic outcomes to be much more influenced by exogenous factors (the influence of the European Union, for example) than is the case in Canada – this would inflate variances in exogenous or non-political, shocks (σ_{ξ}^2) in Belgium and give it an overall lower competency signal.

As we show below, however, a theoretical strategy that attempts to use the selection model of rational economic voting to explore these kinds of contexts must address this question of what happens to both the denominator and numerator of the competence signal. Given, this we suggest an extension and reinterpretation of Alesina and Rosenthal’s model that, we believe, gives the model a clear substantive interpretation and so allows for more substantively grounded speculations about how different aspects of globalization are likely to alter the competence weight and thus economic voting. Further, our extension leads us to think about the effects of phenomena like increased trade or a more regulated economy in ways that have not been emphasized in the previous literature.

Our modification of the original Alesina and Rosenthal (1995) formulation begins by distinguishing between two types of decision makers, which we will call “electorally-dependent decision makers” (EDDs) and “non-electorally dependent decision makers” (NEDDs). The first of these labels (EDD) is just shorthand for referring to the elected officials that make up the national government and the bureaucracy that is responsible to them. The second label (NEDD) refers to everyone else whose decisions might impact the economy including individuals, firms, interest groups, non-electorally dependent (entrenched) bureaucrats, foreign leaders, the WTO, and many more. The reason this distinction is important is that we assume that competency shocks are only associated with the decisions of the EDDs (electorally-dependent decision makers), while the exogenous shocks are associated with the decisions of everyone else. Note that included amongst the NEDDs are government officials from sub-

national levels of government that contribute to exogenous shocks in the macro-economy. Hence, federalist systems that multiply the number of non-national government entities that contribute to exogenous shocks would have a lower overall competency signal and hence less economic voting.¹³

In the model developed above we assumed a single decision – the setting of interest rates, for example. In fact, EDDs make many economically consequential decisions; as do NEDDs. Just as in the model above, each of these decisions has some systematic effect on the economy and some random effect, and the competence and exogenous shocks discussed above are nothing but these many random shocks, summed over the sets of decisions made by elected and non-elected decision makers respectively.

Formally, let the number of decisions made by EDDs be α and the number made by NEDDs be β and assume, for notational simplicity, that there is a single elected decision maker and a single non-elected decision maker making all of these decisions.¹⁴ With this, we can write the growth equation from above as:

$$(1.7) \quad y_{it} = \bar{y} + \sum_{l=1}^{\alpha} \omega_{ilt} + \sum_{l=1}^{\beta} \psi_{lt}$$

where ω_{ilt} is the growth shock associated with the l th decision of i , the EDD. Likewise, ψ_{lt} is the growth shock associated with the l th decision of the NEDD. Any known or systematic impacts of these

¹³ The effect of federalism on the magnitude of the economic vote in national elections is typically explained as the result of an increased level of confusion on the part of voters (Anderson 2006; Cutler 2004). In our theory voters are not confused but rather are fully informed and simply discount the national incumbent’s competency signal when there are a larger number of “non-elected” actors affecting shocks to the macro-economy. For similar reasons we would expect to see relatively low levels of economic voting in state or provincial elections where the importance of “non-elected” actors (i.e., the federal government) on economic outcomes is considerable (Stein 1990). We are unable to actually test this hypothesized relationship with our sample of countries because they have very little variation on the widely accepted measures of federalism. For example, on the Franzese (2002) measure of federalism, twelve of the seventeen countries in our sample (for which there is a federalism measure) have the lowest score of 1 leaving only five countries that register as federalist (and one, the U.S., is a very large outlier compared to the other federalist countries).

¹⁴ This can be extended to represent both the number of decision makers and their volume of decisions although the notation becomes much more complex; the results nevertheless are exactly the same.

decisions on the economy are subsumed in the natural rate of growth or are anticipated by voters and so have no effect on growth.¹⁵

We assume that for the EED, the l 'th shock is persistent in the same way as in our earlier discussion (i.e. $\omega_{it} = \mu_{it} + \mu_{it-1}$). And we assume that μ_{it} and ψ_{it} are independent normally distributed random variables with zero means and variances σ_{μ}^2 and σ_{ψ}^2 , respectively.¹⁶

The growth equation can then be expressed as,

$$(1.8) \quad y_{it} = \bar{y} + \sum_{l=1}^{\alpha} (\mu_{it} + \mu_{it-1}) + \sum_{l=1}^{\beta} \psi_{it}$$

Rearranging this gives:

$$(1.9) \quad \sum_{l=1}^{\alpha} \mu_{it} + \sum_{l=1}^{\beta} \psi_{it} = \bar{y} - y_{it} + \sum_{l=1}^{\alpha} \mu_{it-1}$$

Where everything on the right hand side of this equation is observed and so the sum of the terms on the left is also observed, though not the individual components. Denote the sum on the left hand side as $k_{it} = \sum_{l=1}^{\alpha} \mu_{it} + \sum_{l=1}^{\beta} \psi_{it}$. Since k_{it} is observed, the voter can compute her expectation about $\sum_{l=1}^{\alpha} \mu_{it}$ given

¹⁵ Specifically, if $\sum_{l=1}^{\alpha} (\phi_{it} + \omega_{it})$ is a generic term capturing the total impact of all decisions relevant to the economy that are made by the elected decision maker, rather than simply as an inflation choice, we can think of $\pi_{it} = \sum_{l=1}^{\alpha} \phi_{it}$ as the “policy” part of this impact over which voters have rational expectations.

Thus, as before, π_{it} is fully anticipated by the rational electorate (so voters anticipate the many choices the decision maker will make) and can have no real effect on growth (i.e., given rational expectations and the information assumptions from the earlier model, π_{it} will equal π_{it}^e). Consequently, the decision maker will always choose the mix of policies that are most preferred by the voter.

¹⁶ This persistence means we need to think of the l th decision at time t and the l th decision at time $t+1$ as being members of the same “category” of decisions so that the shock to decision l at time $t-1$ tells us something about the shock to decision l at time t . One can simplify matters considerably by assuming that the shocks for all decisions made in a single period by the same decisionmaker are the same. In that case, we would think of the shock as a sort of characteristic of the decision maker so that all his or her decisions about the economy “worked” a little better or a little worse. An equivalent version of the model would allow for many decisionmakers each making many decisions. However, this kind of generalization has no impact on our conclusions, though it does change the substantive interpretation of the persistence assumption as noted above.

k_{it} (i.e., her expectation about the EDD's current overall competence shock, given the observed level of growth and the decision maker's overall competence shock in the last period). To calculate this

conditional expectation, we need to know the distribution of both k_{it} and $\sum_{l=1}^{\alpha} \mu_{ilt}$. $\sum_{l=1}^{\alpha} \mu_{ilt}$ is the sum of α normally distributed random variables each with zero mean and variance σ_{μ}^2 , so $\sum_{l=1}^{\alpha} \mu_{ilt} \sim N(0, \sigma_{\mu}^2 \alpha)$.

Likewise, $\sum_{l=1}^{\beta} \psi_{lt} \sim N(0, \sigma_{\psi}^2 \beta)$. Thus, k_{it} is the sum of two normally distributed random variables, both

with zero means and variances $\sigma_{\mu}^2 \alpha$ and $\sigma_{\psi}^2 \beta$, respectively. The distribution of k_{it} is thus:

$$(1.10) \quad k_{it} = \sum_{l=1}^{\alpha} \mu_{ilt} + \sum_{l=1}^{\beta} \psi_{lt} \sim N\left(0, \sigma_{\mu}^2 \alpha + \sigma_{\psi}^2 \beta\right)$$

Given that both, k_{it} and $\sum_{l=1}^{\alpha} \mu_{ilt}$ are distributed normally, their joint distribution is bivariate normal

and the optimal forecast of $\sum_{l=1}^{\alpha} \mu_{ilt}$ given k_{it} is just the conditional expectation, which is computed from

the appropriate conditional distribution of the bivariate normal. Using standard results (Greene 2003),

this conditional expectation is:

$$(1.11) \quad E\left[\sum_{l=1}^{\alpha} \mu_{ilt} \mid k_{it}\right] = E\left[\sum_{l=1}^{\alpha} \mu_{ilt}\right] + \frac{\sigma_{\mu,k}}{\sigma_k^2} \left(y_{it} - \bar{y} - \sum_{l=1}^{\alpha} \mu_{ilt-1}\right) - E[k_{it}]$$

$$= \left(\frac{\alpha \sigma_{\mu}^2}{\alpha \sigma_{\mu}^2 + \beta \sigma_{\psi}^2}\right) \left(y_{it} - \bar{y} - \sum_{l=1}^{\alpha} \mu_{ilt-1}\right)$$

The numerator of the competence signal is now the variance of the overall competence shock, which is the product of the variance of the distribution of competence shocks associated with a single decision and the number of decisions made by the EDD ($\alpha \sigma_{\mu}^2$). This is important because it implies that expanding the number of economically consequential choices that the electorally-dependent decision

maker makes will increase this product. More substantively, this variance should be larger in countries in which EDDs make more of the economic decisions that determine the country's growth path.

The principal advantage of this formulation of the model is that it alleviates the need to speculate about how differences across cases in particular political and economic institutions lead to differences in the variance of the distribution of individual competence shocks (σ_μ^2) or individual exogenous shocks (σ_ψ^2) across cases. Instead, since these are the variances governing the shocks associated with individual decisions, each of which is likely to have only a very small effect on growth, we can simply assume that these variances are both small (implying that the maximum impacts of an individual decision on growth is small) and constant across cases. So the positive or negative shock associated with any one decision in any one place and time may range in size similarly to any other decision. What differs across context, however, is the number of decision over which we take the sum. Thus, the task in connecting political and economic institutions to the strength of the competence signal is shifted in our revised model from speculation about the impact of these institutions on the variances of the distributions of competence and exogenous shocks to speculation about how they impact the number of economically consequential decisions subject to electoral control.

Turning back to Equation (11.1), since $E\left[\sum_{l=1}^{\alpha} \mu_{ilt} \mid k_{it}\right] = E\left[\sum_{l=1}^{\alpha} \mu_{ilt} \mid y_{it}\right]$, this expression is the rational voter's assessment of the current competence of the incumbent given the observed economy.¹⁷

Further, from Equation (1.5), we have $E\left[\sum_{l=1}^{\alpha} \mu_{ilt} \mid y_{it}\right] = E\left[\sum_{l=1}^{\alpha} \omega_{ilt+1}\right]$, so we now have what we need to explore the implications of the model for economic voting by comparing the voter's expected utility for voting for the incumbent in this model to her expected utility for the challenger.

¹⁷ $E[\mu_{it} \mid y_{it}] = \frac{\sigma_{\mu,y}}{\sigma_\mu^2 + \sigma_\xi^2} (y_{it} - y - \mu_{it-1})$ by applying the same signal extraction solution as above. Further,

it is easy to show that $\sigma_{\mu,y} = \sigma_{\mu,k}$, so the claim in the text follows.

The voter's expected utility for voting for incumbent party i is just the expected utility the voter will accrue in the next period if party i is in office.¹⁸

$$\begin{aligned}
(1.12) \quad E\left[\sum_{l=1}^{\alpha} \mu_{ilt+1} \mid v_i\right] &= E\left[u(\pi_{it+1}, y_{it+1})\right] \\
&= \frac{1}{2} E[\pi_{it+1}^2] + bE[y_{it+1}] \\
&= 0 + b\left(\bar{y} + E[\eta_{it+1}]\right)_i \\
&= 0 + b\left(\bar{y} + 0 + E\left[\sum_{l=1}^{\alpha} \omega_{ilt+1}\right]\right) \\
&= b\left(\bar{y} + \left(\frac{\alpha\sigma_{\mu}^2}{\alpha\sigma_{\mu}^2 + \beta\sigma_{\psi}^2}\right)\left(y_{it} - \bar{y} - \sum_{l=1}^{\alpha} \mu_{ilt-1}\right)\right) \\
&= b\bar{y} + b\left(\frac{\alpha\sigma_{\mu}^2}{\alpha\sigma_{\mu}^2 + \beta\sigma_{\psi}^2}\right)\left(y_{it} - \bar{y} - \sum_{l=1}^{\alpha} \mu_{ilt-1}\right)
\end{aligned}$$

Lacking any information about the challenger's level of competence, the voter's expected utility for voting for the challenger, k , is just:¹⁹

¹⁸ All voters in the model are identical and care about achieving the highest possible economic growth and lowest possible inflation in the next period. Specifically, we will write the utility of a typical voter in period $t+1$ as a function of which party is elected, what policy that party pursues, and what the resulting level of economic growth will be. Given some governing party, i , that pursues a particular economic policy (a choice of π_{it+1}), the voter's utility in period $t+1$ is in part:

$$u(\pi_{it+1}, y_{it+1}) = -\frac{1}{2} u(\pi_{it+1}^2) + by_{it+1}, \quad b > 0$$

where in Alesina and Rosenthal's formulation π is just inflation and b indexes the voter's preference for growth relative to inflation. However, in our formulation π is a package of policies and b indexes the voters preference for growth relative to her (non-growth related) utility for the overall policy package offered by the government. The particular functional form of the voters utility is quite flexible: as we will see any choice that has the voter's utility increasing in growth will produce the same substantive implications for rational economic voting given the other assumptions in the model. The one provided above is a common formulation in the literature and so was chosen for its familiarity. In our application, it requires that we normalize the utility of the policy bundle so that the voters preferred policy is achieved at a level of zero, but this can be done without loss of generality. Since utility is increasing in y and is maximized, for a given y , when equals zero, this expression says that the voter prefers more growth and price stability and that she would be willing to trade price increases for growth at a rate governed by the size of b .

¹⁹Alesina and Rosenthal (1995) assume that the expected competence of the challenger is always zero. We discuss what happens when we change this assumption (and why we might need to) below.

$$\begin{aligned}
E\left[\sum_{l=1}^{\alpha}\mu_{klt+1} \mid v_k\right] &= E\left[u(\pi_{kt+1}, y_{kt+1})\right] \\
&= \frac{1}{2}E[\pi_{kt+1}^2] + bE[y_{kt+1}] \\
(1.13) \qquad &= 0 + b(\bar{y} + E[\eta_{kt+1}]) \\
&= b\left(\bar{y} + E\left[\sum_{l=1}^{\beta}\psi_{lt}\right] + E\left[\sum_{l=1}^{\alpha}\omega_{klt+1}\right]\right) \\
&= b\bar{y}
\end{aligned}$$

Thus, the voter is more likely to vote for the incumbent when the expected utility in Equation (1.12) is larger than that in Equation (1.13). The difference is:

$$\begin{aligned}
(1.14) \qquad E\left[\sum_{l=1}^{\alpha}\mu_{ilt+1} \mid v_i\right] - E\left[\sum_{l=1}^{\alpha}\mu_{klt+1} \mid v_k\right] &= b\bar{y} + b\left(\bar{y} + E\left[\sum_{l=1}^{\beta}\psi_{lt}\right] + E\left[\sum_{l=1}^{\alpha}\omega_{klt+1}\right]\right) - b\bar{y} \\
&= b\left(\frac{\alpha\sigma_{\mu}^2}{\alpha\sigma_{\mu}^2 + \beta\sigma_{\psi}^2}\right)\left(y_{it} - \bar{y} - \sum_{l=1}^{\alpha}\mu_{ilt-1}\right)
\end{aligned}$$

This result makes it clear when voters can and cannot extract information from fluctuations in the previous economy in order to access the current competence of an incumbent and cast an economic vote.

The term $y_{it} - \bar{y} - \sum_{l=1}^{\alpha}\mu_{ilt-1}$ is simply observed economic performance less the parts of economic growth

whose sources are known to the voter. The term captures how the current period differs from the natural level of growth, discounted by the impact of the incumbent's known level of competence in the previous

period. We can interpret the coefficient on this term, i.e. $\left(\frac{\alpha\sigma_{\mu}^2}{\alpha\sigma_{\mu}^2 + \beta\sigma_{\psi}^2}\right)$, as the ‘‘competency signal’’ that

controls how much information about the competence of incumbents voters can extract from observed movements in the economy. This competency signal will always be positive and will approach one as the

variance in the random (non-political) shocks to the economy, $\beta\sigma_{\psi}^2$, goes to zero. In that case, the voter

knows that growth above or below the natural rate is completely due to competency shocks –

consequently, deviations from the natural rate of growth will perfectly identify competent and

incompetent administrations. More generally, if $\alpha\sigma_\mu^2$, the variation in the competence term μ_{it} , is large relative to variation in the non-political component of growth, $\beta\sigma_\psi^2$, then changes in the economy will provide a strong signal about the competency of the incumbent and the voter will weight the retrospective economy more heavily in her utility function. Alternatively, growth that is above or below the natural rate is a poor signal of the incumbent's competence if $\beta\sigma_\psi^2$ is high relative to $\alpha\sigma_\mu^2$.

Context and competency shocks. Given our assumption that σ_ψ^2 and σ_μ^2 are constant over all contexts, the impact of political and economic institutions on the strength of the competence signal (and ultimately on economic voting) must come through differences in the α and β terms in the above equations. The numerator of the competence signal is the variance of the overall competence shock ($\alpha\sigma_\mu^2$), which implies that expanding the number of economically consequential choices that the EDDs makes will increase the value of this term. More substantively, the variance in the overall competence shock should be larger in countries in which EDDs make more of the economic decisions that determine the country's growth path.

When comparing the overall competency signal in different contexts the ratio of non-electorally-dependent to electorally-dependent decisions in each context can shape the relative size of their overall competency signals. Consider the case where the competency signal is larger in one context than another:

$$(1.15) \quad \frac{\alpha\sigma_\mu^2}{\alpha\sigma_\mu^2 + \beta\sigma_\psi^2} > \frac{\alpha'\sigma_\mu^2}{\alpha'\sigma_\mu^2 + \beta'\sigma_\psi^2}$$

$$\frac{\beta\sigma_\psi}{\alpha\sigma_\mu^2} < \frac{\beta'\sigma_\psi}{\alpha'\sigma_\mu^2}$$

$$\frac{\beta}{\alpha} < \frac{\beta'}{\alpha'}$$

where α and β are from a large competency signal context and α' and β' are from a small signal context. The resulting inequality in Equation (1.15) suggests that the ratio of NEDDs to EDDs in the

large signal context must be smaller than this ratio in the smaller signal context. The relative impact of political and economic contexts on the overall competency signal is the magnitudes of these ratios.

Contextual effects that will have the most unambiguous impact on this ratio are ones that simultaneously increase α and decrease β or vice-a-versa. These are cases where the rising number of NEDDs affecting variations in shocks to the macro-economy is displacing the number of EDDs affecting these shocks. This will generate the inequality in Equation (1.15) and an unambiguous predicted effect. Contexts where the number of NEDDs affecting macro-economic shocks is high will tend to have fewer EDDs impacting macro-economic shocks – hence an overall signal that is smaller. An example here might be the adoption of monetary unions or common tariff regimes which typically result in a smaller number of EDDs affecting macro-economic shocks (thereby reducing the magnitude of the competency shock term) and a larger number of NEDDs having an impact (thereby increasing the exogenous shock term). The opposite case that results in a strong competency signal is contexts with relatively larger numbers of EDDs and relatively fewer NEDDs. Large states with unitary constitutions and relatively closed economies compared to small states with federal constitutions and that have extensive exposure to international trade might be an example of this case.

There are also contextual differences that only influence the numerator or denominator in these terms. Take the example of holding the numerator constant by setting $\beta = \beta'$ – two such contexts would not differ in terms of the number of NEDDs affecting macro-economic shocks. The inequality in Equation (1.15) then simply reduces to $\alpha > \alpha'$; contexts with a higher number of decisions by EDDs affecting economic shocks will have a higher competency signal. An example here might be presidential versus parliamentary constitutions. One might think of presidential regimes as having larger numbers of elected decisions that affect the macro-economy than is the case with parliamentary contexts (on the grounds that there is a fusion of executive and legislative officials in a parliamentary regime while they are elected separately in a Presidential regime). Nevertheless, all things being equal, parliamentary and presidential constitutional contexts may have similar numbers of NEDDs impacting a nation's macro-

economic shocks. Hence, the result of holding β and β' constant and increasing the number of decisions by EDDs (α) will be a higher competency signal.

Contextual differences will not always generate different competency signals. When the two ratios in Equation (1.15) are equal it is less likely that competency signals will vary across contexts. Obviously, this can happen when $\alpha = \alpha'$ and $\beta = \beta'$. These are simply cases in which context does not matter. A somewhat more problematic case is when the two ratios in Equation (1.15) are equal but $\alpha \neq \alpha'$ and $\beta \neq \beta'$. We expect this to be relatively rare since it presumes that contextual differences reduce or increase both the number of EDDs and of NEDDs in similar ratios to each other.

Our theoretical results in this section provide a foundation for understanding how economic and political context shapes the economic vote. As the ratio of NEDDs to EDDs rises the overall competency signal will decline and vice-a-versa which, we argue, should impact the economic vote. Our theory does not indicate which specific contexts are associated with particular ratios of NEDDs to EDDs. Hence, in order to generate predictions regarding the impact of economic and political context on economic voting we need to understand how these contexts impact the ratio of NEDDs to EDDs. Below, we examine a number of such hypotheses by providing arguments about how specific institutional differences across political and economic contexts should impact the ratio of NEDDs to EDDs.

The Data

The dependent variable in our empirical analysis is the estimate of the economic vote for each of 163 voter preference surveys conducted in 19 countries from 1979 to 2001. We employ a two-stage estimation strategy that is only briefly describe here – a detailed description of the estimation is available in Duch and Stevenson (2005 and 2007). For each of the 163 voter preference studies in our sample we estimate a multinomial logit vote choice model for each of the major competing parties.²⁰ Each of these 163 studies includes a vote preference question (typically, “if an election were held today which party

²⁰ The second stage results presented here are robust to the multinomial estimation technique. Duch and Stevenson (2006 and 2007) compare the results employing MNL and multinomial probit (MNP) and find the results are virtually identical.

would you vote for?") and the respondent's retrospective evaluation of the overall economy (whether respondents thought the economy had got better or worse over the past 12 months). These are the core questions for our analysis and they are roughly similar across all of the 163 studies. In addition, we include control variables in the estimation that reflect the types of variables typically included in the specification of vote choice equations: socio-economic cleavages, policy measures, and left-right self placement. In each country specification we include the appropriate set of control variables that are necessary to ensure consistent estimates for the economic evaluation variable.²¹

Once a model of vote choice was estimated for each survey, we calculated the predicted probability that each voter in the sample would vote for each party (the voter's estimated "support vector"). We then repeated this calculation after moving each respondent's perception of the economy one category towards worsening perceptions.²² The differences in the two estimated support vectors for each party, averaged over the sample of voters, are our estimates of the economic vote for each party. Standard errors of the predicted changes were simulated using the procedures outlined in King, Tomz, and Wittenberg (2000). Adopting this strategy, we obtain 678 estimates of economic vote magnitudes (one for each party in the 163 surveys). In the case of Britain, for example, this procedure would typically produce estimates (along with their standard errors) of the changes in the support for the Labour Party, for the Conservatives and for the Liberal Democrats when each voter's economic perceptions worsen. In the analysis presented below our dependent variable is the *economic vote of the Chief Executive*, i.e., whichever party held the prime ministry at the time of the survey.

Results

Open Economy, Competence and the Economic Vote

An open economy is expected to reduce the room to maneuver of electorally-dependent officials and hence undermine democratic accountability. David Cameron identifies these in his classic article

²¹ The models and the parameter estimates for each of these elections studies are available at www.raymondduch.com/economicvoting.

²² A change of one category for economic perceptions (in a three category response variable) is the typical change, given the variation in our sample. Perceptions of respondents on the lowest category were not changed.

exploring the impact of exposure to the global economy on the size of government (Cameron 1978). An open economy implies increased trade flows. Trade flows have an impact similar to that of capital mobility on the ability of domestic decision makers to manage aggregate demand and control inflation (Cameron 1978; Lindbeck 1975; 1976). Aggregate demand in economies with significant dependence on export markets is subject to external demand and to prices that are determined by global markets beyond the influence of domestic policy makers. High levels of imports subject economies to inflationary (or deflationary) shocks that again are beyond the control of domestic governmental officials (Cameron 1978). Because trade typically implies specialization resulting from the forces of comparative advantage, the production structure in open economies is often more concentrated than in closed economies (Rodrik 1998; IMF 2005). This can exaggerate the extent to which domestic economies are subject to external shocks beyond the control of incumbent policy makers. Rodrik (1998), for example, establishes that more open economies have significantly more volatile GDP growth.²⁷

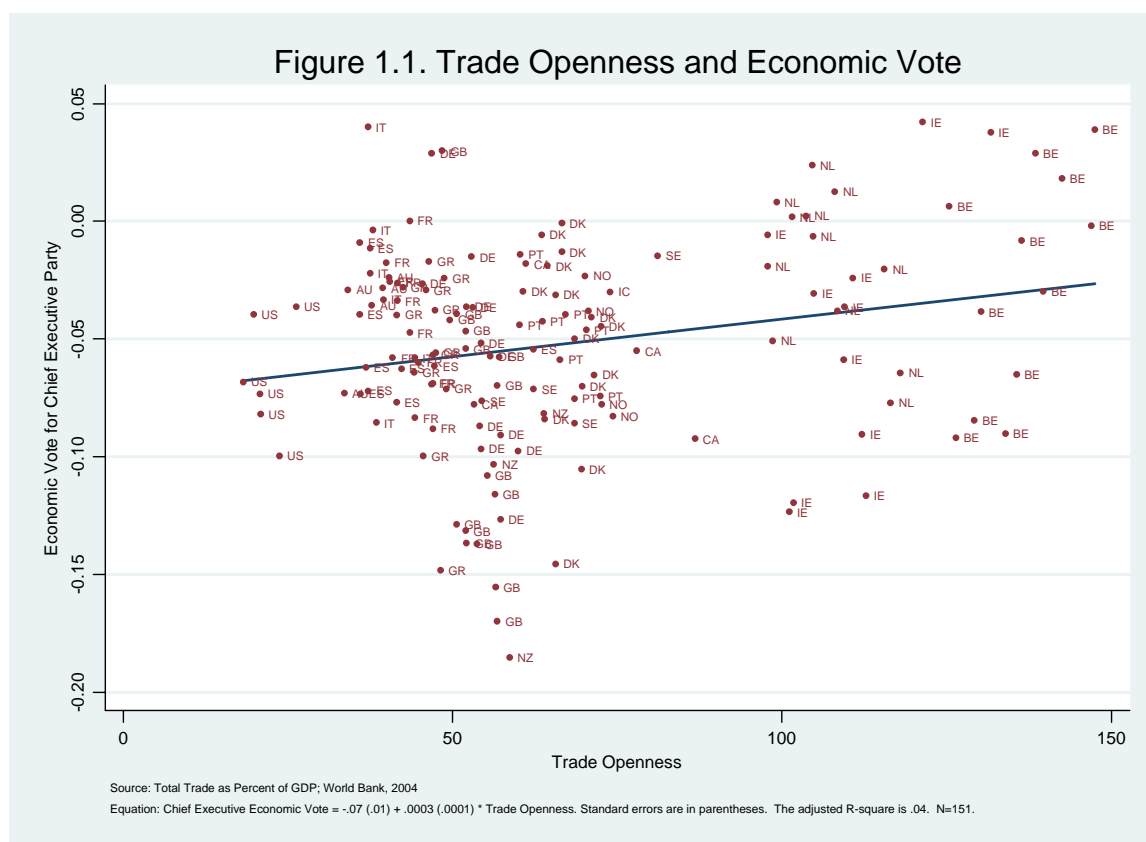
Debates concerning the impact of the open economy on the economic vote (Scheve 2004; Hellwig 2001; Lewis-Beck 1988) are essentially disagreements over the relative magnitudes of the competency and exogenous shock terms in the competency signals generated in open and closed economy contexts. An open, more globally integrated, economy reduces the control that EDDs have on macro-economic policy outcomes and they subject domestic economic outcomes to greater influence by NEDDs, and particularly foreign decision makers. Accordingly, in an open economy the number of NEDDs affecting the macro-economy should be greater than in a closed economy (*i.e.*, $\beta_{cl} < \beta_{op}$) while the number of EDDs should remain constant or possibly be smaller in open economy than in a closed one (*i.e.*, $\alpha_{op} \leq \alpha_{cl}$). Hence, the ratio of NEDDs to EDDs will be smaller in a closed economy,

²⁷ See also evidence to this effect for the developing economies in Gavin and Hausmann (1996).

$$(1.16) \quad \frac{\beta_{op}}{\alpha_{op}} > \frac{\beta_{cl}}{\alpha_{cl}}$$

which suggests a lower overall competency signal in economies that are open to global economic influences and hence lower levels of economic voting.²⁸

To evaluate this argument we employ a measure of Trade Openness from the World Bank which is a ratio of total trade to gross domestic product (GDP) (World Bank 2004).²⁹ Figure 1.1 plots the *economic vote of the Chief Executive* against our measure of Trade Openness. There is no evidence that the economic vote is higher in open economies as some have claimed (Scheve 2004). In fact, more open economies have a smaller economic vote. This supports our argument that the competency signal is weaker in open, as opposed to closed, economies which in turn leads to lower economic voting.



²⁸ And as Ebeid and Rodden (2006) nicely demonstrate this effect can differ at the sub-national level as a function of the structural features of provincial or state economies.

²⁹ Trade is a particularly good measure of the exposure of the domestic economy to global economic influences because a country's trade exposure and balances with other countries are regularly reported in the media and imbalances are frequently the subject of political debate (Burden and Mughan 2003).

The Policy Making Context of Limited versus Extensive Government

As our theory predicts, a more open economy seems to suppress democratic accountability, at least as measured by the economic vote. The literature identifies two rather broadly different responses to these global trends that potentially have important implications for democratic accountability. Cameron (1978) and others (Katzenstein 1985; Rodrik 1998) argue that economies that are particularly vulnerable to global economic shocks historically have adopted institutions designed to moderate the potential social and economic dislocations resulting from exogenous shocks to the domestic economy. This includes higher levels of government spending on social programmes (unemployment benefits, medical insurance, and pension schemes, for example), greater government-industry-labor coordination on economic policy making, and initiatives designed to maintain international competitiveness (government investment in human capital).³⁰ Adserà and Boix (2002) demonstrate the empirical relationship between openness and size of the government sector in democracies although they point out that the expansion of the government sector should be seen as a strategy for building a free-trade coalition. Some see this expansion of the state sector as enhancing democratic governance: a large role for the state increases the ability of citizens to hold decision makers accountable for the economy.

Alternatively, some suggest a liberal convergence in economic policies resulting from the competitive pressures of globalization: Because of global constraints, national governments are forced to liberalize the economy in response to similar initiatives by competing nations, resulting in what some characterize as a race to the bottom phenomenon. These liberal policies typically reduce the scope of government in the economy either through the introduction of more liberal regulatory regimes or privatization of state-owned entities. This “privatization” of domestic economies results in a more limited

³⁰ While it is true that more open economies tend to have an extensive state sector, it is important to point out that this is an historical legacy and that increasing the role of government is not the only policy response to increased exposure to global competition. Garrett (1998) and Boix (1998), for example, describe the very different policy responses to global competition of the Left and Right in the advanced democracies.

role of the state in shaping macro-economic outcomes. The conventional wisdom in this case is that a reduced role of government in managing the macro-economy results in lower democratic accountability.

These arguments raise three interesting puzzles regarding globalization, the government's role in the economy and democratic accountability: What happens to the scope of government in the face of rising globalization? Theoretically how does the scope of government shape the incumbent's competency signal? What empirical relationship is suggested between scope of government and the economic vote?

We begin with the theoretical puzzle: the implications of an extensive, as opposed to limited, state sector for the competency signal. A policy context with an extensive state sector increases the number of domestic institutions and other constellations of political actors actively involved in making economic policies – in short, it produces a more “dense” policy making environment. Take as an example contexts in which government ownership of industry is quite pronounced. The economic decisions that are taken by government-owned firms– such as capital investment decisions, employment policies, and even marketing strategies – are subject to a much broader range of oversight by interested parties (labor unions, competitors and consumers) than would be the case for private entities.

This more dense policy making environment has an interesting, and somewhat counterintuitive, implication for the relationship between the breadth of the state sector and the economic vote. If we focus on the ratio of NEDDs to EDDs, $\left(\frac{\beta}{\alpha}\right)$, as it rises the competency signal declines, as does the economic vote. We expect this ratio to be large in contexts with extensive as opposed to limited state sectors because an extensive state sector implies that a larger number of interested, and non-electorally-dependent, actors affect economically relevant decisions³¹ This follows in part because in a context with an extensive state sector the benefits and costs associated with changing economic priorities are more likely to be borne by greater numbers of interested parties (Becker 1983; Buchanan and Tullock 1962).

³¹ It is important to point out here that our argument has no necessary implications for the quality of economic policy outcomes – our only concern here are unanticipated shocks to the macro-economy.

A dense policy making environment implies a proliferation of actors that affect (or veto) macro-economic policy initiatives, many of whom are not electorally dependent or are not subject to discipline by elected officials – thus can not (in the specific sense of our theory) be considered part of the “government” whose competence the voter is trying to determine. It is not simply the proliferation of veto players (Alesina and Drazen 1991; Tsebelis 2002; Henisz 2004; and Olson 1982) that matters here but rather that an extensive state sector attracts the participation of many non-electorally dependent as opposed to electorally dependent actors in the policy process. This argument has two important implications for the competency model. First, an extensive state sector will increase the number of the NEDDs. Second, while an extensive state sector may also raise the number of EDDs it will do so at a more moderate rate than the increase in NEDDs. As a result we expect the ratio $\left(\frac{\beta}{\alpha}\right)$ will be higher in extensive state, as compared to limited state, contexts.

Contexts with a more extensive state sector are hypothesized to have a smaller competency signal and less economic voting. The breadth of the state sector of course can be measured in a number of different ways. Accordingly, in order to test this argument we identify three distinct dimensions of state influence over the macro-economy – size of the state sector; corporatism; and the complexity, or density, of government regulations – and explore their impact on the competency signal and the economic vote.

Based on the results described above, Table 1.1 derives the implications of changing the levels of each of these three variables for our competency signal. The first column of Table 1.1 develops our case for the notion that big government reduces the competency signal. It rests on two assumptions. The first assumption simply suggests that there are more NEDDs in contexts with big government. As government grows and becomes more complex, the number of NEDDs (interest groups, commissions, elected local government officials, for example) affecting macro-economic policies will increase significantly as will the volume of their decisions. We see this as a rather non-controversial – and easily verifiable – assumption. The second assumption simply recognizes that there may well be more EDDs in big government contexts than in more limited government contexts, but imposes the condition that the ratio

of EDDs in large versus small government contexts is smaller than the ratio of NEDDs in large versus small government contexts. This results in the ratio of NEDDs to EDDs in contexts with small

government being less than it is in contexts with large government $\left(\frac{\beta_s}{\alpha_s} < \frac{\beta_l}{\alpha_l}\right)$. This suggests that the

exogenous shock term in large government contexts will be inflated because voters perceive NEDDs as having a disproportionate impact on shocks to the macro-economy. This of course depresses the overall competency signal, which results in a lower economic vote. Accordingly, economic voting should be negatively correlated with the size of the government sector.

Table 1.1. Extensive versus Limited State

Size of the State Sector	Corporatism	Regulation Density
$\beta_s < \beta_l$ $\frac{\alpha_l}{\alpha_s} < \frac{\beta_l}{\beta_s}$ $\frac{\beta_s}{\alpha_s} < \frac{\beta_l}{\alpha_l}$	$\beta_m < \beta_{cw}$ $\alpha_m > \alpha_{cw}$ $\frac{\beta_m}{\alpha_m} < \frac{\beta_{cw}}{\alpha_{cw}}$	$\beta_{lr} < \beta_{dr}$ $\frac{\alpha_{dr}}{\alpha_{lr}} < \frac{\beta_{dr}}{\beta_{lr}}$ $\frac{\beta_{lr}}{\alpha_{lr}} < \frac{\beta_{dr}}{\alpha_{dr}}$
<i>l</i> : large government sectors <i>s</i> : small government sectors	<i>cw</i> : corporatist context <i>m</i> : market oriented context	<i>dr</i> : dense regulation <i>lr</i> : relatively light regulation

The second dimension of an extensive state sector described in Table 1.1 is corporatism (Lehmbrunch and Schmitter 1982). Corporatism first implies that the overall number of economically important decisions in a corporatist setting (*cw*), compared to a more market oriented setting (*m*), is shifted from EDDs to NEDDs (even though these decisions might be seen as “governmental” in some sense). This has the effect of increasing the number of NEDDs (β_{cw}) and decreasing the number of

EDDs (α_{cw}) in a corporatist context. This implies that the ratio of NEDDs to EDDs will clearly be

higher in a corporatist than a more market oriented setting $\left(\frac{\beta_m}{\alpha_m} < \frac{\beta_{cw}}{\alpha_{cw}}\right)$. And this in turn suggests that

the overall competency signal is higher in contexts with more market-oriented institutions as opposed to those with high degrees of corporatism. Because they have a higher overall competency signal, contexts with a low level of corporatism should have a larger economic vote than contexts with high levels of corporatism.³³

The third dimension of an extensive state sector presented in Table 1.1 is regulation density. As with the case with size of government, we assume that there are more NEDDs in contexts with dense regulations. As regulatory oversight of the private sector grows and becomes more complex, the number of NEDDs affecting macro-economic policies will increase significantly. This results in a lower ratio of

NEDDs to EDDs in contexts with low as opposed to dense regulation $\left(\frac{\beta_{lr}}{\alpha_{lr}} < \frac{\beta_{dr}}{\alpha_{dr}}\right)$.

Our argument is that a more extensive state sector results in a higher ratio of NEDDs to EDDs which in turn depresses the economic vote. We have identified three dimensions of government activism that we believe nicely distinguish an extensive versus a limited state sector. Each of these dimensions is hypothesized to affect the magnitude of the economic vote: 1) a larger government sector will depress the economic vote; 2) the extent of corporatism is negatively correlated with the economic vote; 3) regulatory density is negatively correlated with the economic vote. We now empirically test these three hypothesized relationships.

We briefly describe how these three variables are measured. The size of the state sector is simply general government total outlays as a percentage of Gross Domestic Product (OECD

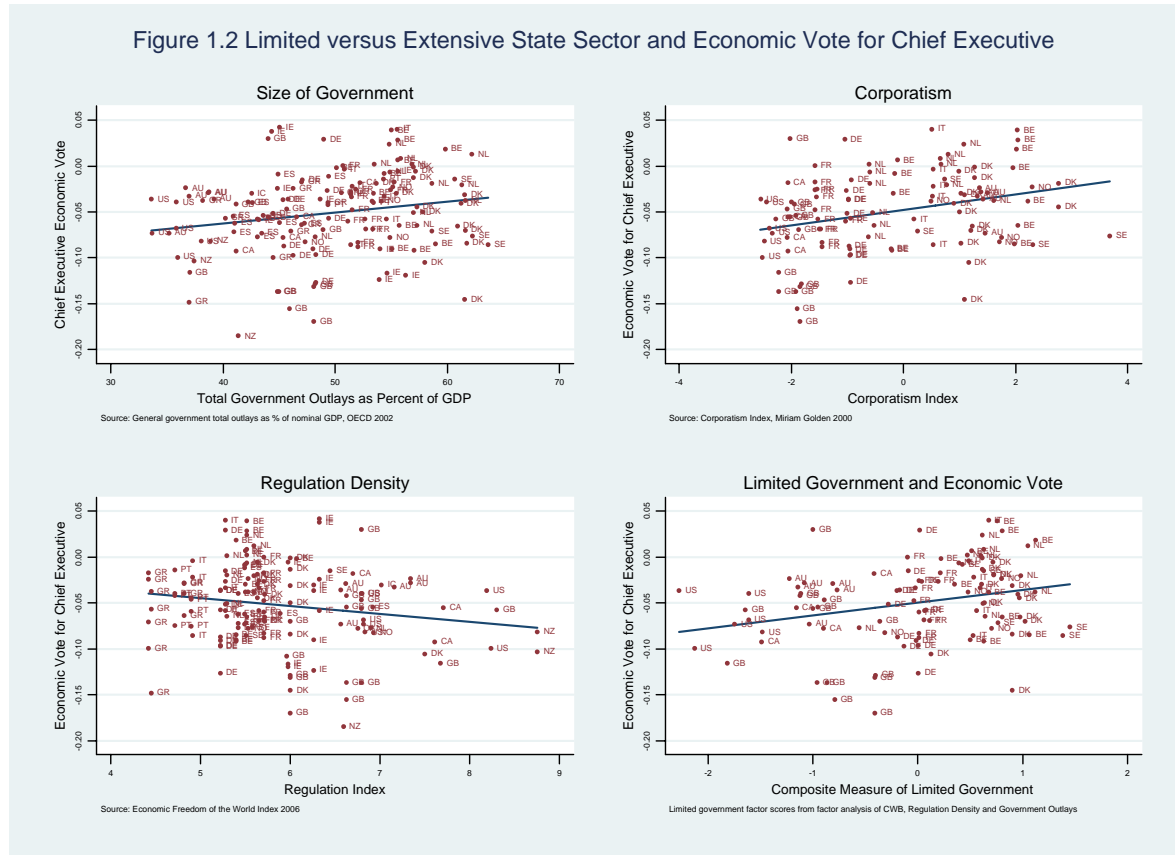
³³ Some readers might find it odd that we suggest that there is more electorally accountable economic decision makers in unregulated versus corporatist labor markets. Any confusion can be resolved by drawing a careful distinction between governmental and electoral accountability. In a free market for labor, the government makes some decisions and is electorally accountable for them (say investment in education). But in a corporatist system these decisions, and many others, become party to the overall societal bargain that is as much the responsibility of labor unions and business as it is of the politicians.

2002). Corporatism is measured by an index developed by Golden (2000). The index consists of the factors scores from a principal component factor analysis of four measures that Golden (2000) demonstrates empirically as representing an underlying corporatist dimension: government involvement in private-sector wage bargaining (a fifteen-point scale with 1 indicating no government involvement at all and a 15 indicating government imposed wage freezes and prohibition of supplementary bargaining); bargaining level (a four-point scale with 1 indicating plant-level bargaining and 4 indicating a centralized bargaining level), confederal involvement (an eleven-point scale measuring the extent to which private-sector wage negotiations are determined by bargaining amongst the confederation of unions – a low score indicating no confederation involvement at all); and adjusted union density (union membership with unemployed, self-employed and retired members excluded). Finally regulatory density is measured by a composite index of the extent of government regulation of credit markets, labor markets and businesses – the index ranges from 0 to 10 with 0 indicating a maximum of government regulatory oversight (Gwartney and Lawson 2006).

Figure 1.2 plots the *economic vote of the Chief Executive* against each of these three variables. Each of the three hypothesized relationships is supported by the bivariate plots. The upper left plot is the economic vote against the size of the government sector. Economic voting is higher in contexts with more a smaller government sector (remember that a large negative value indicates high economic voting). Note that countries with relatively small government sectors such as the U.S., the U.K., Greece, Canada, and Spain tend to have much higher levels of economic voting. Conversely, the big government states such as Denmark, the Netherlands, Sweden and Belgium have lower economic voting. Big government implies a lower overall competency signal because the ratio of NEDDs to EDDs is greater than in contexts with a smaller government sector which in turn results in lower levels of economic voting. The upper right plot is the economic vote against our index of corporatism. Clearly high levels of corporatism tend to reduce economic voting. The lower left plot is of the economic vote against regulation density. Note that a low score on the regulation density variable suggests a highly dense regulatory environment.

Accordingly the plot in Figure 1.2 suggests that the economic vote is suppressed in contexts with high levels of regulation: hence countries with a relatively low degree of government regulatory oversight tend to have high levels of economic voting. These results reinforce our contention that the competency signal is higher in contexts where the state sector is more limited, which results in more economic voting.

Figure 1.2 Limited versus Extensive State Sector and Economic Vote for Chief Executive



Limited State Sector and the Economic Vote

³⁸ The factor loadings of the three measures are as follows: Regulation Density is -.67; Corporatism is .59; and Government Size is .80. The Alpha reliability statistic for these three items is 0.63, again confirming that it is reasonable to treat these items as measuring a similar underlying concept

A high level of involvement of the state in the economy is hypothesized to increase the impact of NEDDs on policy outcomes which reduces the overall competency signal and lowers the economic vote. We have now explored three dimensions of state involvement in the economy. The argument is similar in each case: contexts in which EDDs have more authority to shape economic outcomes relative to NEDDs (indicated by smaller government, less corporatism, and, less government regulation) should increase the size of the competency signal and increase economic voting. The empirical results for simple bivariate plots are surprisingly consistent and supportive. These results support the general contention that overall competency signals, and hence economic voting, are higher in contexts with a limited state sector.

We can think of our three measures of the policy context as dimensions of an underlying structural feature of political economies – a limited versus extensive state sector. Factor analysis of these three items indicates that they are tapping this underlying feature of a limited state sector. The factor analysis results in a single dimension with each item having a reasonably high loading.³⁸

The lower right plot in Figure 1.2 examines the relationship between the *economic vote of the Chief Executive* party and our limited state sector factor scores. The relationship is quite strong and in the expected direction: a more limited state sector results in higher levels of economic voting. There is no disputing the fact that the economic vote is higher in contexts with a more limited state sector. Moreover, this clearly challenges conventional notions that big government, in itself, signals incumbent responsibility for economic outcomes and hence should raise levels of economic voting. Rather, the signal that conditions the economic vote is the relative magnitude of the variance of the competency shock to the variance of exogenous shocks to the macro-economy. As the number of EDDs relative to NEDDs in a national context rises, the overall competency signal gets larger. It turns out that this ratio is larger in contexts with a limited state and hence, some might say paradoxically, the overall competency signal is stronger in contexts with a limited state sector, as is the economic vote.

The visual plots of the relationship of the economic vote with the composite measure of limited government and also with each of its three dimensions constitute strong support for our theoretical argument. Table 1.2 reports the estimated bivariate regression equations corresponding to the graphs in

Figure 1.2. Again, they reinforce our earlier conclusions that the competency signal is higher in contexts with limited government which in turn results in higher levels of economic voting.³⁹

Table 1.2. Regression Model of Chief Executive Vote

	Model 1	Model 2	Model 3	Model 4
Government Outlays	.001 (.0006)			
Corporatism		.008 (.003)		
Regulatory Density			-.009 (.004)	
Limited Government Index				.014 (.004)
Constant	-.11 (.03)	-.05 (.01)	-.001 (.02)	-.05 (.004)
R ²	.04	.04	.03	.08
N	146	107	152	107

Numbers in cells are coefficients and standard errors. All models were estimated using OLS regression with standard errors robust to heteroscedasticity and non-independence between observations of the same party in different surveys.

An Open Economy and an Expansive State Sector Depress the Economic Vote

Globalization and an expansive state sector represent two of the most prominent changes experienced by developed democracies in the post-WWI period. There is a debate as to whether increased globalization has resulted in 1) policy convergence around liberal economic policies, designed to enhance competitiveness, or 2) the expansion of the scope of government, seen as a way to cushion the social dislocation resulting from global competition. Given our empirical results this controversy has

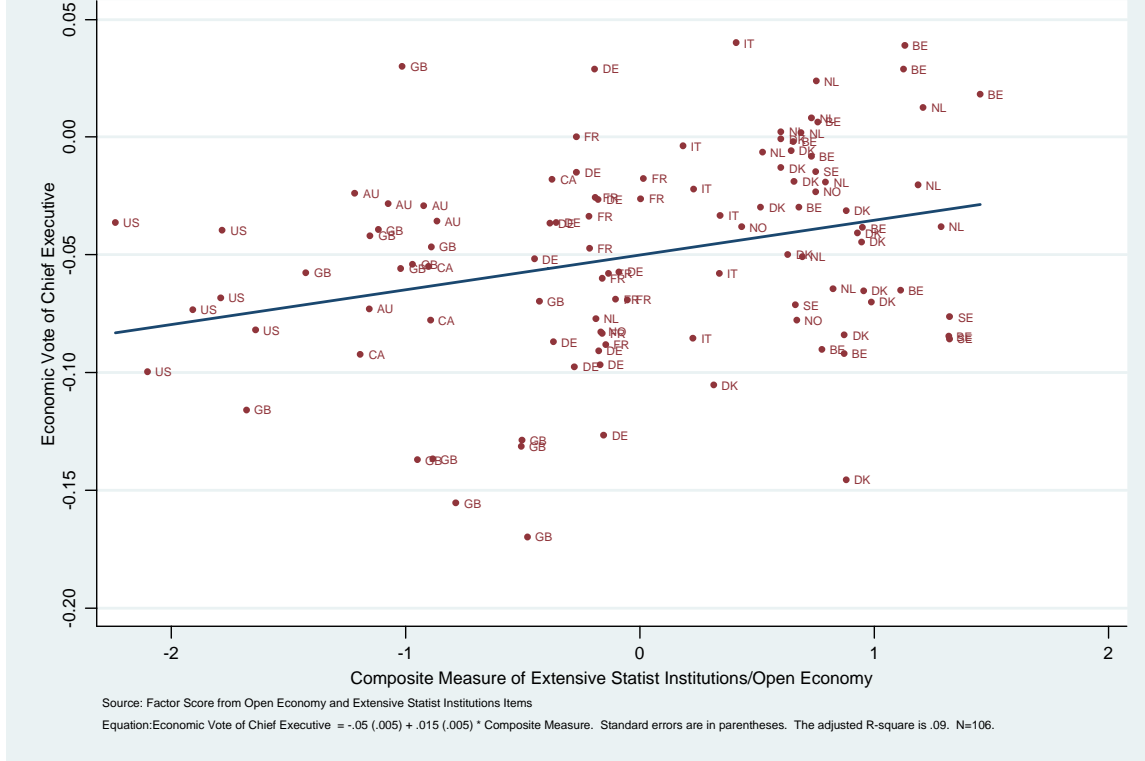
³⁹ A plausible alternative argument here is that our measure of scope or size of government is actually capturing the extent to which the state has adopted social transfer policies designed to cushion the impact of economic shocks and that this safety-net effect is actually moderating the magnitude of the economic vote rather than the impact of the ratio of NEDDs to EDDs. This is an argument made by Pacek and Radcliff (1995). We can gain some insight into whether this is the case by identifying what proportion of government expenditures represent social benefits and social transfers. If much of the relationship between our measure of the scope of government and the economic vote is the result of a safety-net effect then including this as a control variable in the simple regression in Model 4 of Table 1.2 would significantly attenuate the relationship. In fact, we include this variable in the equation, the relationship between the limited state sector variable and the economic vote is slightly stronger. But interestingly though, this percent of government expenditures accounted for by social benefits and social transfers has a positive and significant coefficients confirming the earlier findings of Pacek and Radcliff (1995). The regression result is as follows: Chief Executive Economic Vote = $-.11 (.03) + .02 (.0006) * \text{Limited State Sector} + .16 (.07) * \text{Social Benefits/Government Expenditures}$. Standard errors are in parentheses. The adjusted R-square is .12. N=108. Another test of this alternative argument is to substitute the measure of government expenditures as a percent of GDP employed in Model 1 with a measure that includes only expenditures not associated with social benefits or transfers. This results in a weaker relationship with the economic vote but one that is still positive as hypothesized although slightly below conventional levels of significance – the t-statistic is 1.5.

implications for overall levels of economic voting in developed democracies. The notion that openness to the global economy and the size of the government sector are positively correlated implies that these two variables reinforce each other's impact on the economic vote. Alternatively, if these two variables are negatively correlated – resulting from the fact that increased globalization engenders a liberal economic policy response – then their contextual effects on the economic vote would cancel out. With globalization likely to continue increasing this has interesting implications for economic voting and, by extension, democratic accountability. The former scenario – globalization and government size are correlated – implies declining levels of economic voting while the later scenario – a negative correlation – suggests stable levels of economic voting in the face of rising globalization.

We now explore these two possible empirical scenarios. The first scenario suggests that democracies may fall along a single dimension characterized by open economies with an expansive state sector at one extreme and economies less open to global trade and with a limited state sector, at the other. A factor analysis of all four variables described above (the open economy item and the three limited government items) confirms that this is the case – we obtain a single factor dimension with each item exhibiting a high loading.⁴⁰ Figure 1.3 shows that this composite measure of scope of the state sector and trade openness is significantly correlated with the *economic vote of the Chief Executive*. Hence, countries with exposure to global trade will likely also have an expansive state sector; and both of these characteristics will have negative affects on the economic vote. It is not unreasonable then to distinguish national contexts in terms of this dimension: contexts with an open economy and an expansive state sector will have relatively low levels of economic voting while contexts with a closed economy and a limited state sector should have a high economic vote. If globalization continues to increase, and its relationship with size of government persists, this suggests declining levels of economic voting in the future.

⁴⁰ The item factor loadings are as follows: trade openness is .60; government outlays is .83; corporatism is .65; and regulation density is -.62.

Figure 1.3. Extensive Statist Institutions/Open Economy and Economic Vote



Pooled Multi-level Model Results

This is an important result because it supports the underlying competency model that we described earlier; it confirms rather counterintuitive predictions regarding the impact of globalization and scope of the government sector on the economic vote; and it suggests future trends in economic voting for the developed democracies. Accordingly, we assess the robustness of the finding by estimating a pooled multi-level model and by introducing controls for the concentration of administrative responsibility within each country. To implement this we combined individual level data from our 163 electoral surveys (into a pooled or “stacked” data set) to estimate a single logistic model of the individual level vote for or against the Chief Executive party. This vote was modeled as a function of economic perceptions and a much reduced set of control variables that were available in most of our surveys. The requirement that we have a set of common control variables eliminated 17 studies, so that 146 studies remain in the pooled data set. We estimate a sparse individual level model: it includes the de-meaned

left-right self-placement of the voter (coded so higher numbers indicate a more right leaning voter) and its interaction with a dummy variable indicating whether the prime minister's party is a leftist party.⁴¹ We expect then that the coefficient on left-right self-placement will be positive and its interaction with the ideology of the prime minister to be negative. The variable measuring retrospective perceptions of the national economy has been broken into three dummy variables: *worse*, which equals one if the voter thought the economy had gotten worse in the last year; *better*, which equals one if she thought the economy had gotten better; and *same*, which equals one if she thought the economy had stayed the same. Two of these, *better* and *worse*, were included in the individual level model. We expect these two dummy variables to have opposite signs with *worse* being negative and *better* being positive. The pooled model is thus limited to one main control variable – the ideology of the voter relative to that of the prime minister. This sparseness in specification is the cost one pays for pooling data from disparate surveys.⁴²

The multi-level interaction results reported in Table 1.2 strongly confirm the results of the two-stage analyses presented above.⁴³ First the results in Model 1 are for the core economic voting model and they establish in fact that there is a significant economic vote in our sample of 146 voter preference studies. The coefficient on the *economy got better* dummy variable is positive and statistically significant; and the *economy got worse* variable has a statistically significant negative coefficient.

Model 1.2 adds two interaction terms to the core equation: the *limited state sector* variable interacted with each of the *economic perception* variables. The coefficients on these interaction terms are exactly as we would expect: In the case of the *limited state sector* variable interacted with the *economy got better* variable, the coefficient is negative and significant suggesting that the impact of this economic perception variable is lower in contexts with more extensive government involvement in the economy

⁴¹ In order to include as many studies as possible, we had to combine some left-right self-placement questions that gave the respondent different response options. This was done by normalizing the various scales and then using the normalized scales.

⁴² For a detailed comparison of the two-stage estimation strategy and the conventional multi-level interaction method using these data, see Duch and Stevenson (2005).

⁴³ 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.

(recall that the *limited state sector index* has a high value for an expansive state sector). The *limited state sector* variable interacted with the *economy got worse* variable has a positive coefficient suggesting that the impact of negative perceptions is moderated in contexts with a large government involvement in the economy. There is more economic voting in contexts with a limited state sector.

Table 1.2 Multi-level Logistic Regression Model of Incumbent Vote

	Model 1	Model 2	Model 3	Model 4	Model 5
Left-Right Self Placement (dev. from mean)	0.48 (.01)	0.48 (0.01)	0.49 (0.01)	0.48 (0.01)	0.48 (0.01)
Left-Right Self Placement X Leftist PM (Leftist PM is an indicator variable)	-.74 (.01)	-0.87 (0.01)	-0.75 (0.01)	-0.88 (0.01)	-0.88 (0.01)
Voter Perceives Economy got Better (indicator variable)	.43 (.03)	0.46 (0.03)	0.80 (0.07)	0.45 (0.03)	0.45 (0.03)
Voter Perceives Economy got Worse (Indicator variable)	-.55 (.03)	-0.57 (0.04)	-0.86 (0.07)	-0.56 (0.04)	-0.59 (0.03)
Limited State Sector Index		-0.02 (0.04)			
Voter Perceives Economy got Better X Limited State Sector Index		-0.23 (0.04)			
Voter Perceives Economy got Worse X Limited State Sector Index		0.22 (0.05)			
Trade Openness Ratio			-0.002 (.001)		
Voter Perceives Economy got Better X Trade Openness Ratio			-0.005 (0.001)		
Voter Perceives Economy got Worse X Trade Openness Ratio			0.004 (0.001)		
Composite Measure				-0.03 (0.04)	0.07 (0.04)
Voter Perceives Economy got Better X Composite Measure				-0.23 (0.04)	-0.22 (0.05)
Voter Perceives Economy got Worse X Composite Measure				0.20 (0.04)	0.09 (0.05)
Concentration of Executive Power					.89 (.20)
Voter Perceives Economy got Better X Concentration of Executive Power					.01 (.22)
Voter Perceives Economy got Worse X Concentration of Executive Power					-.78 (.21)
Size of chief executive's Party	5.22 (0.22)	6.15 (0.28)	5.24 (0.23)	6.12 (0.28)	5.49 (0.32)
Constant	-2.39 (.07)	-2.70 (0.08)	-2.28 (0.10)	-2.70 (0.08)	-2.49 (0.09)
$\sigma^2_{\omega 1}$	0.09	0.06	0.09	0.06	0.05
$\sigma^2_{\omega 2}$	0.08	0.06	0.06	0.06	0.06
$\sigma^2_{\omega 3}$	0.10	0.08	0.08	0.07	0.06
$\sigma_{\omega 1, \omega 2}$	-0.03	-0.02	-0.03	-0.03	-0.02
$\sigma_{\omega 1, \omega 3}$	0.04	-0.02	-0.03	-0.02	-0.01
$\sigma_{\omega 2, \omega 3}$	-0.05	-0.04	-0.03	-0.04	-0.03
N	201,876	201,876	201,876	201,876	201,876

Standard Errors are listed below the logit coefficients. All coefficients are statistically significant at $p < .05$ except the shaded cells.

Model 3 examines the hypothesized impact of an open economy on economic voting. Again, these results reinforce our earlier conclusions: more open economies have less economic voting. *Trade openness* interacted with the *economy got better* variable has a negative coefficient suggesting that the impact of negative economic perceptions on vote choice is lower in contexts with higher exposure to global economic influences. And the positive coefficient on the interaction with the *economy got worse* variable suggests that the impact of negative economic perceptions on the vote is lower in open economy contexts. This confirms that there is more economic voting in contexts less exposed to global influences.

The results for the *trade openness* and *limited state sector* variables in Models 2 and 3 are consistent with each of the individual bi-variate analyses presented earlier. In the previous section we also provided evidence that countries typically fall along a single continuum characterized by an open economy with an expansive state sector on one extreme and a closed economy with limited government on the other. Accordingly we created a *composite measure* of state sector expansiveness and trade openness. Model 4 in Table 1.2 confirms that this composite measure has the hypothesized effect on the magnitude of the economic vote clearly suggested by Figure 1.4: The coefficient on this *composite variable* interacted with negative retrospective evaluations is positive and significant while the coefficient on the interaction of this variable and positive evaluations is negative and significant. This is further strong confirmation that countries with high scores on this *composite measure* – have high exposure to global trade and an expansive state sector – will have less economic voting.

Elsewhere (Duch and Stevenson 2007) we argue that the competency signal that conditions the magnitude of the economic vote is not simply a function of the ratio of electorally to non-electorally dependent decision makers. We also demonstrate that the competency signal is affected by the concentration of executive responsibility. Hence contexts in which executive responsibility is highly concentrated in the hands of a single party – single party majority governments would be the extreme case – would have a larger competency signal than those contexts in which executive responsibility is diffused amongst a number of parties in a multi-party governing coalition. And others, such as Powell and Whitten (1993), have made similar arguments that are typically characterized in terms of “clarity of

responsibility”. One might reasonably conclude here that we are confounding, in these analyses, the impact of electorally dependent decision makers on the competency signal with the impact of the concentration of executive responsibility on this signal. And given that many of the political contexts with an extensive state sector tend to be those with multi-party governing coalitions (Persson and Tabellini 2003) it may be difficult to tease out of these data the independent effect of the two variables.

This ultimate robustness check on our findings is presented in Model 5 in Table 1.2 where we include a measure of the concentration of executive responsibility that we have developed and described in Duch and Stevenson (2007). Our measure of the distribution of policymaking responsibility takes into account both the coalition status of the cabinet and the extent to which power within coalitions is shared equally among cabinet partners. Specifically, given n parties in an election, we can define a vector δ as the n -vector of equal shares of policymaking responsibility. δ has n equal elements that sums to one. Since this gives equal policymaking responsibility to all parties in the election, our hypothesis suggests that this vector of equal shares is the distribution of policymaking responsibility that should lead to the least amount of economic voting overall. Now, given some real world n -vector of shares of policymaking responsibility (call this vector λ), we can use the vector distance between λ and δ as a measure of the degree to which responsibility is concentrated in the system.⁴⁴ To construct this measure for each of our 163 cases, we use each party’s share of cabinet portfolios for λ , construct a δ of appropriate length, and then calculate the resulting vector distance between the two.

If the elements of λ are equal across parties, the vector distance we calculate will be zero, no matter how many parties are in the election. However, the upper bound of this distance – which 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

⁴⁴ The vector distance is just the square root of the summed squared differences in the elements of the two vectors.

will be. Accordingly, we normalize this distance by dividing by the upper bound. We call this measure *concentration of authority* and it can take values between zero (equality) and one (complete concentration of authority in one party).

According to our theory – and consistent with other claims regarding the clarity of responsibility – this measure should be positive related to the magnitude of the economic vote. Hence its interaction with the positive economic evaluation variable should have a positive coefficient and its interaction with the negative evaluation variable should have a negative coefficient. This is the result reported in Model 5 although the positive interaction coefficient is not statistically significant. More important is the fact that the coefficients on the *composite measure* interaction terms retain their significance and are in the hypothesized direction.

Clearly the pooled multi-level modeling results reported in Table 1.2 confirm the conclusions we drew from the two-stage analyses presented earlier. Economic voting is depressed in contexts with a more expansive state sector and an open economy; moreover these results are robust to controls for the concentration of executive responsibility which constitutes the most widely employed alternative explanation for the magnitude of the economic vote.

Summary

We begin our effort to understand the implications of globalization for democratic accountability with a rigorous theory of how the political and economic context shapes individual vote choice. First, we focus on one fairly narrow aspect of democratic accountability – the importance of perceived economic performance in the voting decision. Our contextual model of retrospective rational economic voting spells out how context conditions the economic vote. Voters in our competency model condition their economic vote on signals regarding the competency of incumbents. The model suggests that as the ratio of decisions affecting macro-economic outcomes by non-electorally-dependent decision makers (β) to those by electorally-dependent decision makers (α) declines, the overall competency signal will rise and

vice-a-versa. This result has important implications for the debate regarding globalization and democratic governance because it provides a rigorous explanation for how globalization affects vote choice.

The globalization literature has focused on two important structural changes facing countries exposed to international economic influences: trade openness and changes in the scope of government designed to respond to international economic pressures. Accordingly we have explored the implications of these two dimensions of globalization for democratic accountability, measured here by economic voting. Our theoretical results suggest that higher levels of trade openness imply more “non-electorally dependent decision makers” affecting economic outcomes. As a result, the competency signal of incumbents will be lower which in turn should reduce economic voting. Our empirical results support this prediction. Consistent with the arguments made by Cameron (1978) and Garrett (1998) we find that those states with open economies tend to respond to the influences of globalization by expanding the scope of government involvement in the economy.

Secondly, the competency theory suggests that as the ratio of “non-electorally dependent decision makers” to “electorally dependent decision makers” increases with the scope of government involvement in the economy thereby depressing the economic vote. More concretely, increasing the size of the government sector, embracing corporatist institutions and increasing the extent of government regulation of the private sector reduce the magnitude of the incumbent’s competency signal leading voters to discount the importance of the economy in their voting decision. Again, the empirical findings are strongly supportive. This finding challenges those who argue that expansion of the state sector compensates for the erosion of democratic accountability resulting from an open-economy. In fact, our results suggest the opposite; that the expanded scope of the state sector reinforces the erosion of democratic accountability that results from having an economy open to the forces of globalization.

Our results provide at least some tentative insights into the implications of globalization for democratic governance. The net implications of globalization for democratic accountability depend on whether greater exposure to the international economy occurs in a context with an extensive as opposed to more limited state sector. A larger government sector may in fact moderate the negative social

consequences of globalization but our competency theory suggests that broadening the scope of government's involvement in the economy reinforces the negative consequences of trade openness on democratic accountability. More specifically, increasing the size of the government sector, embracing corporatist institutions and increasing government regulation reduce the magnitude of the incumbent's competency signal leading voters to discount the importance of the economy in their voting decision. Paradoxically, countries responding to increased exposure to global economic forces by privatizing their economies and adopting liberal economic policies are more likely to counteract the erosion of democratic accountability associated with globalization.

Accordingly the debate as to whether increased globalization has resulted in policy convergence around liberal economic policies rather than the expansion of the scope of government has important consequences for economic voting in particular and democratic accountability more broadly. We find that openness to the global economy and the size of the government sector are positively correlated. It is not the case that countries with high levels of trade openness have privatized their economies and adopted liberal economic policies. Our analyses suggest that democracies fall along a single dimension characterized by open economies with an expansive state sector at one extreme and at the other extreme democracies with less exposure to global trade and with a limited state sector. These two trends – a more open economy and an expansive state sector – seem to reinforce each other's negative impact on democratic accountability. This of course is a static snapshot of current global realities for advanced democracies of the world. But if this current correlation between the scope of government and exposure to global economic influences persists, then as globalization increases we can expect declining levels of economic voting and a growing crisis of democratic accountability.

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