

## Competency Signals in a Crowded Political Context

Raymond M. Duch  
Nuffield College  
University of Oxford  
Oxford OX1 1NF  
44 (0)1 865 278 515  
[raymond.duch@nuffield.ox.ac.uk](mailto:raymond.duch@nuffield.ox.ac.uk)

and

Randy Stevenson  
Department of Political Science  
Rice University  
P.O. Box 1892  
Houston, Texas 77251-1892  
e-mail: [stevenso@ruf.rice.edu](mailto:stevenso@ruf.rice.edu)

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## Abstract

Two broad globalization trends are widely seen as affecting democratic governance in the advanced democracies: open-economies and liberalization (or privatization). Both trends are seen by some as reducing the role of elected officials in shaping domestic economic outcomes. The implication is that the ability of voters to hold decision makers accountable for economic outcomes is undermined. In this essay we explain how these two dimensions of globalization condition the economic vote. We show how both of these trends affect the voter's assessment of the incumbent's "competency" for macro-economic outcomes.

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 the macro-economy to establish the extent to which economic outcomes are the result of incumbent competency as opposed to exogenous factors. We argue that the extent to which a country's economy is open to international trade and the degree to which the state sector is limited (as opposed to expansive in scope) has important implications for the quality of this competency signal.

Globalization is hypothesized to decrease the incumbent's competency signal and hence depress economic voting. On the other hand, a more limited state sector (our measure of the extent of privatization or liberalization in a country) is hypothesized to increase the incumbent's competency signal which tends to increase the economic vote. We provide evidence to this effect based on 163 national surveys conducted in 19 countries over a 22 year period (1979-2001).

First, we describe our competency theory of the economic vote, a theory explicitly designed to explain, in a general fashion, 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). This is followed by a brief description of the data and measurements. With hypotheses and data in hand we then proceed to empirical tests of the propositions.

## Introduction

Two broad globalization trends are widely seen as affecting democratic governance in the advanced democracies: open-economies and liberalization (or privatization). Both trends are seen by some as reducing the role of elected officials in shaping domestic economic outcomes. The implication is that the ability of voters to hold decision makers accountable for economic outcomes is undermined. Some conclude from this that economic voting, widely recognized as an important mechanism of democratic accountability, should decline as a result (Alvarez, Nagler, and Willette 2000; Hellwig 2006). In this essay we contribute to this debate by explaining how these two dimensions of globalization condition the economic vote. We show how both of these trends affect the voter's assessment of the incumbent's "competency" for macro-economic outcomes. Globalization is hypothesized to decrease the incumbent's competency signal and hence depress economic voting. On the other hand, a more limited state sector (our measure of the extent of privatization or liberalization in a country) is hypothesized to increase the incumbent's competency signal which tends to increase the economic vote. We provide evidence to this effect based on 163 national surveys conducted in 19 countries over a 22 year period (1979-2001).

The nature of the international economy has changed remarkable over the past three decades. Global trade as a percent of GDP has increased from 20 percent in the early 1970s to 55 percent in 2003 (IMF 2005).<sup>1</sup> But this varies rather dramatically by country. For example, the IMF trade intensity score for the EU is about .88, for the U.S. 1.05 and for Canada 2.93 (IMF 2005).<sup>2</sup> Amongst the industrialized nations between 1990 and 2003, the magnitude of foreign assets and liabilities has tripled to a remarkable 200 percent of GDP (IMF 2005). Accompanying this increase in open markets and global trade has been a marked trend toward liberalization of domestic economies – reducing the extent of government ownership (Brune et al forthcoming), increasing central bank independence and promoting more liberal regulatory regimes.

Not surprisingly, this has created an entire "industry" of scholars devoted to understanding the economic and political implications of this development.<sup>3</sup> 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

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<sup>1</sup> Global trade here is defined as the sum of exports and imports of goods and services.

<sup>2</sup> Trade intensity is defined as the ratio of manufacturing trade to total manufacturing GDP (IMF 2005).

<sup>3</sup> Rodrik (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.

government policy makers? The literature has two distinct perspectives on this question. Some have argued that globalization has undermined the effectiveness of democratic accountability because domestic governments have declining control over economic outcomes and hence voters cannot hold decision makers responsible for domestic 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.

Regardless of whether in fact there are objective constraints, public discourse appears to recognize the growing importance of global forces in shaping domestic economic outcomes. We believe that the principal change in perceptions concerns the range of actors – political and economic – that the average citizen recognizes as having an impact on macro-economic outcomes. Voters in Germany, for example, are increasingly aware that international actors such as global bond markets, the European Commission, the World Trade Organization or the U.S. Federal Reserve play an increasingly important role in shaping domestic macro-economic outcomes.

And there is some 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 the results of a 2001 Eurobarometer study that large majorities of citizens in each of the EU countries agree with the notion that “globalization cannot be controlled by domestic governments”. Based on this, and other findings, 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).” Ultimately of course these voter perceptions are what matter when we are discussing democratic governance – the link between vote choice and preferences is the underlying mechanism of democratic accountability. And if the perceived impact of elected officials on economic outcomes is declining in favor of global forces, instrumentally rational voters should discount the importance of economic evaluations in their vote choice?

These 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.

This rather broad claim regarding globalization and democratic governance suggests the following relationship between economic outcomes and individual vote choice: First, perceptions of domestic economic outcomes play a role in the voting decision. Second, we can somehow demonstrate that the importance of the economy in vote choice varies, either over time or across different economic or political contexts. If there is no variation – either over time or cross-nationally – then there is nothing to explain. Third, the importance of these domestic economic outcomes for the vote decision (the economic vote) varies systematically with globalization.

Establishing that this relationship holds presumes a theory and some data. Elsewhere we have proposed a contextual theory of the economic vote that provides the theoretical foundation for identifying contextual variables 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 the macro-economy 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 limited (as opposed to expansive in scope) has important implications for the quality of this competency signal. In order to empirically assess these arguments we draw upon data from 163 individual-level voter preference surveys from 19 countries over a twenty-year time period.

It should be noted that our theory and empirical tests do not address perceptions of economic policy – whether people are happy with surrendering national control over their economy or whether their preferences for particularly economic policies (such as redistribution, tax rates, or welfare expenditures) are thwarted by globalization. This paper addresses a very specific hypothesis about the impact of globalization on democratic accountability: Do people discount the importance of perceived economic performance in their vote utility function when globalization is high?

The paper proceeds as follows. First, we describe our competency theory of the economic vote, a theory explicitly designed to explain, in a general fashion, 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). This is followed by a brief description of the data and measurements (a complete description is at [www.raymondduch.com/economicvoting](http://www.raymondduch.com/economicvoting)). With hypotheses and data in hand we then proceed to empirical tests of the propositions.

## The Competency Model

Arguments regarding globalization and democratic governance suggest that voters are attentive to whether economic outcomes are the result of actions by their elected decision makers as opposed to initiatives by economic and political actors who they cannot hold politically accountable. These arguments presume that voters are able to determine whether a shock to the domestic economy results from actions taken by elected decision makers (a tax cut) rather than by decisions unrelated to national government officials (trade barriers imposed by a foreign entity). This suggests a more informed voter than one might observe in a typical economic voting model. In this case the voter is using information about context (global influences on the domestic economy) to condition her economic vote. 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. Moreover, we have much of the theoretical foundations in Alesina and Rosenthal's (1995) model of rational retrospective voting. In this section we briefly present a competency model of the economic vote that builds on the Alesina and Rosenthal contribution.

We begin, then, by examining Alesina and Rosenthal's model of rational retrospective voting as it was originally conceived and then ask how we must generalize it to make it applicable to other political and economic contexts.<sup>4</sup> 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:

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

Where  $y_{it}$  is the rate of economic growth in period  $t$ , under incumbent party  $i$ ;  $\pi_{it}$  is the inflation rate, the level of which is chosen directly by the incumbent party;  $\pi_{it}^e$  is the rate of inflation that voter's expect the incumbent to choose,  $\bar{y}$  is the natural rate of growth, and  $\eta_{it}$  is a random shock to the economy.<sup>5</sup>

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<sup>4</sup> We generally follow the notational conventions used in Alesina and Roubini (1997).

<sup>5</sup> We could alternatively write the model in terms of unemployment instead of growth and could weight the impact of unexpected inflation on growth, but these complications would not change the relevant implications of the model. Similarly, because voters will always be able to anticipate the policy choices of

The economic shock consists of two parts as follows:

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

One part,  $\varepsilon_{it}$ , is simply an increment to growth that depends on the identity of the incumbent but not on her economic policy (which is captured in  $\pi_{it}$ ). This increment to economic performance is meant to capture the economic impact of the incumbent administration's managerial competence. More specifically, this shock includes any unobserved economic impact of the behavior of the incumbent administration that is not constant over time or administration.<sup>6</sup> We refer to this impact as a "competency shock".

The other part of the total shock to economic growth,  $\xi_t$ , 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 on it. Of course, to be useful in forecasting the future economy, the level of competence inferred from observed economic performance must provide some guide to the incumbent's future level of competence. Consequently, we assume that competence is persistent over time in the following way:<sup>7</sup>

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

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 an identical distribution, with mean zero and finite variance  $\sigma_{\mu}^2$ . Likewise, we assume that the non-political

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politicians in this model, policy will have no real effect on the economy, and politicians can therefore never use policy to help themselves get elected. Consequently, we could present the model in reduced form, eliminating politicians as strategic actors and simply presenting the voter with the resulting decision-theoretic choice problem. We retain the fuller representation of the model because it makes the reduced-form nature of our analysis readily apparent and should facilitate comparison with other models with different assumptions.

<sup>6</sup> If voters observe the impact of this behavior it cannot be part of the shock but is part of the observed policy represented by  $\pi_{it}$ . Likewise, any unobserved impact of behavior on growth that is constant is subsumed in the natural rate of economic growth.

<sup>7</sup> One can also discount the impact of past competence as long as it is at least partially persistent.

shocks,  $\xi_t$ , are drawn from identical distributions each with zero mean and finite variance  $\sigma_\xi^2$ . 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.<sup>8</sup>

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 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  $\mu_{it+1}$  is zero).

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<sup>8</sup> 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.

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

Voters form their expectations about the competence of an incumbent re-elected in period  $t+1$  by evaluating  $\mu_{it}$  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  $\mu_{it-1}$  but not  $\mu_{it}$ . Hence voters base their forecast of the economic competence of the incumbent on both  $y_{it}$  and  $\mu_{it-1}$ . 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:

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

This original Alesina and Rosenthal (1995) formulation can be modified to better reflect that fact that these shocks result from many economically consequential decisions. We begin by distinguishing between two types of decision makers, which we will call “elected” and “non-elected” decision makers. The first of these labels 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 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 elected national decision makers, while the exogenous shocks are associated with the decisions of everyone else. Note that included amongst the “non-elected decision makers” 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 tend to have a lower overall competency signal and hence lower levels of economic voting.<sup>9</sup>

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<sup>9</sup> 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

In the model developed above we assumed a single decision – the setting of interest rates, for example. In fact, elected officials make many economically consequential decisions. Likewise, non-elected decision makers make many economically consequential decisions. 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 set of decisions made by elected and non-elected decision makers respectively.

Formally, let the number of decisions made by elected decision makers be  $\alpha$  and the number made by non-elected decision makers be  $\beta$  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.<sup>10</sup> With this, we can write the growth equation from above as:

$$(1.6) \quad y_{it} = \bar{y} + \sum_{l=1}^{\alpha} \omega_{ilt} + \sum_{l=1}^{\beta} \psi_{lt}$$

where  $\omega_{ilt}$  is the growth shock associated with the  $l$ th decision of  $i$ , the elected decision maker. Likewise,  $\psi_{lt}$  is the growth shock associated with the  $l$ th decision of the non-elected decision maker. Any known or systematic impacts on the economy are subsumed in the natural rate of growth or are anticipated by voters and so have no effect on growth.<sup>11</sup>

We assume that for the elected decision maker, the  $l$ 'th shock is persistent in the same way as in our earlier discussion (i.e.  $\omega_{ilt} = \mu_{ilt} + \mu_{ilt-1}$ ). And assume that  $\mu_{ilt}$  and  $\psi_{lt}$  are

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).

<sup>10</sup> 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.

<sup>11</sup> Specifically, if  $\sum_{l=1}^{\alpha} (\phi_{ilt} + \omega_{ilt})$  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 now think of  $\pi_{it} = \sum_{l=1}^{\alpha} \phi_{ilt}$  as the “policy” part of this impact over which voters have rational expectations.

Thus, as before,  $\pi_{it}$  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,  $\pi_{it}$  will equal  $\pi_{it}^e$ ). Consequently, the decision maker will always choose the mix of policies that are most preferred by the voter.

independent normally distributed random variables with zero means and variances  $\sigma_\mu^2$  and  $\sigma_\psi^2$ , respectively.<sup>12</sup>

The growth equation can then be expressed as,

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

Rearranging this gives:

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

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  $k_{it} = \sum_{l=1}^{\alpha} \mu_{ilt} + \sum_{l=1}^{\beta} \psi_{lt}$ . Since  $k_{it}$  is observed, the voter can compute her

expectation about  $\sum_{l=1}^{\alpha} \mu_{ilt}$  given  $k_{it}$  (i.e., her expectation about the elected decision maker'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  $\alpha$  normally distributed random

variables each with zero mean and variance  $\sigma_\mu^2$ , 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:

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<sup>12</sup> This persistence means we need to think of the  $l$ th decision as a sort of 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 are the same. In this 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.

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

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, this conditional expectation is (Greene 2003):

$$(1.9) \quad E \left[ \sum_{l=1}^{\alpha} \mu_{ilt} \mid k_{it} \right] = E \left[ \sum_{l=1}^{\alpha} \mu_{ilt} \right] + \frac{\sigma_{\mu,k}}{\sigma_k^2} \left( y_{it} - \bar{y} - \sum_{l=1}^{\alpha} \mu_{ilt-1} \right) - E[k_{it}]$$

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

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 elected decision maker ( $\alpha \sigma_{\mu}^2$ ). This is important because it implies that expanding the number of economically consequential choices that the elected decision maker makes will increase this product. More substantively, this variance should be larger in countries in which elected decision makers make more of the economic decisions that determine the country's growth path.

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.<sup>13</sup> 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.

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<sup>13</sup>  $E[\mu_{it} \mid y_{it}] = \frac{\sigma_{\mu,y}}{\sigma_{\mu}^2 + \sigma_{\xi}^2} (y_{it} - y - \mu_{it-1})$  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.

We can write her expected utility for voting for incumbent party  $i$  as equal to the expected utility the voter will accrue in the next period if party  $i$  is in office.<sup>14</sup>

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

Lacking any information about the challenger's level of competence, the voter's expected utility for voting for the challenger,  $k$ , is just:<sup>15</sup>

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<sup>14</sup> 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  $\pi_{it+1}$ ), the voter's utility in period  $t+1$  is in part:

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

where  $b$  indexes the voter's preference for growth relative to inflation. The particular functional form of utility for inflation and growth 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. Since utility is increasing in  $y$  and is maximized, for a given  $y$ , when inflation 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  $b$ .

<sup>15</sup> Alesina 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.

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

Thus, the voter is more likely to vote for the incumbent when the expected utility in Equation (1.10) is larger than that in Equation (1.11). The difference is:

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

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 what the incumbent has “done for the voter lately” (i.e., 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  $\mu_{it}$ , 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 observed growth is more likely to result from non-political shocks than from competency shocks – i.e. if  $\beta\sigma_\psi^2$  is high relative to  $\alpha\sigma_\mu^2$ .

We can conclude, then, that economic voting in its traditional form obtains in this model – voters will vote against the incumbent when economic performance is sufficiently weak and for the incumbent when it is sufficiently strong. In addition, we have established that the economic vote is weighted by a competency signal that captures the extent to which shocks to the economy are due to the competence of governments.

*Context and competency shocks.* We have yet not commented on the  $\alpha$  and the  $\beta$  terms in the above equations. These terms capture the extent to which the variance of the competency shocks differs from one context to another. The numerator of the competence signal is 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 elected decision maker ( $\alpha\sigma_\mu^2$ ). This is important because it implies that expanding the number of economically consequential choices that the elected decision maker makes will increase this product. More substantively, this variance should be larger in countries in which elected decision makers 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-elected to elected decisions in each context can shape the relative size of their overall competency signals. Let's consider the case where the overall competency signal is larger in one context than another. Assuming the variance terms are the same across contexts, we can write:

$$(1.13) \quad \frac{\alpha\sigma_\mu^2}{\alpha\sigma_\mu^2 + \beta\sigma_\psi^2} > \frac{\alpha'\sigma_\mu^2}{\alpha'\sigma_\mu^2 + \beta'\sigma_\psi^2}$$

$$(1.14) \quad \frac{\beta\sigma_\psi^2}{\alpha\sigma_\mu^2} < \frac{\beta'\sigma_\psi^2}{\alpha'\sigma_\mu^2}$$

$$(1.15) \quad \frac{\beta}{\alpha} < \frac{\beta'}{\alpha'}$$

where  $\alpha$  and  $\beta$  are from a large competency signal context and  $\alpha'$  and  $\beta'$  are from a small signal context. Equation (1.13) reduces to the inequality in Equation (1.15): the ratio of non-elected decisions to elected decisions in the large signal context must be smaller than this ratio in the smaller signal context. Determining the relative impact of political and economic contexts on the overall competency signal reduces to establishing the magnitudes of these ratios.

Contextual effects that will have the most unambiguous impact on this ratio are ones that simultaneously increase  $\alpha$  and decrease  $\beta$  or vice-a-versa. These are cases where the rising number of non-elected decisions affecting variations in shocks to the macro-economy is displacing the number of elected decision makers affecting these shocks. This will generate the inequality in Equation (1.15) and an unambiguous predicted effect. Contexts where the number of non-elected decisions affecting macro-economic shocks is high will tend to have fewer elected decisions 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 elected decisions affecting macro-economic shocks (thereby reducing the magnitude of the competency shock term) and a larger number of non-elected decisions 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 elected decisions and relatively fewer non-elected decisions. Large states with unitary constitutions compared to small states with federal constitutions 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  $\beta = \beta'$  – essentially the two contexts do not differ in terms of the number of non-elected decision makers affecting macro-economic shocks. The inequality in Equation (1.13) then simply reduces to  $\alpha > \alpha'$ ; contexts with a higher number of decisions affecting economic shocks by elected decision makers will have a higher competency signal. An example here might be presidential versus parliamentary constitutions. Presidential contexts might have larger numbers of elected decisions that affect the macro-economy but parliamentary and presidential constitutional contexts may have similar numbers of non-elected decisions impacting a nation's macro-economic shocks. Similarly holding  $\alpha$  and  $\alpha'$  constant and increasing the number of decisions by non-elected decision makers ( $\beta$ ) will result in a lower competency signal.

Contextual differences will not always generate different competency signals. When the two ratios in Equation (1.17) are equal it is less likely that competency signals will vary across contexts. Obviously, this can happen when  $\alpha = \alpha'$  and  $\beta = \beta'$ . These cases are relatively easy to deal with – they are simply cases in which context does not matter. A somewhat more problematic case is when the two ratios in Equation (1.17) 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 elected decisions and of non-elected decisions in similar ratios to each other. One might argue that a currency union or a pegged currency policy is an example because effectively it reduces the number of nationally elected actors who can influence growth through monetary policies but it likely reduces the net number of non-elected exogenous actors who can influence domestic growth through manipulation of local currency valuations.

Our theoretical results in this section provide a foundation for understanding how economic and political context shapes the economic vote. As the ratio of decisions by non-elected decision makers to those by elected decision makers rises the overall competency signal will decline and vice-a-versa. Since the importance of the economy in the vote function is determined by the strength of the competency signal, this ratio of non-elected to elected decisions should impact the economic vote. 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 elected to non-elected decisions.

This section has developed a selection model of the economic vote that explains contextual variations in economic voting in terms of the quality of the competency signal that voters are able to extract from shocks in macro-economic outcomes. In addition, we have described how the ratio of elected to non-elected decision makers can condition the magnitude of these competency signals. We now turn to examining empirically how political control of the economy, through its impact on the competency signal, affects economic voting.

### **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 during the 1979-2001 period. A detailed description of how these estimates are derived and a discussion of our two-stage multi-level analysis approach are available in Duch and Stevenson (2005 and 2006) and at [www.raymond Duch.com/economicvoting](http://www.raymond Duch.com/economicvoting). Hence, in this essay we only provide a brief overview of how these estimates were derived. For each of the 163 voter preference studies in our sample we estimate a multi-nomial logit (MNL) vote choice model for each of the major competing

parties. Each of these 163 studies includes a vote preference question and the respondent's retrospective evaluation of the overall economy. 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, left-right self placement and partisanship where appropriate. In each country specification we include the appropriate set of control variables that are necessary to ensure consistent estimates for the economic evaluation variable.<sup>16</sup>

We then use these estimated coefficients to generate predicted changes in each individual's vote probabilities associated with a change in the individual's economic perceptions. We define a "meaningful change" as a change in opinion that results from moving each respondent's economic perception one unit in the direction of a worsening economy. This represents a reasonable shift in economic perceptions based on our assessment of the distribution of economic perceptions in the 163 surveys. The control variables are held constant at the values they take on for each individual in the sample.<sup>17</sup> This gives us estimates of the change in each party's vote probabilities associated with a unit deterioration in economic perceptions. All told this gives us 655 economic votes for each of the parties in our sample of 163 voter preference 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. Likewise, the French case typically generates a vector of about five changes in vote probabilities; one each for the RPR, UDF, the Socialists, the Communists and the Greens. In the analysis presented below our dependent variable is the *economic vote of the Chief Executive* defined as any decrease (increase) in support for the party of the incumbent Chief Executive that is caused by worsening (improving) economic perceptions.

### **Political Control of the Economy**

The globalization and democratic governance debate points to two features of globalization that are hypothesized to undermine accountability: Open economies and capital

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<sup>16</sup> The models and the parameter estimates for each of these elections studies is available at [www.raymondduch.com/economicvoting](http://www.raymondduch.com/economicvoting).

<sup>17</sup> Our estimates of the impact of a change in economic perceptions on vote probabilities is generated in a fashion that also produces estimates of uncertainty about the economic vote measure for each case. We accomplish this by sequentially applying the simulation procedure detailed in King, Tomz and Wittenberg (2000) to each respondent in each sample. Again, we provide details of this estimation in Duch and Stevenson (2006).

mobility are expected to reduce the room to maneuver of elected officials and hence undermine democratic accountability. David Cameron identifies these in his classic article exploring the impact of exposure to the global economy on the size of government (Cameron 1978). Cameron pointed out how economic context – an open economy in particular– can undermine the ability of incumbents to control macro-economic policies. Hence, an open economy undermines democratic accountability. In this section we propose to empirically evaluate this argument in terms of economic voting. We first spell out clearly the implications of an open economy for the incumbent’s competency signal which will then imply the hypothesized relationship between this variable and the economic vote.

As we pointed out earlier there is more of a debate regarding the implications of globalization for the types of economic policy responses adopted by governments. Many of those who argue for divergent responses to globalization point to the constructive role that government can play in managing the impact of dislocations associated with globalization (Garrett 1998). And some, such as Cameron (1978), suggested that the institutional and political responses to the exigencies of an open economy tend to broaden the scope of government and the role of non-elected decision makers in macro-economic policy making. To the extent this is the case, the conventional wisdom seems to see this as enhancing democratic governance: a large role for the state increases the ability of citizens to hold decision makers accountable for the economy.

Alternatively, as we noted earlier, some see 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 involve reducing 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 role of the state in shaping macro-economic outcomes. The conventional wisdom regarding democratic governance in this case is that a reduced role of government in managing the macro-economy results in lower democratic accountability.

What is of particular interest here is that there does seem to be agreement on the nature of the relationship between limited versus extensive government and democratic accountability: Reducing the scope of the government’s role in the economy reduces democratic accountability while broadening its scope results in higher democratic accountability. This is the second argument regarding globalization and democratic governance that we will evaluate. This section will also explore this argument with respect to the economic vote. Again, we will first lay out

how the scope of government shapes the incumbent's competency signal from which we can deduce the empirical hypotheses regarding the relationship between scope of government and the economic vote.

### *Open Economy, Competence and the Economic Vote*

What are the implications of an open economy for economic voting? Scholars who previously have addressed the question from various theoretical perspectives disagree. Lewis-Beck (1988) speculated that greater openness might sensitize voters to the importance of economic policies and thereby increase the economic vote. Scheve (2004) argued for the same relationship (higher economic voting in an open economy) although he suggested that it results from lower exogenous shocks (our  $\sigma_{\xi}^2$  term) in open economies and therefore a higher overall competency signal. Hellwig's (2001) analysis suggested exactly the opposite: Greater openness seems to dampen the positive impact of economic performance on incumbent vote. And this conforms to the earlier speculations of Lewis-Beck and Eulau (1985, 6) and, more recently, Hibbs (2006).

These 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. We argue that the variation in these magnitudes from one context to another is determined by differences in the number of elected and non-elected decisions associated with macro-economic shocks in the different contexts. As economies become increasingly integrated into the global economy, the variance in the competency shocks is likely to shrink because the number of elected decisions affecting the macro-economy decline (i.e.  $\alpha_{op} < \alpha_{cl}$ , where *op* refers to an open economy and *cl* refers to a closed economy). At the same time the number of non-elected decision makers increases ( $\beta_{op} > \beta_{cl}$ ).

Capital mobility, for example, is one of the defining features of an open economy. And the Mundell-Fleming condition is the classic statement on how increased capital mobility reduces the number of elected decisions affecting macro-economic policies and increases the impact of non-elected decisions.<sup>18</sup> This condition essentially states that a country can have at most two of the following three conditions: capital mobility, fixed exchange rates, and monetary policy autonomy (Frieden 1991). Hence, for example, having opted for capital mobility, if authorities reduce interest rates in order to stimulate the local economy, capital will flow out of the country

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<sup>18</sup> See the early works of Mundell (1962; 1963; 1964). Our discussion is based on Frieden (1991).

in search of higher rates abroad and before this initiative can have its effect, domestic interest rates will have climbed back to world levels (Frieden 1991, 431). In order to retain autonomy over monetary policy authorities would need to abandon a fixed exchange rate regime. This condition does not eliminate the ability of governments in an open economy to enact monetary and fiscal policies (Oatley 1999; Garrett 1998) but rather restricts their options given the decision to, or not to, maintain fixed exchange rates.<sup>19</sup> The Mundell-Fleming condition suggests that the price paid by incumbent governments for participating in the global economy – capital mobility, for example – is a more restricted ability to manage the domestic economy.<sup>20</sup> In terms of our model, the Mundell-Fleming condition suggests that once a country opens up to the global economy by allowing for capital mobility, it essentially cedes a decision option, either the ability to control its exchange rate or the ability to shape monetary policy – and one of these decisions is in effect relinquished to non-elected decision makers. As Clark, Usha and Parker (1998) point out, not all countries opt for policies or institutions that increase exposure to these global forces, but once they do incumbent governments cede considerable control over managing the macro-economy.<sup>21</sup>

An open economy also 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 1975; 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 1975). 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

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<sup>19</sup> And while governments are not obligated to commit to fixed exchange rate regimes under a system of capital mobility many have taken this option to ward off financial speculation which in turn has restricted their fiscal policy options (Garrett 2000).

<sup>20</sup> It is important to point out that we are not drawing any conclusions here regarding the impact of open economies on partisan differences in macroeconomic policies (in fact the evidence of Oatley 1999 suggesting that partisan differences persist is in our minds quite convincing) nor are we suggesting that open economies necessarily constrain the redistributive and overall taxation policies pursued by governments (Boix 1998 and Garrett 1998 provide convincing challenges to these arguments).

<sup>21</sup> And more recent efforts by proponents of the “new open economy macro-economics” have provided models of the precise impact of these global interdependencies on domestic output and inflation in open economies (Lane 1997). Good reviews of this literature include Lane (2001) and Sarno (2000).

shocks beyond the control of incumbent policy makers. Rodrik (1998), for example, presents empirical data clearly indicting that more open economies have significantly more volatile GDP growth.<sup>22</sup>

Capital mobility and increased trade flows reduce the control that elected decision makers have on macro-economic policy outcomes and they subject domestic economic outcomes to greater influence by non-elected, and particularly foreign, decision makers. Accordingly, in an open economy the number of non-elected decisions affecting the macro-economy rises ( $\beta_{cl} < \beta_{op}$ ) while the number of elected decisions declines ( $\alpha_{op} < \alpha_{cl}$ ). Hence, we expect the ratio of non-elected decisions to elected decisions will be smaller in a closed economy,

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

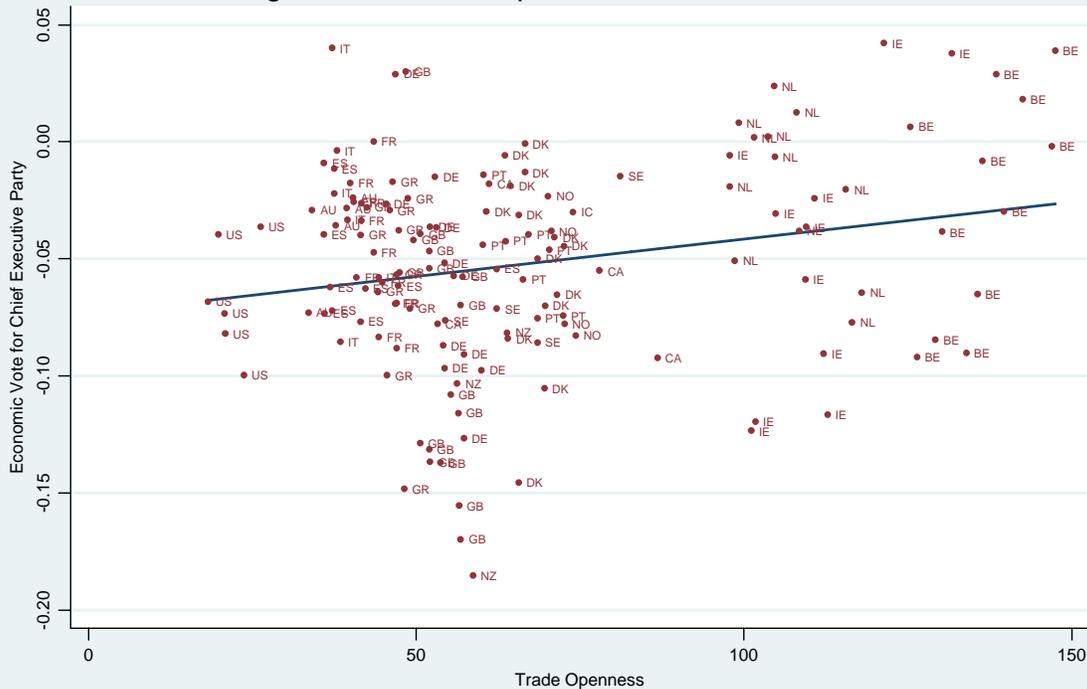
which suggests a lower overall competency signal in economies that are open to global economic influences. It follows, then, that a weaker competency signal in open economies will result in lower levels of economic voting.

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). Figure 9.1 presents a plot of the *economic vote of the Chief Executive* against our measure of Trade Openness. First, there clearly is no evidence that the economic vote is higher in open economies as some have claimed (Scheve 2004). In fact, openness of the economy leads to a significantly smaller economic vote. This lends support to our argument that the competency signal in open economies is weaker than in closed economies which in turn leads to lower levels of economic voting.

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<sup>22</sup> See also evidence to this effect for the developing economies in Gavin and Hausmann (1996).

Figure 1.1. Trade Openness and Economic Vote



Source: Total Trade as Percent of GDP; World Bank, 2004  
 Equation: Chief Executive Economic Vote = -.07 (.01) + .0003 (.0001) \* Trade Openness. Standard errors are in parentheses. The adjusted R-square is .04. N=151.

*The Policy Making Context of Limited versus Extensive Government*

Rising levels of trade and globalization have domestic political consequences (Rogowski 1989; Garret 1998). 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).<sup>23</sup> Adserà and Boix (2002) demonstrate the empirical relationship between openness and

<sup>23</sup> While it is true that more open economies tend to have an extensive state sector, its 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.

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.

Hence, the domestic policy context in open economies frequently is characterized by a more extensive state sector. To understand the implications of an extensive as opposed to limited state sector for economic voting we need to explore its impact on the competency signal. A policy context with an extensive state sector increases the institutions and constellation of political actors actively involved in making economic policies – in short, a more “dense” policy making environment.

A more dense policy making environment has implications for the division of decision-making between elected versus non-elected decision makers. As we pointed out earlier, increasing the number of economically relevant decisions made by elected officials and their subordinates, while holding the number of decisions made by non-elected decision makers constant, increases the competence signal and, therefore, the likelihood that voters will attribute macro-economic innovations to incumbents.<sup>24</sup> In contrast, increasing the number of decisions made by non-elected decision makers, while holding constant the number of decisions made by elected decision makers, has the opposite effect. Simply increasing the overall number of decisions (or decision makers) has an ambiguous effect that depends, in part, on how the increase is distributed among elected and non-elected decision makers.

This 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 non-elected to elected decisions,  $\left(\frac{\beta}{\alpha}\right)$ , as it rises the competency signal declines, as does the economic vote. We expect this ratio to be large in contexts with extensive state sectors compared to limited state sectors because an extensive state sector implies that a larger number of interested, and non-elected, actors will affect macro-economic policy shocks (i.e., it increases the number of non-elected decisions).<sup>25</sup> This follows in part because in a context with an extensive state sector the benefits and costs associated with changing macro-economic priorities are more

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<sup>24</sup> Our argument shares some similarities to efforts to model policy responsiveness as a function of the number of political and institutional veto actors (a veto actor could be a coalition partner or other policy making institutions that must endorse a policy change) along with the degree to which they are polarized on particular issues. Examples include Tsebelis (2002), Franseze (2002), Hallerberg and Basinger (1998) and Henisz (2004). We differ from this approach in that our concern is with the division of decision-making between elected versus non-elected decision makers, not necessarily how many there are overall.

<sup>25</sup> 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.

likely to be borne by greater numbers of interested parties (Becker 1983; Buchanan and Tullock 1962).

An extensive state sector results in a proliferation of actors that affect (or veto) macro-economic policy initiatives, many of whom are not elected 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-elected as opposed to elected 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 non-elected decisions, i.e., the number of decisions originating with decision makers that are not competing for election. Second, while an extensive state sector may also raise the number of elected decisions it will do so at a more moderate rate than the increase in non-elected decision makers. 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 and explore their impact on the competency signal and the economic vote. First, we explain how a large state role in the economy dampens the magnitude of the overall competency signal and we provide empirical evidence that it reduces the size of the economic vote. Second, we explore how corporatist arrangements – which include an explicit expansion of the set of actors involved in macro-economic management – reduce the overall competency signal and provide empirical evidence that this reduces economic voting. Finally, we explain how increasing the degree to which monetary policy decisions are politicized reduces the overall competency signal and demonstrate empirically that this in fact reduces the magnitude of the economic vote.

#### *Size of the State Sector*

The size of the state sector refers to the breadth of the state’s role in economic transactions and covers such activities as wealth and income transfers, consumption of goods and services, and ownership of productive entities. Since World War II, developed democracies have experienced both a rise in the size of the state sector and a more activist role of the government in

managing the macro-economy. Franzese (2002) documents the considerable post-World War II growth in the size of government in the economies of the OECD nations. During this same period, Keynesian notions of macro-economic management became economic orthodoxy for the governments of most developed democracies (Hall 1989). The size of the government sector has become synonymous with “state capacity” – the ability of the state to manage the political economy (Krasner 1984). And as we pointed out earlier, many argue that open economies have embraced a state sector in large measure in order to compensate constituencies negatively affected by global economic shocks (Adserà and Boix 2002).

A reasonable inference to draw from this literature is that as the state’s capacity to manage the economy increased so should the level of economic voting (Anderson 1995). As Lewis-Beck and Eulau speculated, “In the nations with more government economic involvement, one could anticipate a stronger association between economics and the vote, since their citizens would be more likely to attribute economic responsibility to government (Lewis-Beck and Eulau 1985, 5).” Tufte (1978) provided an early catalyst for this notion with his powerful images of Nixon’s manipulation of spending on transfer programmes just prior to the 1972 U.S. presidential elections. A reasonable generalization is that big government, which implies more redistribution programmes, means an expanded opportunity to engage in Nixonian-type manipulations of the macro-economy. The implication here is that big government results in government making more economically consequential decisions and so results in a larger economic vote. Moreover, since the size of the government sector varies significantly cross-nationally (Franzese 2002) this raises the possibility that these differences might help explain cross-national variations in the economic vote.

Our argument regarding the impact of an expansive state sector on the overall competency signal, however, suggests exactly the opposite: big government should result in less economic voting.<sup>26</sup> Our case for the notion that big government reduces the competency signal rests on two assumptions proposed in the previous section:

$$(1.17) \quad \beta_s < \beta_l$$

$$(1.18) \quad \frac{\alpha_l}{\alpha_s} < \frac{\beta_l}{\beta_s}$$

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<sup>26</sup> We are not alone in arriving at this prediction. Hibbs (1993) argues that in large welfare states (which, as he points out, are also typically highly exposed to global economic influences) other policies or welfare state spending will dwarf the macro-economic demand management “signals” of the incumbent. As a result, there will be less economic voting in these contexts. Pacek and Radcliff (1995) argue that the size of government moderates economic voting although their explanation is quite different than ours.

where  $l$  represents contexts with large government sectors and  $s$  represents contexts with small government sectors.

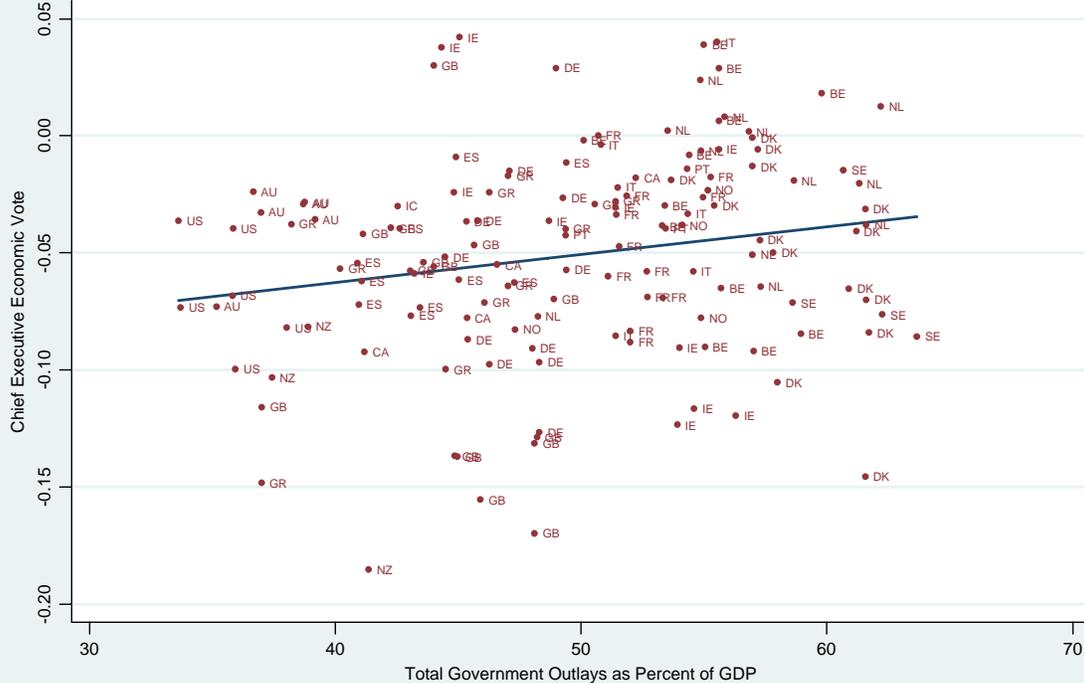
The first assumption simply suggests that there are more non-elected decisions made in contexts with big government. As government grows and becomes more complex, the number of non-elected decision makers (interest groups, commissions, elected local government officials, for example) affecting macro-economic 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 are more elected decisions in big government contexts but imposes the condition that the ratio of elected decisions in large versus small government contexts is smaller than the ratio of non-elected decisions in large versus small government contexts. This results in the ratio of non-elected decisions to elected decisions in contexts with small government being less than it is in contexts with large government,

$$(1.19) \quad \frac{\beta_s}{\alpha_s} < \frac{\beta_l}{\alpha_l}$$

The ratio in Equation (1.19) indicates that the exogenous shock term in large government contexts will be inflated because voters perceive non-elected decision makers as having a disproportionate impact on shocks to the macro-economy. This of course depresses the overall competency signal, which we predict will result in a lower economic vote. Accordingly, economic voting should be negatively correlated with the size of the government sector. Figure 9.2 plots the *economic vote of the Chief Executive* against the magnitude of the government sector. It suggests that economic voting is higher in contexts with more limited government (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.

Figure 1.2. Size of Government and Chief Executive Economic Vote



Source: General government total outlays as % of nominal GDP, OECD 2002  
 Equation: Chief Executive Economic Vote = -.11 (.03) + .001 (.0006) \* government/GDP. Standard errors are in parentheses. The adjusted R-square is .04. N=146.

Big government implies a lower overall competency signal because the ratio of non-elected to elected decision makers is greater than in contexts with a smaller government sector. As the competency theory predicts, this results in lower levels of economic voting in contexts with a large government sector. Let's now take a closer look at the notion that this results from a relatively larger number of non-elected decision makers affecting macro-economic policy outcomes.

*Corporatism and Coordinated Wage and Price Bargaining*

A number of post-World War II developed economies adopted “corporatist” policies designed in large part to moderate the magnitude of shocks to the macro-economy. In large part these were open economies that were particularly vulnerable to global economic shocks (Katzenstein 1985). These initiatives are described by Hall as a “...process of social or economic policy making in which considerable influence over the formulation or implementation of policy is devolved onto the organized representatives of producer groups, often by means of peak-level

bargaining about wage settlements” (Hall 1999, 138).<sup>27</sup> By expanding the role of government to include the negotiation of “social contracts,” which typically focused on wages but could include a range of other policies, the expectation was that government could ensure satisfactory levels of real economic growth, restrain inflationary pressures, and avoid excessive levels of unemployment (Franzese 2002, chapter 4).<sup>28</sup>

The institutional actors associated with these efforts to promote coordinated wage and price bargaining (CWB) are a good example of the non-elected decision makers in our competency signaling model. Corporatist, or CWB, institutions are explicitly designed to increase the number of non-elected decision makers influencing macro-economic policy outcomes. In corporatist contexts, key macro-economic policies – price and wage policies – are subject to relatively non-partisan negotiation amongst a country’s leading interests groups. And corporatist institutions significantly constrain how capital is employed within the country, ranging from investment and disinvestment decisions, wage settlements and employee benefits. The implications of these institutional features for our competency signal are quite straightforward. First, they clearly imply that the overall number of economically important decisions in a corporatist setting ( $cw$ ), compared to a more market oriented setting ( $m$ ), is shifted from elected decision makers to non-elected decision makers (even though these decisions might be seen as “governmental” in some sense). This has the effect of increasing the number of non-elected decisions ( $\beta_{cw}$ ) and decreasing the number of elected decisions ( $\alpha_{cw}$ ) in a corporatist context. Accordingly,

$$(1.20) \quad \beta_m < \beta_{cw}$$

$$(1.21) \quad \alpha_m > \alpha_{cw}$$

This implies that the ratio of non-elected to elected decisions will clearly be higher in a corporatist than a more market oriented setting,

$$(1.22) \quad \frac{\beta_m}{\alpha_m} < \frac{\beta_{cw}}{\alpha_{cw}}$$

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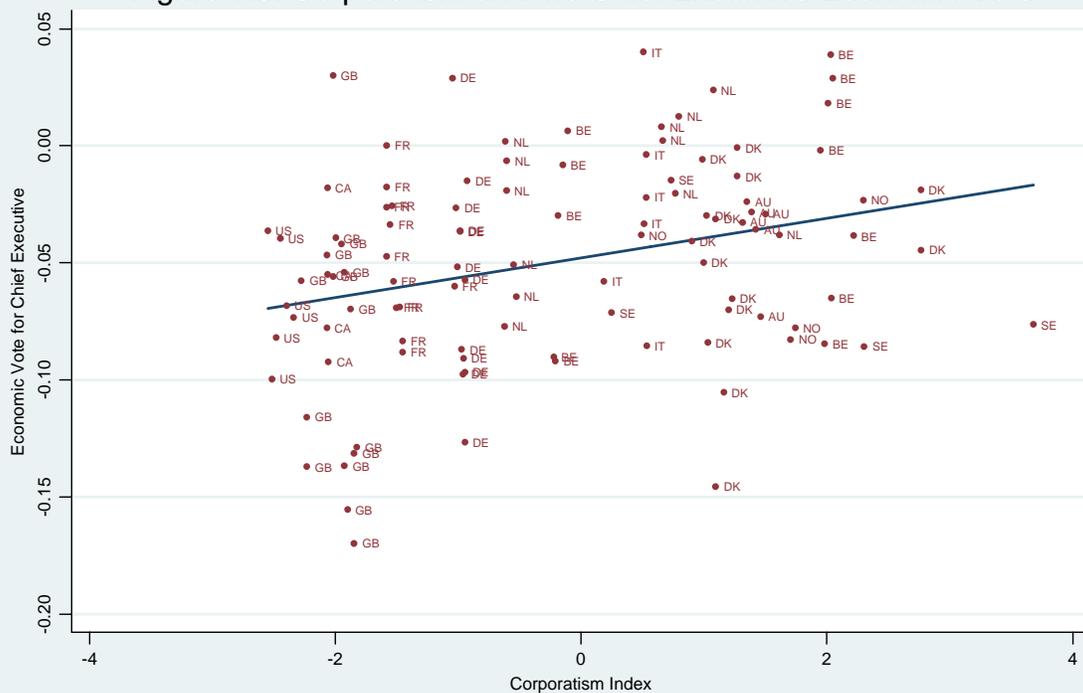
<sup>27</sup> Students of European political economy, in particular Schmitter and Lehmbruch (1978) and Lehmbruch and Schmitter (1982) have elaborated a set of measures of neocorporatism and have demonstrated that policy outcomes are correlated with variation in levels of neocorporatism.

<sup>28</sup> There is a general consensus in the literature that levels of CWB have in fact declined over the past two decades although there is some debate as to how quickly and since when (Golden et al 1995; Franzese 2002).

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.

Some readers might find it odd that we suggest that there is more electoral 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. Figure 9.3 presents a plot of the *economic vote of the Chief Executive* against an index of corporatism constructed by Golden (2000). Clearly high levels of corporatism tend to reduce economic voting. This reinforces our contention that the competency signal is higher in contexts where the state sector is more limited, which in turn generates higher levels of economic voting.

Figure 1.3. Corporatism and the Chief Executive Economic Vote



Source: Corporatism Index, Miriam Golden 2000  
 Equation: Chief Executive Economic Vote = -.05 (.01) + .008 (.003) \* Corporatism Index. Standard errors are in parentheses. The adjusted R-square is .04. N=107.

*Central Bank Independence*

Another dimension of what we are calling an extensive state sector is the politicization of monetary policy. A context in which monetary policy is politicized is one in which decisions regarding central bank interventions are shaped by both elected and non-elected political actors. Conventional wisdom, much of it grounded in the traditional political business cycle literature, argues that central bank independence (CBI) reduces the politicization of monetary policy (Alesina and Gatti 1995; Rogoff 1985). The evidence that central bank independence constrains the ability of various decisions makers – elected and non-elected – to participate in monetary policy making is considerable (Cukierman 1992; Cukierman and Meltzer 1989; Franzese 2002). In fact, Franzese (1999) makes the interesting point that the impact of central bank independence on monetary policy is in some sense defined by which political actors – elected and non-elected – are excluded from the decision making process. A politicized monetary policy context is one in which labor unions, the financial sector, foreign entities and participants in coordinated wage bargaining exert greater control over monetary policy than is the case under central bank

independence (Franzese 1999; Hall and Franzese 1998).<sup>29</sup> Hence increasing central bank independence is not simply about reducing the influence of elected decision makers but also implies a reduction in the impact of these other non-elected actors.

The implications of CBI for the overall competency signal is contingent upon how reducing the politicization of monetary policy impacts the relative numbers of elected and non-elected decisions. Our intuition here, is that while an increase in CBI certainly reduces the role of elected decision makers in monetary policy it also leads to a proportionately greater reduction in the number of non-elected decision makers associated with monetary policies. As part of de-politicizing monetary policy, the incumbent government's role is clearly limited but the role of other non-elected decision makers – such as private financial institutions and their lobbying groups, labor unions, and foreign institutions – find themselves participating in fewer monetary decisions.<sup>30</sup> This reasoning, expressed in the notation from above is:

$$(1.23) \quad \alpha_{in} < \alpha_{pl}$$

$$(1.24) \quad \beta_{in} < \beta_{pl}$$

$$(1.25) \quad \frac{\alpha_{in}}{\alpha_{pl}} > \frac{\beta_{in}}{\beta_{pl}}$$

$$(1.26) \quad \frac{\beta_{in}}{\alpha_{in}} < \frac{\beta_{pl}}{\alpha_{pl}}$$

where *in* refers to a context with an independent Central Bank and *pl* refers to a context with political control over the Central Bank. Equation (1.23) simply indicates that the number of elected decisions will be fewer as a result of CBI. Equations (1.24) and (1.25) make the point that as a result of de-politicizing monetary policy, the number of non-elected decision makers associated with monetary policy will decline *and* that the resulting ratio of elected decisions with CBI relative to elected decisions without CBI is greater than the ratio of non-elected decisions with CBI relative to non-elected decisions without CBI.

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<sup>29</sup> Woolley (1982, 25-27 and 191) makes a similar point regarding the difficulty that interest groups have influencing the U.S. Federal Reserve which is generally considered to have a high level of political independence.

<sup>30</sup> Posen (1993) argues that the financial sector, anticipating anti-inflation policies, would welcome central bank independence. The implication here though is that the other interested parties, such as labor and business lobbyists from sectors other than finance, might be less enthusiastic about losing influence over a politicized monetary policy making process.

The notion that elected decision makers do not entirely relinquish all influence over monetary policy under CBI is widely acknowledged (Woolley 1984; Goodman 1992). What is not well documented – at least to our knowledge – is how the transparency associated with CBI affects the influence of non-elected decision makers. Our intuition here is that the influence of non-elected decision makers over monetary policy is likely to be even less tolerated than that of elected decision makers.<sup>31</sup>

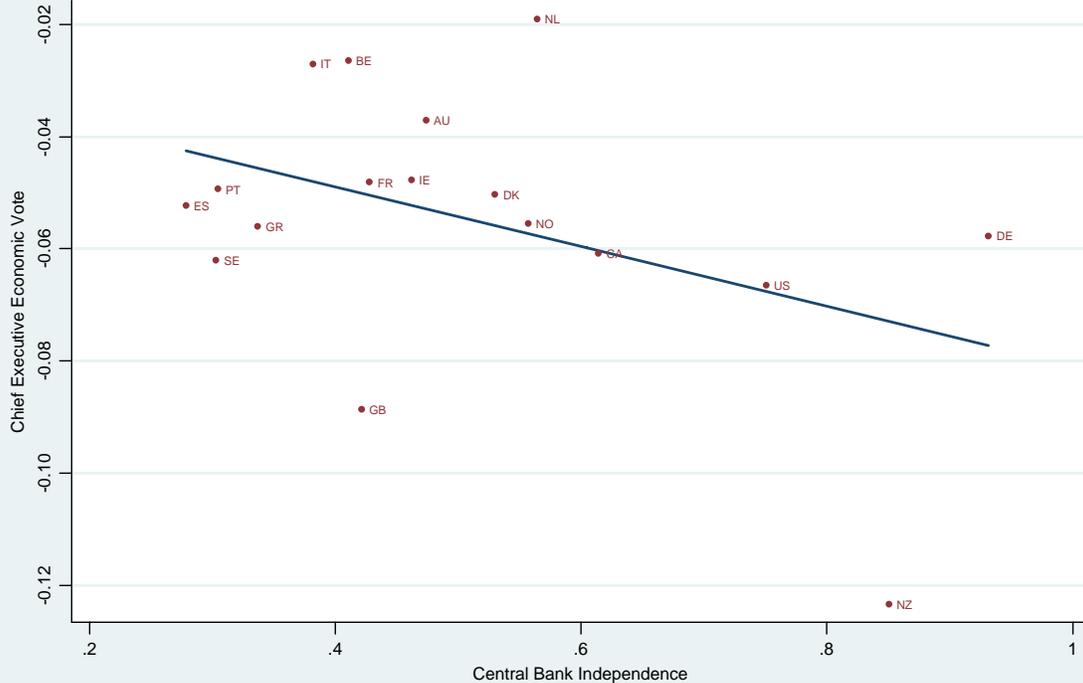
With these assumptions we conclude that the ratio of non-elected to elected decisions under CBI will be lower than without CBI and hence the overall competency signal will be higher in contexts with central bank independence. A higher overall competency signal should generate higher levels of economic voting under CBI. Again the empirical evidence seems to support our contention although we have far fewer informative cases here (because CBI does not vary much, we have only one data point per country and accordingly the dependent variable is the average *economic vote of the Chief Executive* within each country). Figure 9.4 presents the plot of the *economic vote of the Chief Executive* against our measure of Central Bank Independence.<sup>32</sup> As the fitted regression line suggests, there is some evidence here that the economic vote is positively related to CBI. But the result is sensitive to outliers. The two major outliers are Germany and New Zealand, both with very high levels of CBI but different levels of economic voting. Without New Zealand the relationship is quite flat although in the direction our argument would predict. Dropping Germany improves the negative fit. Dropping both New Zealand and Germany also improves the negative fit. On balance we see these results as moderately supportive of the notion that economic voting in contexts with central bank independence is likely to be higher. Further, there is clearly no evidence here that CBI reduces the magnitude of the economic vote. This result reinforces the conclusion of the previous section that more limited government appears to enhance the competency signal and therefore results in higher levels of economic voting.

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<sup>31</sup> We should expect elected decision makers to anticipate this in deciding whether to promote greater CBI. Hence those with a poor signal – lots of non-elected decision makers – should adopt CBI. There is some evidence to this effect – large numbers of veto players resulting in more CBI (Hallerberg 2002; Bernhard 2002).

<sup>32</sup> The measure of Central Bank Independence is from Franzese (2002). The description of the measure is presented in Franzese (2002, 147): the score is a composite measure of CBI based on scales from Cukierman (1992), Grilli et al (1991) and Bade and Parkin (1982). Since these score virtually remain unchanged for each country over the sample time period, we plot the average score for each nation against its average Chief Executive economic vote.

Figure 1.4. Central Bank Independence and Economic Vote



Source: Central Bank independence measure from Franzese, 2002  
 Equation: Chief Executive Economic Vote = -.03 (.016) -.05 (.029) \* Central Bank Independence. Standard errors are in parentheses. The adjusted R-square is .12. N=17.

*Limited State Sector and the Economic Vote*

Our contention is that overall competency signals are much stronger in an economic context in which the state sector is more limited which in turn implies higher levels of economic voting. A high level of involvement of the state in the economy significantly increases the impact of non-elected decision makers on policy outcomes which reduces the overall competency signal. We've now explored three dimensions of state involvement in the economy. The argument is similar in each case: contexts in which elected officials have more authority to shape economic outcomes relative to non-elected officials (indicated by smaller government, less corporatism, and, a less politicized central bank) should increase the size of the competency signal and increase economic voting. The empirical results for simple bivariate models are surprisingly consistent and supportive. We believe these empirical results constitute grounds for the general contention that overall competency signals, and hence economic voting, are higher in contexts with a limited state sector. The hypothesis is worth pursuing further.

Specifically, we can think of our three measures of the policy context as dimensions of an underlying institutional or structural feature of political economies – a limited versus extensive state sector. And in order to assess whether in fact these three measures are tapping this

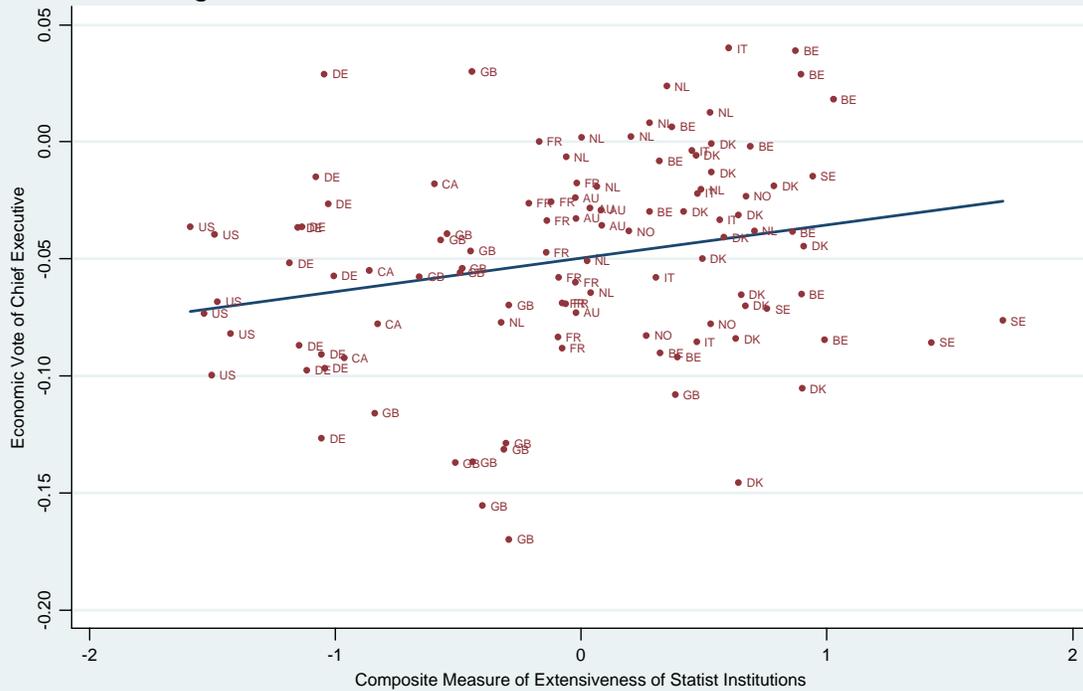
underlying feature of a limited state sector we factor analyzed the three items. The factor results confirm that these three items are measuring a similar concept: the factor analysis results in a single dimension with each item having a reasonably high loading on the dimension.<sup>33</sup>

Figure 9.5 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 elected decisions relative to the number of non-elected decisions 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.

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<sup>33</sup> The factor loadings of the three measures are as follows: CBI is -.59; Corporatism is .65; and Government Size is .54. 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

Figure 1.5. Extent of Statist Institutions and Economic Vote

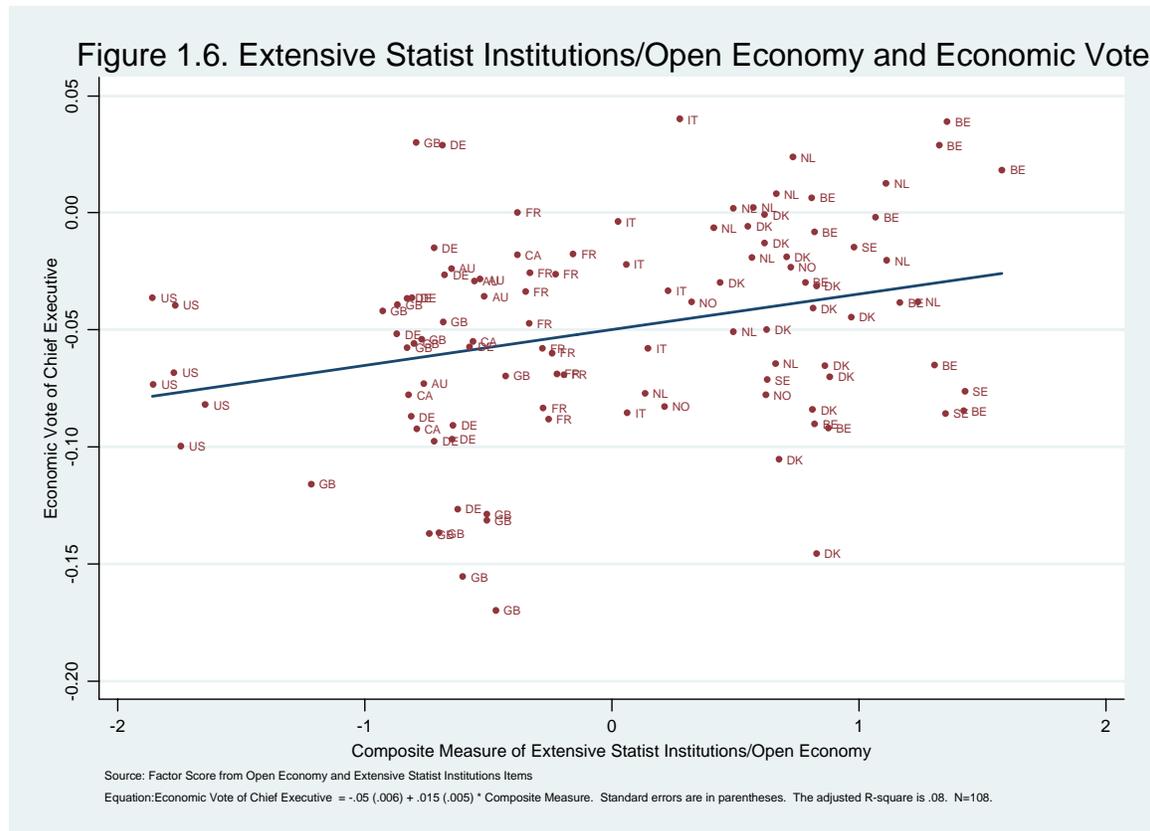


Source: Statist institutions factor scores from factor analysis of Corporatism, Central Bank independence and Government Outlays  
 Equation: Economic Vote of Chief Executive =  $-0.05 (0.006) + 0.014 (0.006) * \text{Extensive Statist Institutions}$ . Standard errors are in parentheses. The adjusted R-square is .04. N=108.

*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, although as we pointed out earlier nations differ considerably in the extent to which they have been affected by these trends. We also pointed out that countries that have open economies tend also to have an expansive state sector. And finally both developments have similar implications for the competency signal and the economic vote. This suggests that democracies may fall along a single dimension characterized by open economies with an expansive state sector at one extreme and closed economies 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. And Figure 9.6 shows that the factor scores from this factor analysis are significantly correlated with the *economic vote of the Chief Executive*. For the purposes of understanding how context shapes the economic vote, it is not unreasonable 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.



### Multi-level Model Results

To this point we have presented bivariate model results based on our two-stage estimation strategy. We now estimate multi-level interaction models employing our two measures of political and economic context: *limited state sector* and *trade openness*. In order to explore this, we use the data set described earlier that pools 146 studies and includes a reduced set of control variables (ones that were common to all of the surveys). The sparse individual level model we estimate includes a 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. The model includes two dummy variables measuring retrospective perceptions of the national economy: *worse*, which equals one if the voter thought the economy had gotten worse in the last year; and *better*, which equals one if she thought the economy had gotten better. These dummy measures of economic perceptions will be

interacted with the two variables measuring political and economic context: the *limited state sector index* and the *trade openness* variables described earlier.

The multi-level interaction results reported in Table 1 strongly confirm the results of the two-stage analyses presented above. 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 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 (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 Multi-level Logistic Regression Model of Incumbent Vote**

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>
Left-Right Self Placement (dev. from mean)	.43 (.01)	0.44 (0.01)	0.44 (0.005)	0.44 (0.005)
Left-Right Self Placement X Leftist PM (Leftist PM is an indicator variable)	-.77 (.01)	-0.77 (0.01)	-0.77 (0.01)	-0.78 (0.01)
Voter Perceives Economy got Better (indicator variable)	.38 (.04)	0.37 (0.04)	0.72 (0.08)	0.64 (0.09)
Voter Perceives Economy got Worse (Indicator variable)	-.51 (.05)	-0.50 (0.04)	-0.80 (0.10)	-0.76 (0.11)
Limited State Sector Index		-0.14 (0.11)		-0.04 (0.13)
Voter Perceives Economy got Better X Limited State Sector Index		-0.19 (0.05)		-0.12 (0.05)
Voter Perceives Economy got Worse X Limited State Sector Index		0.14 (0.06)		0.06 (0.07)
Trade Openness Ratio			-.01 (0.002)	-.005 (0.001)
Voter Perceives Economy got Better X Trade Openness Ratio			-0.01 (0.001)	-0.004 (0.001)
Voter Perceives Economy got Worse X Trade Openness Ratio			0.005 (0.001)	0.004 (0.001)
Constant	-.92 (.08)	-0.97 (0.08)	-0.56 (0.18)	-0.58 (0.21)
$\sigma^2_{\omega 1}$	0.633	0.639	0.641	0.064
$\sigma^2_{\omega 2}$	0.107	0.090	0.082	0.078
$\sigma^2_{\omega 3}$	0.162	0.150	0.135	0.131
$\sigma_{\omega 1, \omega 2}$	-0.059	-0.074	-0.086	-0.094
$\sigma_{\omega 1, \omega 3}$	0.006	0.012	0.035	-0.036
$\sigma_{\omega 2, \omega 3}$	-0.102	-0.090	-.078	-0.076
N	152436	152436	152436	152436

Standard Errors are listed below the logit coefficients. All coefficients are statistically significant at  $p < .001$  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 where the economy is 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. We also explored the notion that countries typically fell 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. This raises the possibility that neither of these variable has an impact, independent of the other variable, on the economic vote. Alternatively these two variables may in fact each have an independent impact on the economic vote. This would suggest that while there clearly is a close relationship between an open economy and the size of the state sector, they have developed in a sufficiently different fashion to allow each to have an independent impact on the competency signal and in turn on the economic vote.

We explore this by including both the trade openness and limited government interactions in the equation (Model 4). There is only one substantive change in the results: the *limited state sector* variable interacted with the *economy got worse* variable, although still in the correct direction, is no longer statistically significant. Overall, we think these results confirm that both an extensive state sector and trade openness have an independent, negative, impact on the economic vote. There is though some evidence in the results that an open economy may have a more significant impact on the economic vote.

### **Summary**

Efforts to understand the implications of globalization for democratic accountability must begin with a rigorous theory of how the political and economic context shapes individual vote choice. This is the tact adopted in this essay. First, we have focused on one fairly narrow aspect of democratic accountability – the importance of perceived economic performance in the voting decision. The globalization and democratic accountability debate implies that the economic vote should be conditioned on the extent to which an economy is subject to global forces. Second, we have proposed a contextual model of retrospective rational economic voting that spells out how context – specifically trends in the global economy – 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-elected decision makers ( $\beta$ ) to those by elected decision makers ( $\alpha$ ) 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 – defined here as open economies and liberalization – affects vote choice.

Most conventional accounts of how globalization affects democratic governance do not explore in any rigorous fashion precisely how these economic developments shape vote choice. Our results, which are based on a well specified theory of the economic vote, suggest a slightly different perspective on globalization and democratic accountability. At least with respect to the two dimensions of globalization examined here, the conventional notion is that lower democratic accountability is associated with open economies that have an extensive state sector and the other extreme – closed economies with a limited state sector – is associated with higher democratic accountability.

Our theory of the economic vote – specifically the competency signaling component – suggests that these two dimensions of globalization have quite different implications for democratic governance. We predict that those states with open economies and an extensive state sector will have less democratic accountability, at least from the perspective of economic voting. Consistent with the arguments made by Cameron (1979) 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. It is not the case, though, as some have argued, that this expansion of the state sector enhances democratic accountability in open-economy states. 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.

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