

Representing Defense: Democratic Control of the Defense Budget in the United States and Western Europe

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Abstract: There is now substantial evidence that defense spending decisions in the United States are influenced by citizen preferences. However, there is little time-series evidence for countries other than the United States. Regression models of citizen responsiveness and opinion representation in the politics of defense spending in five democracies are estimated. Results show that public opinion in all five countries is systematically responsive to recent changes in defense spending, and the form of the responses across countries uniformly resembles the “thermostat” metaphor developed by Wlezien and the more general theory of opinion dynamics developed by Stimson. Findings show also that defense budgeting is representative: public support for defense spending is the most consistently significant influence on defense budgeting change in four countries; thus, a parsimonious theory of comparative policy representation is potentially within reach. The implications of the results for defense spending in the NATO alliance and the European Union are discussed.

Keywords: Democratic control; defense spending; public opinion; citizen responsiveness; alliance dynamics

A substantial body of scholarship has emerged on the question of democratic control of foreign and defense policy. This literature has produced a surprisingly cumulative set of findings that indicates that citizens are systematically responsive to government policy and that public opinion is an important determinant of subsequent policy change. The evidence indicates, in short, that democratic control of defense policy is a very real phenomenon.

However, most of this evidence concerns citizen opinion and representation in the United States. As a result, we have few of the answers that are needed to construct a comparative theory of representation in the domain of defense policy. In particular, we need answers to the following questions: are citizens in all democracies responsive to policy change? Is the form of the response similar? Does public opinion influence policy in all democracies—that is, are all democracies representative?

These questions are not merely of theoretical interest. In the United States and Western Europe, defense spending is either already increasing or governments are under pressure to increase it. However, the level and sustainability of public support for increased defense spending remain open questions, especially if deficits loom or civilian spending would be restrained or reduced.

Precisely how such pressures will play out is something we do not know on the basis of existing evidence. In this study, we seek to close this gap in our knowledge. We estimate regression models of citizen responsiveness and policy representation in five countries: the United States, Great Britain, France, Germany, and Sweden. The time period covered by our

study varies by country, but it generally includes the period from the late 1960s through 1998.¹ Our specific focus is the role of citizen opinion in the politics of defense budgeting, the yearly decisions that concentrate attention on the costs and benefits of defense policy.

We proceed as follows. In the next section, we review the state of the evidence on the responsiveness of citizen opinion to defense policy change and the degree of representation that attends defense policy decisions. In subsequent sections, we specify regression models of change in public support for defense spending (citizen responsiveness) and the subsequent impact of public opinion on defense spending change (representation). We return to the theoretical and policy implications of our results in a concluding section.

Citizen Responsiveness and Policy Representation: The State of the Evidence²

Citizen Responsiveness

Contrary to early speculation that characterized citizen opinion as shallow or erratic, we now know that public opinion in both Europe and the United States responds to the external environment and to government policies in systematic and even “rational” ways (Flynn and Rattinger 1985; Shapiro and Page 1988, 1994; Nincic 1988; Eichenberg 1989; Page and Shapiro 1983, 1992; Mayer 1992; Holsti 1996; Risse-Kappen 1991). What is more, there is a coherent structure to American opinions of global affairs, and this opinion structure has evolved systematically in reaction to the cold war and its end (Wittkopf 1990, 1996; Peffley and Hurwitz 1992; Bartels 1994).

The same responsiveness is found in more specific studies of defense spending and public opinion, although the evidence is largely confined to the United States. In the single comparative study of which we are aware, we found, on the basis of data through 1989, that public support for defense spending in the United States and Western Europe responded negatively and significantly to past levels of spending and to changes in budgetary priorities, as well as positively to threatening events in the external environment (Eichenberg and Stoll 1989). Concerning U.S. defense spending, Stoll (1992) found that high levels of defense spending reduce subsequent levels of citizen support for defense in the period from 1947 to 1987. A negative relationship with defense spending change also appears in British public opinion (Soroka and Wlezien 2002).

The most sophisticated research on the United States is the work of Wlezien (1995, 1996, forthcoming). Wlezien conceptualizes citizen responsiveness in terms of a “thermostat” metaphor: if policy (in this case, defense spending) moves below or above the public’s desired level, opinion will react in the opposite direction by demanding an increase or decrease for subsequent years. This is precisely what Wlezien finds in several studies. Indeed, the thermostat phenomenon characterizes citizens’ reactions to budgetary change in many policy domains (Wlezien 1995).

Citizen opinion, then, is responsive and systematically so. Although Wlezien (1995, 1996, forthcoming) uses the thermostat metaphor, others have termed this effect the policy of

¹ The precise coverage for each country is listed in the appendix

² Here we focus on studies of public opinion and foreign and defense policy, but there is a broader and growing literature on representation more generally. For reviews of theory and evidence, see in particular Stimson (1995, 1999); Stimson, MacKuen, and Erikson (1995); Page and Shapiro (1983, 1992, 1994); Wlezien (1995, forthcoming); and Soroka and Wlezien (2002).

opposites (Nincic 1988), and yet other scholars have argued that citizens want governments to avoid either “collision or collusion” in foreign policy, that is, policies that go beyond a moderate blend of firmness and détente (Flynn and Rattinger 1985; Eichenberg 1989).³ Whatever the metaphor, the pattern of “opposites” in public reactions to defense and foreign policy suggests the comparative applicability of Stimson’s (1999, 122-23) notion of a moderate zone of acceptability in citizen issue opinions. When government policy moves outside the zone of what the public prefers, public opinion will react by demanding a return to acceptable policies.

This notion also helps us understand a second pattern in research on public responsiveness to the defense budget: the negative reaction that is evoked by any challenge to the much higher priority that the public places on nondefense spending. As a public priority, defense spending is pervasively unpopular. Indeed, with the exception of the first 2 years of the Reagan administration, we know of no surveys in Europe or the United States in which defense spending is not substantially less popular than spending on health, education, and social security.⁴ Thus, it is not surprising that public support for defense spending in Europe and the United States responds not just to change in the defense budget itself but also to change in the relative growth of defense and social spending and especially to any trade-off in which defense grows faster than social spending (Eichenberg and Stoll 1989). Others have found a negative relationship between preferences for domestic and defense spending in Britain, although the relationship is difficult to trace to spending decisions themselves (Wlezien 1995; Soroka and Wlezien 2002).

Representation

The evidence, then, is that the public responds to policy, and citizen reaction generally takes the form of a “thermostat.” The subsequent question is therefore whether governments take notice: is defense budgeting representative? Stimson, MacKuen, and Erikson (1995, 543) argue that representation is in fact a “simple idea and an old one. Public sentiment shifts. Political actors sense the shift. And then they alter their policy behavior at the margin.” Is there evidence that this process characterizes defense budgeting?

There is in fact substantial evidence that it does—at least in the United States. Ostrom and Marra (1986) and Hartley and Russett (1992) found that public support for defense spending was a substantial positive influence on change in defense spending, even after controlling for the influence of Soviet arms spending and other factors. In a study of congressional appropriations decisions, Bartels (1991) showed that citizen support for defense spending at the constituency level exerted a strong independent influence on legislative support for the Reagan defense buildup, again controlling for other constituency characteristics, such as defense spending or tax burdens in the district. Finally, Wlezien (1996) confirmed the impact of public support on presidential appropriations requests, but perhaps more important, he also showed that the system of representation in the United States is finely tuned. Presidential requests are best explained by citizen opinion in the spring of the previous year, when presidents are finalizing their budgets. Appropriations, however, are best explained by opinion late in the year, when Congress is deliberating on the budget. In summary, Wlezien not only demonstrates the representative nature of American defense budgeting but also shows that political actors at different stages of the

³ The term is borrowed from Stanley Hoffmann (1983, especially chaps. 9-11).

⁴ European surveys through the late 1980s are listed in Eichenberg (1989, 165-67); on the United States, see Stoll (1992), Wlezien (1995, forthcoming), and Niemi, Mueller, and Smith (1989). For more recent data, see the sources listed in the appendix.

political process are quite sophisticated in monitoring the most recent evolution of public sentiments (see also Wlezien forthcoming).

Much less is known about the impact of public opinion on defense budgeting in Western Europe.⁵ Flynn and Rattinger (1985), Eichenberg (1989), and Risse-Kappen (1991) review a substantial amount of comparative survey data and conclude that public opinion is a constraint on defense, but their methodologies are largely descriptive. Recently, Soroka and Wlezien (2002) showed that British defense spending is influenced by public preferences. Other studies of European defense spending focus primarily on the question of alliance dynamics, that is, whether European states “free ride” on the spending of the United States. Despite substantial theory and cross-sectional evidence that free riding exists, studies of the dynamics of European defense spending reveal a positive correlation with American defense spending over time (Palmer 1990; Sandler and Hartley 1999). However, none of these free-riding studies control for the effect of public opinion on spending.

Modeling the Responsiveness of Public Support for Defense Spending

Previous research demonstrates that the public response to defense spending change is essentially one of “opposites”—the thermostat metaphor described by Wlezien (1995, 1996, forthcoming). This hypothesis is reinforced by broader studies of European opinion that show a preference for policies that balance firmness and détente. Thus, in all countries, we expect a significant, negative coefficient for measures of change in defense spending in any model of public opinion response.

We would normally expect the timing of opinion change to be simultaneous because the budget for year T has been debated and legislated, so citizens should know that spending in year T is changing. On the other hand, there is also compelling reason to evaluate the lagged effect of spending changes. A practical reason is that we do not control the timing of the opinion surveys on support for defense spending. Surveys that occur early in the year may tap opinion before the public debate on defense has started. The implementation of the previous year’s budget has already occurred, so citizens have information about the recent evolution of the defense budget, its perceived effect on competing priorities, and debates about both. We therefore test for both possibilities in the models reported below: public support for defense spending is modeled as a function of the percentage change in the defense budget for the current year (T) as well as the percentage change for the previous year ($T - 1$).

Comparative Hypotheses

Do we expect opinion to be more responsive to the defense budget in one country than in another? Focusing just on defense spending, no obvious distinctions come to mind, although it may be that the public is more attentive to defense spending in those countries where defense

⁵ There are few time-series studies of the impact of public opinion on foreign and defense policy more broadly. Shapiro and Jacobs (2000) provide an exhaustive review of the literature on the United States. Brooks (1985, 1987, 1990) studied highly aggregated opinion and policy measures for the United Kingdom, France, and Germany and concluded that policy is congruent with previous opinion “only” about 40% of the time. LaBalme (2000) and Isernia (2000) provide cases studies of the opinion-policy connection in France and Italy, respectively, and both conclude that public opinion is not a negligible factor.

spending is a larger share of the budget and therefore more salient to the public.⁶ The United States is in fact distinct in this regard: an average of 6% of gross domestic product (GDP) has been devoted to defense since 1965, compared to 3% to 4% for Europeans.⁷ To the extent that size and salience matter, we might expect opinion to be more responsive in the United States than public opinion in Europe.

Public spending priorities should also condition public responses to defense spending. Across the five countries under study here, commitments to different civilian priorities vary both in total magnitude and in the structure of the welfare state. Public consumption spending is essentially purchases of goods and payment of salaries to provide public services (education, roads, hospitals). Transfers are exactly what the word suggests: cash payments for retirement, unemployment, sickness, or other benefits.⁸ Different societies value different “baskets” of these types of public spending. In France, cash transfers to individuals dominate spending, whereas in Sweden, the budget is dominated by consumption spending. Any model that includes public priorities must take care to capture these specific spending priorities—a single measure of total public spending would mask the diversity of welfare states.

Another comparative difference is the relative commitment of public opinion to the North Atlantic Treaty Organization (NATO) alliance. The progression is quite clear: the Americans, British, and Germans have placed a high value on the NATO commitment (60%-70% average support), whereas the French have been less supportive (40%-50% average support). The Swedes, of course, reject NATO because they maintain an overwhelming commitment to neutrality.⁹ Because NATO provides a forum in which pressure to increase defense spending is exerted, we would expect public opinion in the more “pro-NATO” states to be more sensitive to arguments that defense spending must meet alliance commitments. To the extent that public opinion responds to pressure to coordinate defense spending, we would expect a positive correlation between relative measures of American and European defense budgets because it is the gap between U.S. and European spending efforts that animates alliance bargaining on defense spending.

A Model of Citizen Responsiveness

In this section, we specify and operationalize a model of citizen responsiveness. We begin with the sources and operationalization of the measure of public support for defense spending. In the five countries under study, government or private polling agencies have inquired about citizen preferences on defense spending, employing a variant of the following question: “Do you think spending for defense is too much, too little, or just about right?”¹⁰ Our

⁶ Research by Wlezien (1995) and Soroka and Wlezien (2002) shows that citizen responsiveness to defense spending is higher than it is to domestic spending in the United States and the United Kingdom, a fact that they attribute to the higher salience of defense spending.

⁷ Figures on spending in this and the following paragraph are taken from the sources listed in the appendix.

⁸ To ease exposition in the following discussion, public consumption spending is referred to simply as *civilian spending* and transfers to households as *cash transfers*.

⁹ Surveys on the North Atlantic Treaty Organization (NATO) were provided by the United States Information Agency (for a summary, see Eichenberg forthcoming); Swedish surveys on neutrality and NATO can be found in Stütz (1988, 1999).

¹⁰ Complete details on sources, question wording, and time coverage for each country are provided in the appendix.

operationalization of support for defense spending in these surveys is net support, computed as follows:

$$\text{Net support} = \% \text{ too little} / (\% \text{ too little} + \% \text{ too much}) \cdot 100.$$

We ignore the neutral response category, “about right,” because our focus is the balance of political debate about increasing or decreasing defense, and we also suspect that the neutral response actually contains a fair number of “nonattitudes.”¹¹ The “too little” and “too much” responses, in contrast, represent what we might call crystallized opinions—an active stand on the issue—and our measure is the percentage of this crystallized opinion that prefers an increase in the current defense budget.¹²

Figure 1 provides an overview of this measure of net support. The figure suggests that the measure is a plausible representation of citizen opinions on defense spending issues. Net support generally follows the contours of the cold war—higher levels of support in the 1960s giving way to decline during the détente of the 1970s, then rising again from the mid-1970s to a peak after the Soviet invasion of Afghanistan in 1979. Support then declined starkly with the Gorbachev détente and the end of the cold war. Indeed, the measure of support for defense spending so closely follows the rise and fall of international tensions as to suggest that it measures perceptions of threat or tension as well as attitudes toward defense spending itself. Support for defense spending began rising once again in the mid-1990s, even with the constraints imposed in Europe by the transition to economic and monetary union.

Defense Spending

We operationalize defense spending as the percentage change in constant price defense spending. To ensure comparability, we use the NATO definition of defense spending as reported in the yearly *SIPRI Yearbook* (Stockholm International Peace Research Institute, various years). As noted above, the specification of the exact timing (lag) in the effect of this variable is ultimately an empirical one because plausible arguments can be made for the likelihood of simultaneous effects (opinion in year T responds to spending change from year T – 1 to year T) as well as for the likelihood of a 1-year lagged effect (opinion in year T responds to spending change from year T – 2 to year T – 1). We therefore test for both possibilities in the models reported below.

Spending Trade-Offs

We noted above that public opinion in both Europe and the United States responds negatively to any trade-off in which defense spending increases more rapidly than nondefense programs. We measure the trade-off phenomenon as follows. We calculate the ratio of defense spending to public consumption spending, as well as the ratio of defense spending to cash transfers to individuals. We then construct dummy variables reflecting the most direct challenge

¹¹ Asher (1998, 26-43) reviews the research demonstrating that neutral response categories often lead to the measurement of nonattitudes.

¹² We prefer the net support measure because of its intuitive interpretation as the percentage of crystallized opinion that prefers an increase in defense spending. However, as an empirical matter, the “increase” and “decrease” responses are essentially mirrors, with negative correlation of about –.85 in each country. See Wlezien (1996) for the same finding in his data for the United States.

to public priorities: those years in which defense spending actually increases faster than each of these spending categories. These are labeled *trade-off: civilian spending* and *trade-off: cash transfers* in the tables that follow.¹³ In addition, because recessions frequently raise demands for countercyclical spending on civilian programs, we specify a dummy variable for years of negative GDP growth. We expect a negative sign on the recession variable.

External Environment

We seek to model the effects of alliance dynamics and external threat. National leaders in NATO states will find themselves under pressure to maintain alliance commitments to defense spending to avoid the impression of “free riding.” Presumably, this pressure finds its way into domestic debates on the defense budget in the form of a comparison of a state’s (K) recent growth rate to that of the United States. We measure this comparison as follows: the “gap” between the real percentage growth of U.S. defense spending and the real percentage growth of each state’s defense spending (i.e., % change U.S. defense spending – % change K defense spending). We evaluated both a simultaneous and a lagged version of this gap measure, but only the lagged version (T – 1) proved to be of any significance.

We also specify a number of behavioral measures of external conflict and threat in the equations for change in support for defense spending. There are two categories: one is the conflict involvement of the Soviet Union, and the other is the conflict involvement of the particular country under study.

The cold war was a major part of the international environment of all the major Western countries, including Sweden, whose geographic location required that it be attentive to cold war tensions. Thus, all of the countries in the study should pay close attention to the conflict involvement of the Soviet Union. As it rises, this should be an indication of an increasing threat to citizens in the countries under study. We also measure the conflict involvement of each state. Short-lived conflicts should produce a “rally ’round the flag” effect in the public and a concern for the defense preparedness of the country. Longer, costly, and inconclusive conflicts should reduce the level of support in the public.

We include two types of international conflict in our analysis: militarized interstate disputes (MID) and wars. We rely on the Correlates of War project data for measures of both forms of conflicts. Militarized interstate disputes are united historical cases of conflict in which the threat, display, or use of military force short of war by one state is explicitly directed toward the government, official representatives, official forces, property, or territory of another state (Jones, Bremer, and Singer 1996, 163). Our measure is the number of MIDs involving the state.¹⁴

¹³ In earlier versions of this study, we estimated the impact of the defense/civilian ratios themselves. Not surprisingly, these ratios are heavily correlated with defense spending change (the numerator in the measure), so they were discarded in the final analyses reported here.

¹⁴ The Correlates of War (COW) project militarized interstate dispute (MID) data set currently ends in 1992. We therefore updated these data through Keesing’s Record of World Events (<http://libnet.ac.il/~libnet/keesings/htm>). We obtained the data by checking all entries under the annual index heading of “Defense” for each country and coded an MID if an event met the definition provided in the text above. Given the changing nature of military operations in the recent era, we included military operations in support of peacekeeping and peacemaking. Such operations would not necessarily be included in the MID data unless the other actor (the actor other than the state involved in this study) was also a state.

A war is sustained combat between states that produces at least 1,000 battle deaths (Small and Singer 1982). Soviet wars are coded as a dummy variable. Because Soviet war involvements during this time period all begin late in the year, and we wish to make sure that we do not have an independent variable that takes on its values after the dependent variables of the study, we code a 1 for 1969 (after the Soviet invasion of Czechoslovakia) and for 1980 (after the Soviet invasion of Afghanistan).

For the United States, we also specify the impact of the Vietnam War. The years of direct U.S. involvement in a combat role were 1965 to 1973. To reflect the initial support for the war, followed by the growing disenchantment among the American people (Mueller 1973), we code a 1 for 1965 through 1968 and a -1 for 1969 through 1973. The other countries in the study are coded quite simply. Britain's war dummy is coded 1 in 1982 (the Falklands/Malvinas War) and in 1991 (the Gulf War). France's war variable is coded 1 for the Persian Gulf War as well. There are no war involvements for Germany or Sweden during the time under study.¹⁵

Results: The Responsiveness of Public Opinion¹⁶

The results are reported in Table 1. The striking feature of the analysis is the predominance of the "thermostat." In all countries but France, opinion reacts negatively and significantly to change in defense spending (in either the current or previous year). In France, sensitivity to the civilian spending trade-off variable is most significant, whereas in Britain, a trade-off of defense for transfer spending is significant in addition to the lagged change in the defense budget itself. The defense spending variables or trade-off variables are reliably significant and in the negative direction predicted by the thermostat model of public responsiveness suggested in the work of Wlezien (1995, 1996, forthcoming) and others. In summary, controlling for the effects of events in the external environment, public opinion in all five countries is highly responsive to change in defense and civilian spending in precisely the direction predicted by theory and previous research.¹⁷

In three cases (France, Germany, and Sweden), a recession does indeed lower support for defense spending—further evidence that civilian spending is a higher priority. In Britain, it is the opposite: recession is associated with an increase in support for the defense budget, perhaps suggesting that the British public see defense spending as an instrument of countercyclical policy.

It is also worth noting that in the three cases in which there is a potential clash of civilian and military priorities—the negative trade-off and/or recession relationships in Britain, France, and Sweden—the magnitude of the negative parameters is much larger than those for defense spending itself. Changes in the defense budget provoke a 1% or 2% decrease in net public support, but spending trade-offs or recession lower support by 18% to 20% or more.

¹⁵ Germany did not engage in combat in the Gulf War and thus does not meet the COW criterion for participation in a "war." In addition, the period from 1990 to 1991 saw the unification of Germany and the collapse of the Soviet Union. Thus, a dummy variable coded 1 in 1991 for Germany would have an ambiguous interpretation, to say the least.

¹⁶ All of the statistical analyses reported in this study were performed with Stata/SE 7.0 for Windows, updated through June 2002 (Stata 7.0 executable file and .ado files updated to August 13, 2001).

¹⁷ We also conducted vector autoregressions (VARs) to see if the reverse is true, that is, that prior levels of public support somehow Granger "cause" changes in defense spending. The results of these VAR analyses allow us to reject this hypothesis.

Variables in the external environment have an effect in each country—but each in their own way. The alliance dynamics variable has little relationship to change in public opinion; apparently, citizens are sensitive to their own country's defense spending but not to any comparison with U.S. spending growth. Not surprisingly, a state's war involvement (United States, France) or the Soviets' war involvement (Germany, Sweden) evokes an upward change in public support for defense spending. Militarized disputes (MID) work their way differently in each country. In Sweden, it is the recent dispute behavior of the Soviet Union that has the strongest impact on opinion. Public opinion in France, in contrast, reacts most to its own state's dispute behavior. With the exception of the British, however, public opinion reacts in the predicted direction and, for the most part, significantly to some measure of the external conflict environment.

One apparent curiosity remains to be discussed: the fact that one spending trade-off variable in Sweden is *positively* and significantly related to change in defense spending opinions.¹⁸ We think it unlikely that this relationship should be taken literally: that the public is endorsing the slower growth of civilian spending relative to defense spending. More likely, the higher relative growth of defense spending in these trade-off years occurs at times of heightened perceived threat in Sweden that is not captured by our behavioral measure of external conflict—a pattern that would explain the public's apparent endorsement of a “guns for butter” trade-off. The effect is presumably unmeasured because we have already controlled for threatening behavior in the environment, and there is in fact little colinearity between the trade-off variables and the conflict behavior variables. This interpretation is strengthened through an examination of a separate Swedish opinion series that measures the perception of the “risk of conflict in Europe.”¹⁹ The spikes in this series correspond very closely to those years in which defense spending grew faster than nondefense spending: the period from 1979 to 1984, a time of heightened tension in Sweden because of the repeated incursion of Soviet submarines in Swedish waters, and the period from 1991 to 1998, when Swedish worry was apparently aroused by German unification and events in the Balkans and Russia. Although Sweden was involved in only one MID during these years (and the Soviets only in 1978, 1982, and 1985), clearly Swedes were concerned about the risk of conflict in Europe, and this helps to explain why there was no negative reaction—indeed, there was positive reaction—to the spending trade-offs in these years.

Of course, this interpretation points to the desirability of including perceptual measures of threat in the models, but achieving a cross-national data collection of this kind poses a daunting challenge.²⁰ For the moment, we must be content with the rather robust finding that, controlling for conflict behavior, citizens in the five states studied here react to change in defense spending in a “thermostatic” fashion, and in some they react all the more so when defense spending grows faster than nondefense spending or when recession highlights domestic priorities. This is presumably a fact that is not lost on governments, the subject to which we now turn.

¹⁸ The same is true of trade-off variables in Britain and France, but they were eliminated from the estimates because of colinearity with the defense spending variable (Britain) or other trade-off variables (France).

¹⁹ The series is taken from the same source as that for Swedish opinions of defense spending (see appendix).

²⁰ Note that Wlezien (1996) controlled for perceptions of the Soviet threat (dislike of the Soviet Union) and still found a strong impact of defense spending on public support for defense spending in the United States.

Representation in the Defense Budgeting Process

There is a rich comparative literature on defense budgeting as a decision-making process. It suggests four near-universal features of defense budgeting in Western democracies.²¹ First, the nature and sequence of tasks in the budgeting process are nearly identical. In years prior to the presentation of the budget, the overall government spending total is first established, and then the division between defense and nondefense spending is established in a “macro”-budgeting phase. Second, as much as 2 years prior to the presentation of the budget, chief executives and finance ministers establish the spending total, and bottom-up bargaining then begins between the finance minister and the spending ministers. Third, budgeting is incremental. There is little desire to consider the entire package of government priorities each year. The focus is on marginal change. Finally, defense budgeting is strategically ambiguous. Budgetary bargaining about defense takes place in an environment of great uncertainty about the threat and the most appropriate response to it. The outcome of the bargaining process is affected by a variety of factors, including alliance pressures, the external conflict environment, the status of the economy, and the competition with domestic spending priorities. For students of representation, the crucial question is whether out-comes are also influenced by citizen preferences.

Modeling Representation and Change in Defense Spending

Our dependent variable is the *change (constant prices)* in defense spending from year $T - 1$ to year T . The independent variables in the model represent the factors reviewed above: *net public support* for defense spending, *macro-budgeting* considerations, and *external threat*. To these, we add a fourth set of variables to control for *partisan effects* on defense budgeting outcomes.

Net Public Support

We operationalize public support for defense spending using the net support measure discussed above. In the discussion of budgetary decision making, we noted that formulation of the budget in some countries can begin as much as 2 years before the budget is actually expended in year T (finance ministers often request agency submissions in the fall of year $T - 2$ for expenditures in year T). The actual impact of public preferences may depend on institutional features. In all political systems, chief executives and finance ministers begin work on the budget toward the end of year $T - 2$ and finalize it during year $T - 1$. Legislatures examine the budget during year $T - 1$, generally in the fall. In the United States, we would expect citizen opinion during this period of deliberation ($T - 1$) to affect Congress and thus the amount of expenditure approved. In European systems, it is likely that little will change in the defense budget request that was announced earlier in the year because European legislatures have little authority and make only minor changes in the government’s defense budget.

These differences are revealed in the bivariate correlation between public support for defense spending at different lags and change in defense spending in year T (not shown).²²

²¹ Unless otherwise cited, this section draws on the following: Crecine (1970), Eichenberg (1981), Wildavsky (1982), Lord (1973), Yost (1978), Kanter (1979), Greenwood (1982), Martin (1981), Taylor (1982), and Wilson (2000).

²² A table of bivariate correlations between lagged values of support and subsequent spending is included in the replication package on the Journal of Conflict Resolution Web site and at <http://www.ruf.rice.edu/~stoll>.

Significantly, it is only in the United States that the strongest correlation occurs with public support in the immediately preceding year—confirming Wlezien’s (1996) finding that Congress does indeed change presidential requests on the basis of the most recent public sentiment. In Britain, the strongest correlation occurs at $T - 2$, and in France, Germany, and Sweden, it occurs as early as $T - 3$! What these correlations suggest is that a target for defense spending is set quite early in European systems, that public sentiment is a strong correlate of that target, and that parliaments make little change in the defense total. In short, the correlations confirm an important feature of research in the U.S. context and indicate that European defense budgets are largely executive matters decided on the basis of early budgetary planning.

The impact of public sentiment on budgetary deliberations could thus occur as early as 2 or even 3 years before actual expenditures (when budgetary guidance, agency requests, and bargaining with chief executives begins) or as late as the year before expenditures, when chief executives finalize budgets and legislatures conduct deliberations. For this reason, we evaluated the level of net support for defense spending in years $T - 1$ through $T - 3$ and report the most reliable estimates. We expect a positive sign on the coefficients for net support.

Macro-Budgetary Constraints

Budgeting begins when chief executives and finance ministers assess the amount of total expenditure that is consistent with economic conditions and then attempt to enforce this macro constraint on spending agencies. In the case of defense spending, the outcome of this macro-bargaining process depends on three factors: the growth in revenues, the pressures that arise from the *deficit*, and the special circumstances of recession, which lend support to arguments for countercyclical spending. We operationalize these pressures in the equation for change in defense spending. The model includes the following:²³

Change in revenues: the constant price change in revenues ($\text{Revenues}_t - \text{Revenues}_{t-1}$),

Deficit: total revenues – total expenditures,

Recession: a dummy variable for years in which constant GDP declines.

Although one could argue that the effect of these variables should be simultaneous, there is in fact reason to expect that recession and deficits in the previous year will in fact affect the outcome of bargaining. Budget preparation occurs 1 to 3 years before actual expenditures, and a deficit in those years casts a shadow on budgeters. Thus, in evaluating the models, we estimated the impact of recession and deficits in the prior year ($T - 1$) on the change in defense spending for year T .

²³ One might ask why we do not include a full series of standard measures of economic performance. There are three reasons. The first and most obvious is parsimony. The second is that our reading of the budgeting literature tells us that the quantities listed here are precisely those projected (estimated) by budgeters and employed in the macro-budgetary phase. Thus, the third reason is not surprising: domestic product, revenues, deficits, and recession are themselves highly intercorrelated

External Environment

The *external conflict* and *alliance dynamic* variables are the same as those specified in the analysis of change in public support: war involvements, MIDs, and the gap in defense spending change between the United States and each state in the analysis.

Partisan Control

Conventional wisdom holds that conservative governments and legislatures are more sympathetic to defense spending than are labor or social democratic governments. What is more, there is evidence that partisan cleavages are a major fault line in both American and European public opinion on defense spending and other security issues at the individual level (Flynn and Rattinger 1985, 378-79; Eichenberg 1989, 186; Wittkopf 1990). Finally, in the American case, Wlezien (1996, forthcoming) shows that partisan control of the presidency as well as Congress from 1973 to 1994 was a substantial factor determining defense budgeting outcomes.

We are a bit more ambivalent than the conventional wisdom. Even a cursory study of European and American chief executives would reveal some on the “left” who were proponents of a strong defense—or at least proponents of a balanced commitment to defense and negotiation (Kennedy or Johnson in the United States and Helmut Schmidt in Germany come to mind). In addition, in Europe especially, parties of the right are actually parties of the *center-right*—few Christian Democrats or Gaullists question the consensus that surrounds the commitment to the welfare state. Finally, it is worth noting that the end of the cold war and the consequent reductions in defense spending occurred in some prominent cases under Conservatives: Bush, Thatcher/ Major, Kohl, and—partially—under conservatives in Sweden and France. Despite these counterexamples, one must still assess the possibility, so we evaluated two measures of conservative control of the political system: the presence of a conservative *chief executive* and the percentage of *seats in the legislature* that are held by conservative parties. Only the measure of conservative legislative seats revealed any substantial impact, so the chief executive variable is not reported here.²⁴

Results: Representation and Change in Defense Spending

Recall that the central empirical question is this: controlling for other factors that influence the yearly change in defense spending, is there evidence that governments respond to public opinion when making defense spending decisions? The results in Table 2 indicate clearly that they do.

²⁴ . In the case of conservative seats in the legislature in Europe, we are not so much interested in legislative actions on the budget—the powers of parliaments are quite limited—as we are in the varying indication of conservative political strength that is not revealed by a simple dummy variable for a conservative chief executive. We also evaluated the voting strength of conservative parties as an impact on subsequent budgeting outcomes but found it to be even less significant than the two variables mentioned here.

Public Support for Defense Spending

Public opinion does indeed influence defense spending. Net support for defense spending has a positive and reliably significant impact on change in defense spending in all countries but Sweden. Indeed, public support at some prior moment is the most consistent predictor of change in defense spending across countries; the other variables in the model are both weaker and less consistently related to defense spending.²⁵

This is no small finding. As we noted above, the published evidence is that public opinion affects defense budgeting in the United States, but very little comparative evidence on the subject existed. These results show that governments respond to public opinion in other democracies as well. Moreover, that influence occurs in political systems with widely varying institutional structures: strong independent executives in France and Britain compared to the more open institutional and party structures of Germany and the United States. Representation, it seems, can take different routes.

The estimates also confirm how institutions mold—but do not vitiate—the representation of citizen preferences. In the United States, public opinion in the immediately preceding year is the most significant, a result that squares with the role of Congress in final appropriations. In Europe, the impact of public opinion occurs earlier, reflecting the dominance of the chief executive and especially of finance ministries that set budgetary targets quite early. It may also explain the negative impact that deficits have in Britain, France, and Germany: in these countries, finance officials can cut defense in the face of budgetary constraints without fear of parliamentary contradiction. In summary, our results confirm not only that representation is a widespread phenomenon in democracies but also that it reflects the institutional contours of the budgetary process across these four states.

Why is public support unrelated to defense spending in Sweden? The answer is as obvious as it is frustrating: the Swedish defense budget is difficult to model with *any* set of predictors. These poor results are probably the result of a combination of two facts: Swedish public support for defense spending is by far the highest in this study (an average of 50% compared to 39% in the United States), and Swedish defense spending varies *least*. These two facts are consistent with Sweden's grand strategy: high popular support for a steady commitment to armed neutrality.

The singular feature of the variables representing the *external* environment is their surprisingly weak relationship to any change in defense spending. There is no evidence of free riding: in fact, the impact of U.S. defense spending is a significant impact only on British spending, and the effect is positive. The evidence therefore suggests that Britain is relatively more open to alliance coordination of defense spending, a finding that squares with the image of the British attachment to NATO and a “special relationship” with the United States.

What explains the weakness of the *external* variables that are so central to students of international relations? One obvious answer is that the opinion series on defense spending already captures—and better measures—threat *perceptions*. In addition, we noted earlier that defense budgeting is strategically ambiguous: no magic formula yields an optimal level of “security” for any threat. In the absence of such certainty, defense budgeting becomes the “art of the possible” (Wilson 2000, 14), and that is precisely the pattern that the regression estimates

²⁵ Based on extensive analysis, we found no VAR evidence that the reverse is true (i.e., that current or even future changes in defense spending somehow Granger “cause” past levels of public support).

reveal: defense budgeting is primarily a function of available public support and the resources on hand.

We should also note that the weak impact of the dispute and war variables is not due to the spending cuts of the post-cold war era.²⁶ As Table 2 shows, a simple “post-cold war” dummy variable is significant and negative only for the United States. This makes sense for the United States, which was after all the Soviets’ principal protagonist, and the absence of any effect in Europe confirms once again that Europeans (with the exception of the Swedes) base defense budgeting decisions largely on fiscal and domestic political considerations.

The impact of the partisan control variable is slight. Only in Britain is the percentage of conservative legislators related to change in defense spending. If one wishes to relax the .05 level of significance as the ultimate arbiter, we find a relationship in Germany and Sweden, but the sign of the coefficients is negative. But as it happens, Conservatives held power in Germany (and briefly in Sweden) in precisely the years that defense spending was cut because of reduced post-cold war threats. The pattern therefore confirms an argument that we made earlier. Although those on the right might be more ideologically and rhetorically in favor of a strong defense, rhetoric frequently gives way to practical realities.

Summary of Results: Representation in Defense Spending

We think it important to look beyond nation-specific variations on the defense budgeting theme. It is not surprising that different political systems with different systems of taxation and spending should reveal a slightly different mix of macro-budgetary influences on defense spending. The important point is that, controlling for these specific influences on national decisions on defense spending, the impact of citizen opinion remains a significant influence on marginal changes in the defense effort.

Conclusions and Implications: Toward a Comparative Theory of Representation

We posed three questions at the outset of this article: are citizens in all democracies responsive to policy change? Is the *form* of the response similar? Are all democracies representative?

We take the first two questions together. We have demonstrated that citizens in five democracies are indeed responsive to change in defense spending. Furthermore, the form of that response is uniform across countries. Our analysis demonstrates the general applicability of the thermostat process underlying citizen response to spending behavior (Wlezien 1995, 1996, forthcoming) and also to the generality of the theory underlying such behavior (Stimson 1995, 1999). What we knew on the basis of strong evidence to hold for public opinion in the United States is now shown to hold more generally.

Although evidence and logic from the United States supported the plausibility of Stimson’s (1999, xxii) assertion that such a model of public opinion “ought to transfer across national boundaries with a minimum of difficulty,” students of comparative politics could with equal plausibility entertain the opposite view. British, French, German, and Swedish political culture; party and electoral systems; and governmental institutions (not to mention public

²⁶ Before 1990, defense spending in these five states increased in real terms 60% of the time; after 1990, defense spending decreased 60% of the time, despite substantial dispute behavior in the Persian Gulf and the Balkans.

policies) display a great deal of variety. Party and electoral systems are in fact quite distinct, ranging from the historically consensual British system to the more polarized, multiparty system in France. Yet despite all of this variety, opinion dynamics in the case of defense spending are in fact quite uniform. What this suggests, is that citizen reaction to government policy is in fact a fairly simple and readily understandable process.

Are democracies equally representative? In four out of five countries, defense budgeting outcomes are positively and significantly related to the level of public support at some prior moment. But there is a difference. In the United States, the most recent level of support conditions defense spending, but in European states, the public constraint is exerted earlier. This result obviously suggests the importance of an institutional difference: the U.S. Congress exerts power over the budget up until the moment of appropriation, whereas European executives can establish and enforce budgetary guidelines much earlier. However, this serves to confirm the general: in four countries, defense spending is consistently related to some prior level of popular support. Indeed, the level of popular support is the most significant and cross-nationally consistent predictor of change in defense spending. Change in defense spending is most strongly correlated with the level of popular support at precisely the time that the most powerful political actors are finalizing the defense budget. Governments are responding to citizen preferences.

Representation in our results looks much the same in the four countries that exhibit it. Although the timing of the impact of citizen sentiment varies, the process looks very much like the characterization cited at the outset: “Public sentiment shifts. Political actors sense the shift. And then they alter their policy behavior at the margin” (Stimson, MacKuen, and Erikson 1995, 543). Based on the results in Table 2, this is as true for Britain and France, with fairly closed executive decision making, as it is for the United States and Germany, with governmental, electoral, and party systems that are more open and competitive. We therefore have comparative evidence that opinion dynamics and representation are not confined to the United States—something we could not say before. The results therefore suggest that comparative research on opinion responsiveness and policy representation will yield results that build toward a comparative theory of representation across political systems with a variety of institutional features.

Our results also have important implications for the short-term future of defense decision making. In both the United States and Western Europe, the short-term outlook is for pressure to increase defense spending to fund the “war against terror,” to modernize NATO capabilities, and to implement the European Union’s common security force. Will public opinion support these increased expenditures? Only 10 years ago, the prospect would have seemed close to ridiculous. Throughout the 1990s, citizens and governments on both sides of the Atlantic were interested primarily in cutting defense. Nonetheless, our model shows that such cuts eventually result in increasing support for defense, and this is essentially the dynamic that public opinion has followed. In all five countries, public support is higher than it has been in some time.

Yet our results on the response of public opinion to defense spending suggest that the manner in which governments increase defense expenditures is also critical. We have shown that the reactions of citizens to increases in defense spending will be to lower their support for defense in the future, but an even more prominent pattern is that this support will erode most noticeably if increases in defense outpace spending for civilian purposes or, indeed, if the former increases while the latter are cut. And it is here that American and European governments find themselves in a bind. In the United States, defense spending has increased prodigiously and contributed to a deficit even as the economy has soured and civilian spending has come under

pressure at all levels of government. In Europe, consolidation of deficits was achieved prior to Economic and Monetary Union (EMU), but this was no easy task. What is more, demographic pressures on social spending programs mean that they will either take an increasing share of the budget or must be reformed (which would mean slowing their growth or actually cutting expenditures). Of course, the latter path is likely to provoke a decline in public support for defense spending.

What this suggests is that the window for defense spending increases is a narrow one. Some increases in European defense budgets seem possible. However, given the continuing deficit limitations under EMU and the likely necessity of constraining civilian spending growth, support for any defense spending increases is likely to be short-lived and will require a talent for managing the relative growth of defense and social spending budgets. In the United States, prodigious increases in defense, the reemergence of deficits, and the restraint and even cutting of civilian spending probably mean that the period of increasing support for defense is over.

APPENDIX

Data Sources and Definitions

This is an abbreviated discussion of data sources and definitions. A more detailed version of this appendix appears in our replication package.

I. Public Opinion—Public Support for Defense Spending

United States

The core series for the United States is the spring (March) surveys reported by the General Social Survey (GSS). The question reads, “Are we spending too much, too little, or about the right amount on armaments and defense?” This question is available with some gaps from 1973 through 1998 and is supplemented as follows. For 1960, 1979, and 1981, we use a similar question posed by the Gallup Organization: “There is much discussion as to the amount of money the government in Washington should spend for national defense and military purposes. How do you feel about this? Do you think we are spending too little, too much, or about the right amount?” For 1965, 1966, and 1967, we are grateful to Thomas Graham for providing results of surveys conducted by the General Electric Corporation. This question states, “I would like to get your opinion on several areas of important expenditures, first on the part of the government. As I read each one, please tell me if you would like to see the government spend more, spend less, spend about the same amount.” The years 1968 and 1972 are estimated by the regression technique described in replication materials on the Journal of Conflict Resolution Web site, using the Stimson (1999, 141) index of defense spending “mood,” which is itself an index of responses from many different surveys on defense spending. The correlation between this Stimson index and our core GSS item is .94. There are no interpolated data points for the United States, and the final opinion series covers the period 1960, 1965-1998.

Great Britain

The core data series is from Social Surveys Ltd. (British Gallup) and covers the period 1961, 1965, 1968, 1975-1995. The question reads, “Do you think the government is spending too much, too little, or just the right amount on... armaments and defence?” Data for 1984, 1987, 1996, and 1997 were estimated using the regression technique mentioned above, employing responses to two similar questions on defense spending that appear in The British Social Attitudes Cumulative Sourcebook (1990), or provided by the staff of the British Social Attitudes Survey. The correlations between our core British Gallup series and the British social attitude series used in our estimates are .86 (oppose cuts in defense spending) and .81 (defense spending should be increased, decreased) ($n = 5$ and 6 , respectively). A listing of the Gallup data through 1987 appears in Eichenberg (1989). Later years are provided by British Gallup. The final series for Great Britain covers the period 1961, 1965, 1968, 1975-1997.

France

The core series (1984-1998) is taken from yearly (June) surveys conducted on behalf of the French government by SOFRES (<http://www.sofres.fr/default.asp>). The series was taken

directly from unpublished ministry sources, but the results are also occasionally published in the institute's yearly *L'État de l'Opinion* or on the SOFRES Web site. The question reads, "In your opinion, is it desirable (*souhaitable*) that the share of the government budget devoted to defense be increased, decreased, or stay about the same as it is now?" Data for 1968, 1971, 1972, and 1979-1983 are from surveys conducted by the United States Information Agency and reported in Eichenberg (1989). Translations from French are ours. The final French series covers the period 1968, 1971, 1972, 1979-1998.

West Germany

All data are from surveys conducted by the Federal Ministry of Defense. The question for the core series reads, "Security costs money. In your opinion does the Federal Republic spend too much, too little, or just the right amount on defense?" Data for 1970 are estimated by averaging responses from adjacent years. A listing of the data through 1987 appears in Eichenberg (1989). We are grateful to Hans Rattinger of Bamberg University for providing results from later years. Translations from German are ours. The final German series covers the period 1967-1998.

Sweden

The core question reads, "In your opinion, should expenditures for defense be increased, kept the same, or decreased?" Data for 1962, 1964, 1966, and 1970 are estimated by averaging responses for adjacent years. All data are from Stütz (1988, 1999). Translations from Swedish are ours. The Swedish series covers the period 1961-1998.

II. Economic and Civilian Spending Data

Data for GDP in current and constant prices (and the implicit GDP deflator yielded by these data) are taken from the *National Account Statistics for OECD Member Countries: Vol. 1. Main Aggregates* (Organization for Economic Cooperation and Development [OECD], various years). All revenue, spending, and deficit data are from OECD national accounts (*National Account Statistics for OECD Member Countries: Vol. 2. Detailed Tables*, various years) and are taken directly from the data collection of Thomas Cusack, to whom we owe our thanks. The data are downloadable from <http://www.wz-berlin.de/~tom>.

III. Spending Data

Defense spending data for all countries are outlays (NATO definition) and are taken from the *SIPRI Yearbook: Armaments, Disarmament and International Security* (Stockholm International Peace Research Institute, various years). Constant defense spending is calculated using the implicit GDP deflator calculated from OECD sources (see section II above).

IV. External Conflict

See detailed discussion and references in main text. The list of interstate wars and militarized interstate disputes discussed in the text can be downloaded from <http://pss.la.psu.edu/DATARES.HTM>.

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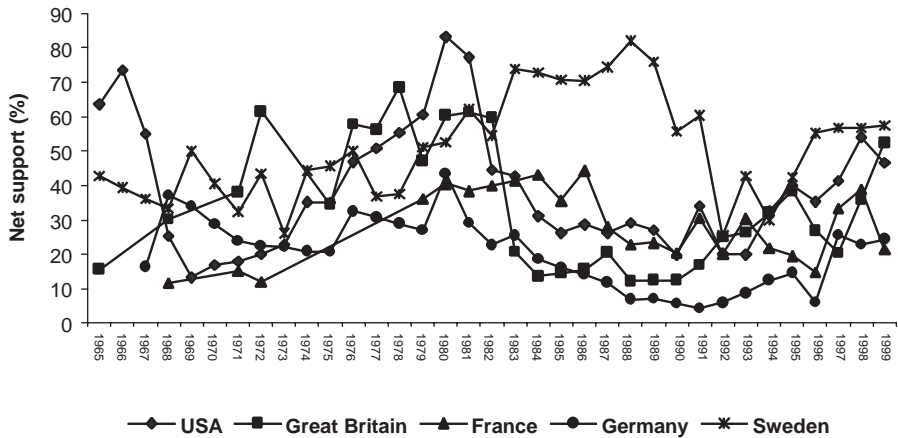


Figure 1: Net Support for Defense Spending in Five Countries

TABLE 1
Regression Estimates of Change in Net Support for Defense Spending

	<i>United States</i>	<i>Great Britain</i>	<i>France</i>	<i>Germany</i>	<i>Sweden</i>
Defense spending					
Percentage change in defense spending (year T)	-0.13 (0.60)	1.27 (0.61)	1.03 (0.66)	-0.96* (0.42)	-1.18** (0.38)
Percentage change in defense spending (year $T - 1$)	-1.07* (0.47)	-1.24** (0.33)	-0.40 (0.22)	0.28 (0.28)	0.69 (0.39)
Spending trade-off variables					
Trade-off: change in defense/cash transfer ratio positive (year T)		-18.92** (4.62)			
Trade-off: change in defense/civilian spending ratio positive (year T)	-7.14 (5.14)		-21.54** (4.35)	0.24 (3.15)	10.55** (3.03)
Recession	0.76 (5.19)	21.05** (5.56)	-18.65** (4.37)	-3.47 (4.19)	-18.30** (3.25)
External environment					
Alliance dynamics		0.32 (0.28)	0.23 (0.17)	0.06 (0.27)	-0.04 (0.15)
External conflict					
War involvement	12.56** (3.80)	-31.87** (9.89)	10.25* (4.00)		
Number of militarized interstate disputes (year $T - 3$)	0.02 (0.88)	-1.65 (0.95)	2.38** (0.37)	2.41 (2.12)	-4.87 (2.58)
Soviet war involvement	10.67 (13.62)	-5.49 (11.13)	13.25 (7.54)	13.99* (5.76)	11.96** (4.01)
Number of Soviet/Russian militarized interstate disputes (year $T - 1$)	1.45 (1.36)	-4.26** (0.83)	4.37** (0.76)	-0.42 (0.99)	2.37** (0.64)
Number of Soviet/Russian militarized interstate disputes (year $T - 2$)	1.78 (1.12)	1.37 (0.87)	-2.06* (0.80)	-0.14 (0.89)	-1.94* (0.85)
Constant	-0.90 (3.52)	8.86* (3.07)	-2.21 (1.22)	-0.48 (2.12)	1.38 (1.30)
n	32	22	20	31	37
R^2	0.54	0.90	0.90	0.41	0.67
Durbin-Watson	1.81	1.86	2.33	2.32	2.26
ρ	0.16	-0.74	-0.82	-0.37	-0.74

NOTE: Ordinary least squares with robust standard errors for United States and Germany. Due to strong evidence of residual autocorrelation, Prais-Winsten regression with robust standard errors is used for Great Britain, France, and Sweden. The Durbin-Watson for these countries is the transformed Durbin-Watson. Values in parentheses are standard errors.

*Significant at the .05 level. **Significant at the .01 level.

TABLE 2

Regression Estimates of Change in Defense Spending

	<i>United States</i>	<i>Great Britain</i>	<i>France</i>	<i>Germany</i>	<i>Sweden</i>
Net support for defense spending					
Net public support (year $T - 1$)	404.02** (141.61)				18.64 (17.82)
Net public support (year $T - 2$)		51.84** (9.44)			
Net public support (year $T - 3$)			251.13* (100.08)	174.38** (38.24)	
Macro-budgetary constraints					
Recession (year $T - 1$)	-1850.74 (8263.30)	-731.22 (473.80)	4665.03 (3425.55)	323.99 (758.98)	1086.50* (450.32)
Change in revenues (year $T - 1$)	0.02 (0.07)	-0.04 (0.03)	0.03 (0.02)	0.01 (0.01)	0.01 (0.01)
Deficit (year $T - 1$)	399.05 (1800.09)	-268.60** (86.92)	-887.80 (508.49)	-668.22 (345.85)	126.37 (72.80)
Percentage legislature seats conservative parties (year $T - 1$)	316.66 (349.69)	36.71* (15.43)	125.44 (131.91)	-285.77 (167.45)	-117.23 (67.55)
External environment					
Alliance dynamics		84.89* (35.66)	18.07 (227.37)	3.05 (62.85)	-37.49 (20.54)
War involvement (year $T - 1$)	13318.08 (7357.98)	-224.79 (705.56)	-797.00 (4542.56)		
Militarized interstate disputes (year $T - 1$)	-233.81 (1285.47)	194.61 (155.83)	-777.07* (418.82)	253.14 (229.94)	-636.66 (328.30)
Soviet/Russian militarized interstate disputes (year $T - 1$)	1269.73 (1123.93)	-105.72 (123.11)	122.84 (575.80)	-595.88 (221.64)	189.33 (100.86)
Post-cold war control	-14853.92* (6142.38)	657.04 (396.56)	569.37 (1824.49)	824.60 (1301.36)	-439.01 (614.46)
Constant	-25938.43 (14861.3)	-3033.17* (1061.15)	-11081.2 (5571.01)	10655.29 (8099.48)	981.96 (1082.85)
n	33	27	20	29	37
R^2	0.70	0.84	0.86	0.75	0.46
Durbin-Watson	1.95	2.19	1.42	2.10	2.01
ρ	-0.02	-0.65	-0.57	-0.24	-0.01

NOTE: Ordinary least squares with robust standard errors for all countries except Britain and France. For Britain and France, Prais-Winsten regression with robust standard errors, using final value of ρ shown in table. Durbin-Watson for Britain and France is the transformed Durbin-Watson. Values in parentheses are standard errors.

*Significant at the .05 level. **Significant at the .01 level.