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Public Spending, Public Deficits and Government Coalitions

André Blais, Jiyoon Kim and Martial Foucault

University of Montréal

This study examines the relationship between types of government and level of public spending. There are two competing perspectives about the consequences of coalition governments for the size of public expenditures. The most common argument is that government spending increases under coalition governments, compared with one-party governments. Another line of thought contends that coalition governments are often stalled in the status quo due to the veto power of each member. Our analysis of public spending in 33 parliamentary democracies between 1972 and 2000 confirms the latter argument that coalition governments have a status quo bias. We find, particularly, that single-party governments are apt to modify the budget according to the current fiscal condition, which enables them to increase or decrease spending more flexibly. By contrast, coalition governments find it difficult not only to decrease spending under difficult fiscal conditions but also to increase it even under a more favorable context, because each member of the coalition has a veto power.

This study focuses on the impact of the number of parties forming the government on the overall level of public spending. The conventional wisdom is that public spending increases as the number of parties in government increases. We propose another perspective, inspired by the veto player model. According to that perspective, the number of parties in cabinet affects first and foremost the government's capacity to shift spending in response to a new fiscal context. The implication is that coalition governments have a status quo bias, compared to single-party governments.

The standard view in the literature is that public spending should increase with the number of parties in government. The typical interpretation is that coalition governments are less willing or able to resist pressures for more spending, the so-called common-pool problem. Because the benefits of government intervention are more concentrated than its costs, most groups have an incentive to push for more spending. The propensity to overspend should be greater when the government is made up of many coalition parties, none of which wants to take responsibility for resisting 'legitimate' demands, than when it is made up of a single party (Kontopoulos and Perotti, 1999; Persson and Tabellini, 2003, pp. 26–7).

The argument is that if parties in a coalition government apportion the different departments among themselves, if each minister controls his or her own department (Browne and Franklin, 1973; Laver and Shepsle, 1990) and if none of the partners is willing to take responsibility for resisting demands from the other parties, the most likely outcome (assuming that each minister prefers to have a larger budget) is for total spending to go up.

However, there is another theoretical perspective, provided by George Tsebelis (1995). If each coalition partner has a veto power on the overall orientation of government policy, the

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predicted consequence of a coalition government would simply be greater stability. The presence of coalitions entails the presence of more veto players and the ultimate consequence should be that it is more difficult to bring about change. Coalitions should have a status quo bias. The impact of a coalition should be to pull governments towards no change; it should put a brake on whatever direction a given government is impelled to move towards.

The theoretical prediction thus hinges on the assumption that is made about the nature of the budgetary process in coalition governments. If a coalition enhances the freedom of each minister to increase his or her own budget, the consequence should be higher spending. But if the existence of a coalition (and greater ideological divergence within a cabinet) entails that it is more difficult to bring about change, because of the presence of more veto powers, then the consequence should depend on the context. If the fiscal situation allows for greater spending, the presence of a coalition should partially offset the inclination to spend more, and so the net effect should be less spending compared to single-party governments. From a veto power perspective, coalitions, especially if they are characterized by ideological heterogeneity, should have a stabilizing effect. Governments that are tempted to increase spending would be forced to increase less and those governments that have to cut would cut less. The impact of a coalition should be to make it more difficult for a government to move in the direction it is inclined to go.

We would argue that a crucial contextual variable that needs to be considered here is the overall fiscal situation that a government is faced with. When a government finds itself in a negative fiscal situation (a large debt or past deficits), it needs to redress the fiscal imbalance; this usually entails cutting spending. On the other hand, if there is no debt or if the government has been making surpluses in the past, there is little pressure to cut spending and the temptation to increase expenditures may be irresistible.

Our general hypothesis is thus that single-party governments should be more capable of responding to the fiscal context. In difficult times, single-party governments should be able to make the tough decision to reduce expenditures. In contrast, under a coalition government, reducing the size of expenditures is more difficult, since coalition partners must agree on the necessity of fiscal responsibility, and each one may exercise its veto power. For this reason, we would expect coalition governments to spend more than their single-party counterparts in periods of fiscal imbalance.

This is only one side of the story. In the absence of fiscal constraint, one-party governments would want to provide more public goods with the hope that this will make people happy and that it will increase their chances of being re-elected. Coalition governments, however, may be stalled by internal disagreements about how and where to spend, and the outcome may well be the status quo. In a 'positive' fiscal context, then, coalition governments should actually spend less than single-party governments.

The same logic applies to the exploration of the relationship between government spending level and ideological distance among coalition parties. It is more difficult to reach consensus on budget outlays under ideologically diverse coalition governments than under ideologi-

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cally cohesive governments. Under pressure for contracting the budget in fiscally difficult times, ideologically remote coalition parties are less able to agree on where to cut and may well end up not cutting at all. On the other hand, in fiscally stable times, the increase in spending can be stalled because of the veto power of each member which may have quite different views about where to increase spending. By contrast, ideologically cohesive governments should face little difficulty in expanding or reducing the size of the budget.

A number of studies have confirmed the standard view that public spending increases with the number of parties in government. Torsten Persson and Guido Tabellini's (2003; Persson *et al.*, 2007) seminal research shows that public spending is higher under proportional representation (PR) and that this is so because of the greater frequency of coalition governments observed in PR systems. Likewise, Kathleen Bawn and Frances Rosenbluth's (2006) analysis of public spending in seventeen West European countries from 1970 to 1998 finds a positive correlation between the number of parties in government and increased public spending. We should note, however, that 70 per cent of the cases covered by Bawn and Rosenbluth had fiscal deficits; this could be the reason why they observe a positive relationship.

Other studies have shown the utility of the veto player model. Bawn (1999) provides compelling evidence of the theory. She demonstrates that in Germany the Freie Demokratische Partei (FDP), which was often the minor partner in government coalitions, was able to veto spending increases in 'left-wing' or 'right-wing' areas proposed by its major partner (SPD or CDU/CSU).

Tsebelis (2002) provides additional evidence in support of the veto player model by examining the number of significant legislatures in Western European countries. He emphasizes the ideological range between coalition partners as being a primary source of veto power. He finds that as the ideological difference between coalition partners in government increases, the number of laws adopted decreases. He concludes that 'if there are many veto players separated by large ideological distance, then legislation can only be incremental. If an exogenous shock occurs, a government such as this cannot handle the situation and cannot agree on the necessary policies' (Tsebelis, 2002, p. 605). George Tsebelis and Eric Chang (2004) provide further evidence for the veto player model by exploring changes in budget composition. They find that change in budget structure, which is measured by the Euclidean space distance between two consecutive budgets, is less likely to take place when ideological distance between veto players is large.

Robert Franzese (2002) examines 21 developed countries in his comparative study on veto players and political economy. He concludes that multiple veto players in governments maintain the status quo. The empirical finding nicely supports Tsebelis' veto player theory.

With respect to the size of government spending, Eunyoung Ha (2008) examines how the number of veto players in government and the ideological distance between them affect the size of welfare spending under the pressure of globalization. Her empirical analysis of eighteen advanced countries demonstrates that the increasing effect of globalization on the size of welfare spending is significantly offset by the number of, and ideological distance between, veto players.

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Table 1: Public Spending: Government Type and Fiscal Condition

	Fiscal condition	
Type of government	*Good (surplus)*	*Bad (deficit)*
Coalition government	Status quo	Status quo
Single-party government	Increase	Decrease

We investigate the impact of the number of parties in government on total public spending. We test a model inspired by the veto player perspective, which assumes that the impact of the number of parties in government is to produce a status quo bias.[1] More precisely, the presence of coalitions weakens the impact of pressures for both increased and decreased spending. The effect of coalitions (and ideological divergence) is conditional. We identify the fiscal context as a crucial factor that induces governments to attempt to increase or decrease public spending. We assume that it is easier to increase spending when the books are in good shape and that a high debt or deficit forces governments to cut expenditures. Single-party governments adjust their budgetary decisions in accordance with the fiscal situation. Such adjustments are more difficult to achieve under multiparty governments because of the presence of veto players with divergent political interests. Thus the size of spending remains relatively unchanged under coalition governments.

Table 1 summarizes our theoretical expectations. The central hypothesis is that the impact of the fiscal factor (the previous year's deficit) on public spending is reduced in the presence of coalition governments, because of their status quo biases. Such an argument has not yet been tested on a large sample of countries.

Additionally, we investigate the relationship between size of government spending and ideological distance among coalition partners. Our research should demonstrate that the conditional relationship is not limited to the number of parties in a government, but holds as well when ideological divergence among coalition partners is considered.

Data and Methods

The sample consists of 32 parliamentary democracies and the time period is 1972–2000. To determine whether a country is democratic or not, we use Freedom House ratings of political rights. Only countries that receive a score of 1 or 2 for ten successive years are construed as democratic. We start in 1972 because this is when both Freedom House ratings and fiscal data become available.

We focus on parliamentary systems. We want to determine whether the presence of coalitions increases public spending, and it is only in parliamentary systems that it makes sense to distinguish coalition and single-party governments. We follow the definition and the classification proposed by Matt Golder (2005) and inspired by Adam Przeworski *et al.* (2000). A parliamentary system is one in which the government serves so long as it maintains the confidence of the legislature.

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The dependent variable is the level of central government spending as a ratio of GDP. We only look at program spending and exclude interest payment and military spending in order to avoid outlier problems which might be caused by some countries spending extraordinarily large proportions on military spending.[2] The data come from the IMF Government Financial Statistics (GFS) Yearbook on CD-ROM. We look at central government spending since we are concerned with the impact of the number of parties forming the central government.

A close examination of the dependent variable alerted us to the presence of outliers in cases of hyperinflation. This led us to remove cases where inflation was above 30 per cent. It is difficult to put much confidence in estimates of government spending and/or GDP when prices are climbing at such a pace.

Our most important independent variable is the number of parties in government. The variable is self-explanatory; it corresponds to the number of parties involved in the cabinet. When there is cabinet replacement in a year, we use the weighted average during the year.[3]

As indicated above, the conventional theory argues that the more parties there are in government, the greater the propensity is to increase spending. We assume a more complicated dynamics; the impact of having more parties in government is conditioned by the fiscal context. Therefore, we include an interaction term between the number of parties and the lagged government deficit (surplus) as a proportion of GDP.

We also create a variable measuring ideological distance among coalition partners. We gave each party in a given cabinet an ideological score on the left–right scale. The ideological scores were assigned on the basis of three studies: Castles and Mair (1984); Hubert and Inglehart (1995); and Benoit and Laver (2006). We standardized ideological scores into a 0–10 scale and used mean scores whenever a given party had been rated by more than one study. We identified the two ideologically most distanced parties in a coalition government and calculated the absolute difference between these two parties. As in the case of number of parties, ideological distance within a coalition is interacted with lagged government deficit (surplus).

The model includes two socio-demographic variables: the percentage of the population under 16 or over 64 and the annual change in per capita GDP. Lastly, we insert the lagged level of government spending in order to control for possible autocorrelation in this type of data.[4]

We test the hypothesis that the level of government spending is influenced by the number of parties and ideological distance in government. We predict that the impact is conditional on the level of government deficit/surplus. Unlike previous studies asserting that the number of parties in government increases the level of spending independent of fiscal circumstances, we expect multiparty governments with greater ideological divergence to be more constrained to change things. Hence, in the presence of a large deficit, single-party governments should spend less than multiparty governments where some veto players oppose spending cuts. Likewise, ideologically cohesive governments should cut spending more swiftly. Under a situation of government surplus, on the other hand, single-party

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governments can more easily increase the size of public spending whereas multiparty governments experience a harder time increasing spending, again due to resistance from veto players. In the same way, governments internally divided along ideological lines should find it more difficult to increase spending than cohesive governments. As a result, the size of government spending fluctuates in single-party governments with a cohesive ideological stance according to the fiscal context whereas it stays relatively stable in multiparty governments with diverse veto players regardless of the context.

If our hypothesis is correct, we should observe a positive effect for the main deficit/surplus variable; that is, public spending should increase with higher surpluses (and decrease with higher deficits). On the other hand, we expect a negative coefficient for the interactive variable; that is, the positive effect of surplus should be weakened as the number of parties in government and/or ideological divergence within cabinet increases.

Since our data are in the form of the time-series cross-section (TSCS), we are careful about choosing the right model. As a preliminary step, we performed the Breusch-Pagan test which confirms the presence of heteroskedasticity. Therefore, we use panel corrected standard error (PCSE) estimations. These estimations correct for heteroskedasticity with the consideration of contemporaneously correlated errors across panels. The model is based on Ordinary Least Square with PCSE, as proposed and advocated by Neil Beck and Jonathan Katz (Beck, 2001; Beck and Katz, 1995a; 1995b). Later, we also consider a fixed effect model and compare the results. By adding country fixed effects, we eliminate any possible bias stemming from unobserved cultural and institutional characteristics of each country. We employ AR1 disturbances, since we find first order serial correlation after a Wooldridge test.[5]

Findings

Table 2 shows the countries included in the analysis and Table 3 shows the distribution of variables. Mean government spending as a percentage of GDP is 31.2 per cent. The mean number of parties in government is 2.04 and 47 per cent of the sample is one-party government. Ideological distance among coalition partners ranges from 0 (when there is only one party in government) to 5, and the mean is 1.5. Most of the time, governments face a negative fiscal context; that is, there was a deficit the previous year. This was the case for 64 per cent of the governments in our sample. The overall mean is a deficit that corresponds to 3 per cent of GDP, but there is a wide range of fiscal contexts.

Table 4 presents the regression results. The first column shows the results when number of parties is considered and the second column shows the results when ideological distance within cabinet is considered.[6]

The results are similar across the two estimations. The level of spending in the previous year and the presence of a substantial fraction of non-working-age population both contribute to increased public spending while a favorable economic conjuncture leads to relatively lower spending, in a counter-cyclical fashion. The impact of these control variables is consistent with theoretical predictions.

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Table 2: Countries and Years in Data Set

Country	*Years*
Australia	1972–98
Austria	1972–2002
Barbados	1973; 1975–8; 1985–9
Belgium	1972–88
Belize	1985; 1989–97
Botswana	1974–88; 1990–6
Bulgaria	1998–2002
Canada	1975–2000
Czech Republic	1994–2001
Denmark	1972–97
Fiji	1972–6; 1978; 1980–5
Germany	1972–96
Greece	1974–81; 1991–8
Hungary	1990; 1992–2001
India	1975–91
Ireland	1983–97
Israel	1973–7; 1979; 1987–2001
Italy	1974–5; 1979–80; 1986–8
Jamaica	1976–7; 1995–2001
Luxembourg	1972–92; 1995
Malta	1973–8; 1981–99
Mauritius	1981–2002
Netherlands	1975–97
New Zealand	1972–88; 1992–2001
Norway	1973–7; 1981–97
Papua New Guinea	1975; 1978–93; 1997
Slovakia	1997–2002
Slovenia	1994–2002
Solomon Islands	1980
Sweden	1972–99
Trinidad & Tobago	1977–81; 1994–5
United Kingdom	1973–99

Our main concern is the impact of number of parties under different fiscal conditions. Our prediction is that the positive effect of a previous surplus (or, equivalently, the negative effect of a previous deficit) is reduced under coalition governments. As a consequence, the main effect of the deficit/surplus variable should be positive while the coefficient of the interaction term should be negative, which is precisely the result that we get. The implication is that when the government deficit is higher than 0.014, having more parties in government increases the level of spending, and one-party governments spend significantly less than multiparty governments. Once this threshold is passed, that is, when the government deficit becomes lower than 0.014 or even becomes positive (a surplus), having

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Table 3: Descriptive Statistics

Variable	*Obs.*	*Mean*	*Std.Dev.*	*Min*	*Max*
Government spending as a fraction of GDP	544	0.312	0.084	0.118	0.564
Lag of government spending as a fraction of GDP	544	0.31	0.084	0.098	0.564
Lag of government surplus (deficit) as a proportion of GDP	544	–0.029	0.049	–0.233	0.226
Number of parties in government	544	2.041	1.379	1	8
Annual rate of change in real GDP per capita (US dollars)	544	0.039	0.13	–0.244	0.439
Proportion of population aged under 16 or over 64	544	0.362	0.047	0.297	0.526
Ideological distance among coalition parties	428	0.802	1.282	0	5.2
Interaction between lag of government deficit and ideological distance	428	–0.022	0.069	–0.38	0.266
Interaction between lag of government deficit and number of parties	544	–0.067	0.123	–0.744	0.226

Table 4: The Determinants of Government Spending

	PCSE	*PCSE*
Lag of government spending as a fraction of GDP	**0.927*** **	**0.894*** **
	(0.019)	**(0.022)**
Lag of government surplus (deficit) as a proportion of GDP	**0.277*** **	**0.227*** **
	(0.063)	**(0.044)**
Number of parties in government	–0.001	
	(0.001)	
Ideological distance among coalition partners		0.002
		(0.001)
Annual rate of change in real GDP per capita	**–0.036** **	**–0.039** **
	(0.011)	**(0.012)**
Proportion of population aged under 16 or over 64	0.009	0.037
	(0.033)	(0.045)
Interaction between lag of government deficit and number of parties	**–0.070** **	
	(0.026)	
Interaction between lag of government deficit and ideological distance		**–0.073** **
		(0.026)
Cons.	**0.028***	0.026
	(0.013)	(0.017)
R-squared	0.889	0.890
Observations	544	428

Note: Numbers in parentheses are panel corrected standard errors.

$*p < 0.05$, $**p < 0.01$, $***p < 0.001$.

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more parties in government implies less spending. Under this condition, one-party governments spend more than multiparty governments. The same calculation can be applied to the second column of Table 4 where ideological distance among coalition parties is used instead of the number of parties. The result is quite similar to the result of the first model except for a slight change in threshold. Now, the threshold is a deficit of −0.015, under which ideologically diverse governments spend more than cohesive governments. When the deficit level is lower than 0.015 or when the government begins to enjoy a surplus, ideologically cohesive governments spend more than ideologically diverse governments. The results nicely support our hypothesis.

We run a set of simulations to illustrate the implications of these findings.[7] The results of these simulations are presented in Table 5 and Figure 1. As the simulation results show, when there is a very large deficit, that is, it represents 20 per cent of GDP (the observed maximum is 0.233), public spending tends to be low (the overall mean is 0.29), but this is particularly the case for single-party governments (0.27). In those cases, public spending increases with the number of parties in cabinet, but this is only because the presence of many parties makes it more difficult to cut. At the other extreme, when there is a public surplus, the propensity to spend is much greater, but this is again especially the case with single-party governments. Single-party governments under the highest surpluses of 23 per cent of GDP overspend coalition governments by a large margin (0.36 vs. 0.31). Coalition governments spend less, because there is a stronger resistance to change. What these simulations indicate is that previous surpluses or deficits have a substantial impact on single-party governments but very little on governments with three or four parties. This is entirely consistent with the view that coalitions increase the number of veto points and are biased in favor of the status quo, not in favor of higher spending.

Figure 1 presents the relationship between the number of coalition partners and a government's swiftness in adjusting spending according to the fiscal situation. The variance in spending among single-party governments is quite large, representing big fluctuations in the size of spending depending on the level of deficit. The variance shrinks as the number of parties in a coalition government increases, and finally becomes almost negligible under four-party coalition governments. The graph vividly corroborates the veto player model.

In order to illustrate more carefully and clearly the marginal effect of the number of parties in a government coalition, we use Brambor, Clark and Golder's (2006) simulation and graphic method. As Figure 2 shows, the marginal effect of the number of parties decreases as fiscal conditions improve. Both upper and lower bounds of confidence intervals are positive when a government suffers from deficit, which implies that the marginal effect of the number of parties is positive and significant. Thus, under government deficits, coalition governments spend more than single-party governments. By contrast, under surpluses, coalition governments spend less than single-party governments.

Figure 3 represents the marginal effect of ideological distance among coalition partners depending on fiscal conditions. As we already saw in the previous graph, the marginal positive effect decreases rapidly as fiscal conditions get better.

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Table 5: Predicted Spending by Number of Parties and Level of Deficit/Surplus

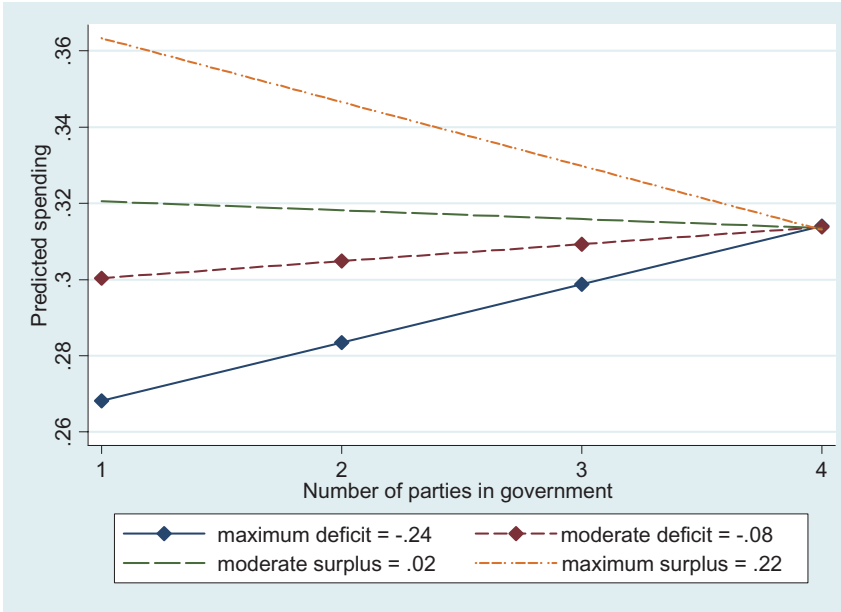
Level of deficit or surplus	*Number of parties in government*	*Predicted spending*	*Difference in govt. spending (single vs. four-party coalition)*
–0.233	1	0.268	
	2	0.283	0.046
	3	0.299	
	4	0.314	
–0.126	1	0.290	
	2	0.298	0.024
	3	0.306	
	4	0.314	
–0.077	1	0.300	
	2	0.305	0.014
	3	0.309	
	4	0.314	
–0.029	1	0.310	
	2	0.312	0.004
	3	0.313	
	4	0.314	
0.02	1	0.321	
	2	0.318	–0.007
	3	0.316	
	4	0.314	
0.068	1	0.331	
	2	0.325	–0.018
	3	0.319	
	4	0.313	
0.226	1	0.363	
	2	0.347	–0.05
	3	0.330	
	4	0.313	

Robustness Checks

In this section, we run a set of regressions in order to verify the robustness of our results. First, we insert other independent variables that might explain the pattern of government spending. The first set of independent variables pertains to national economic conditions, trade openness and GDP per capita. The regression results are presented in the first and second columns of Table 6. Per capita GDP has a significant and positive effect on the level of spending, but the magnitude of the effect is small. The effect of trade openness is also positive. Nonetheless, they do not change the sign or the significance of our most crucial variable, the interaction term between the government deficit and the number of parties or ideological distance.

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Figure 1: Predicted Spending by the Number of Parties and Government Deficit (Surplus)

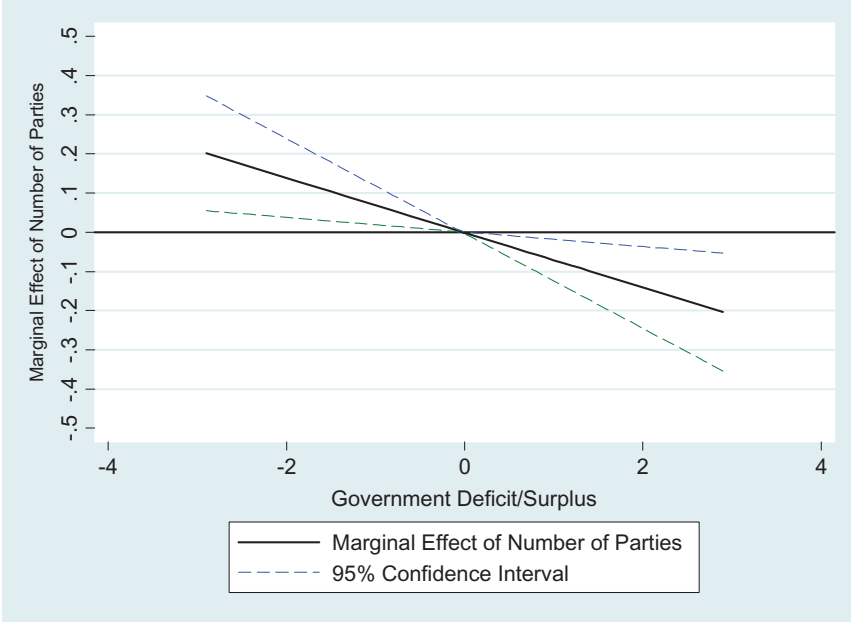


We also test the sensitivity of our findings to the inclusion of a major institutional factor, that is, federalism. It has been argued that federalism limits the authority of the central government particularly with respect to restricting sub-national governments' economic activities. The moral hazard problem faced by sub-national governments would lead to increased spending and transfers of the costs to others (Rodden *et al.*, 2002). Political scientists, for these reasons, predict a positive association between federalism and fiscal indiscipline, represented by high inflation, overspending and fiscal imbalance (Rodden *et al.*, 2002; Treisman, 2000; Wibbels, 2000). We include a federal state dummy as an additional control variable. The federal states in our sample are Austria, Belgium, Germany, Canada, Australia and India. Interestingly, the results show a strong negative effect of federalism on government expenditure growth. But the most important result for the purpose of this article is that the interaction term with number of parties or ideological distance remains negative and significant.

Our data comprise a wide range of countries, unlike other studies that cover relatively developed countries. Mindful of possible unstable spending patterns among less developed countries, we restrict the data to only Organization for Economic Cooperation and Development (OECD) countries. The results are reported in columns 5 and 6 in Table 6. Among OECD countries, the interaction between the number of parties and government deficit has the right sign though it is no longer statistically significant. But the interaction between ideological distance and government deficit does have a consistent negative effect.

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Figure 2: Marginal Effect of Number of Parties on Spending as Government Deficit (Surplus) Changes

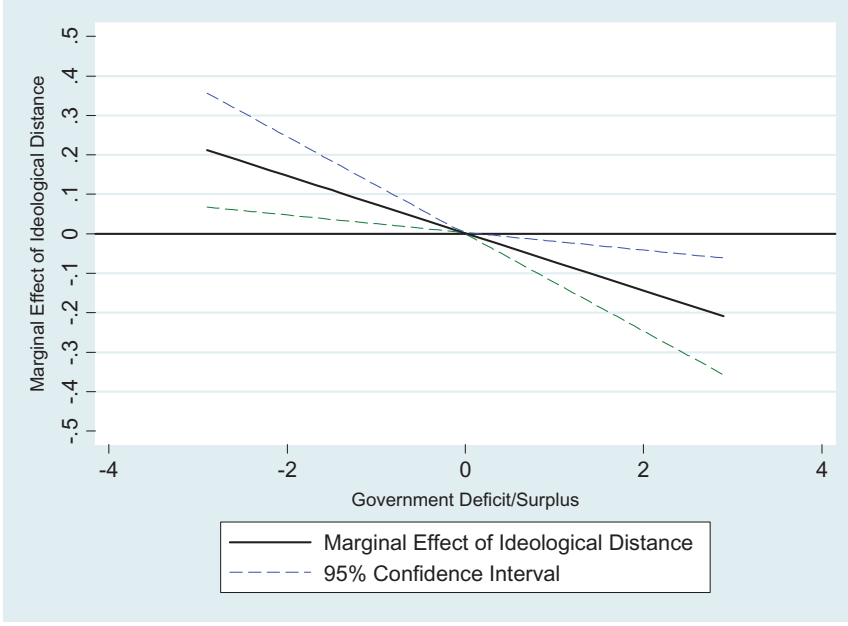


Next, we estimate fixed effects models. As briefly mentioned in the methods section, cross-national studies always present a pitfall because of the uniqueness of some countries. It is quite possible that unobserved individual heterogeneity such as cultural, institutional and social uniqueness is present in our sample. For instance, some countries are prone to spend more than other countries for various reasons including political culture. If this is the case, we cannot assume that there is no correlation between the independent variables and the error term, and this eventually leads to bias estimates. For this reason, we include country fixed effects and compare the results with those from the previous model. The findings are shown in columns 7–12 in Table 6. We did not perform fixed effect estimations with the federalism variable, because 'federalism' is an institutional variable that does not change over time.

Column 7 presents the results using the number of parties as a measure of the strength of veto players. Our primary concern is whether or not any change takes place in the coefficient or sign of the number of parties and the interaction term between the number of parties and government deficit. The results are very similar to the initial findings. We also find a very consistent result when ideological divergence is used instead of the number of parties (column 8). The signs are correct and the interaction of ideological distance with the government deficit is statistically different from zero. We also insert two additional economic variables into the model (columns 9 and 10). Again, the results do not change

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Figure 3: Marginal Effect of Ideological Distance between Coalition Partners as Government Deficit/Surplus Changes



much and even the magnitude of coefficients is very close. In the sample of OECD countries, we find that the interaction term with the number of parties loses its significant explanatory power as it did in the previous OLS with PCSE estimation (column 11). However, when ideological distance instead of number of parties is used as a measure of tension between veto players, the interaction term demonstrates a negative and significant coefficient as we projected (column 12). Among OECD countries, it appears to be ideological distance among coalition parties rather than the number of parties that creates a veto game. We performed additional analyses only for OECD countries controlling for economic variables and federalism. The results are quite robust.[8]

To summarize, our finding that the impact of coalition size and/or ideological divergence on government spending is conditional on the size of the deficit/surplus holds remarkably well under many different specifications. This provides strong support for the veto player model.

Conclusion

The goal of this article has been to examine the linkage between the number of parties in government and policy outcomes. The standard view in the literature has been that the size of public spending increases under coalition governments. The findings of this article

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Table 6: Robustness Checks

	(1) Other economic indicators (PCSE)	*(2) Other economic indicators (PCSE)*	*(3) Federalism (PCSE)*	*(4) Federalism (PCSE)*
Lag of government spending as a fraction of GDP	**0.888*** (0.02)**	**0.853*** (0.03)**	**0.910*** (0.02)**	**0.848*** (0.03)**
Lag of government surplus (deficit) as a proportion of GDP	**0.245*** (0.06)**	**0.187*** (0.04)**	**0.288*** (0.06)**	**0.228*** (0.04)**
Number of parties in government	–0.001 (0.00)		–0.001 (0.00)	
Ideological distance between coalition partners		0.001 (0.00)		0.002 (0.00)
Annual rate of change in real GDP per capita	**–0.032** (0.01)**	**–0.034** (0.01)**	**–0.036** (0.01)**	**–0.039** (0.01)**
Proportion of population aged under 16 or over 64	0.053 (0.04)	0.088 (0.05)	–0.006 (0.04)	0.019 (0.05)
Interaction between lag of government deficit and number of parties	**–0.070** (0.03)**		**–0.077** (0.03)**	
Interaction between lag of government deficit and ideological distance		**–0.083** (0.03)**		**–0.100*** (0.03)**
Lag of relative GDP per capita	**0.000* (0.00)**	**0.000** (0.00)**		
Lag of the level of trade openness	**0.013*** (0.00)**	**0.014** (0.00)**		
Federalism			**–0.007* (0.00)**	**–0.014*** (0.00)**
Constant	0.006 (0.02)	0.002 (0.02)	**0.041* (0.02)**	**0.050** (0.02)**
R-squared	0.889	0.895	0.887	0.891
Observations	534	419	544	428

	(5) OECD: PCSE	*(6) OECD: PCSE*	*(7) PCSE with fixed effects*	*(8) PCSE with fixed effects*
Lag of government spending as a fraction of GDP	**0.935*** (0.022)**	**0.941*** (0.023)**	**0.687*** (0.049)**	**0.644*** (0.056)**
Lag of government surplus (deficit) as a proportion of GDP	**0.317*** (0.080)**	**0.296*** (0.050)**	**0.234*** (0.067)**	**0.194*** (0.053)**
Number of parties in government	0.002 (0.002)		–0.002 (0.002)	
Ideological distance between coalition partners		0.001 (0.001)		**–0.003* (0.001)**
Annual rate of change in real GDP per capita	**–0.036** (0.011)**	**–0.038*** (0.011)**	**–0.044*** (0.010)**	**–0.044*** (0.011)**

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Table 6: *Continued*

	(5) OECD: PCSE	*(6) OECD: PCSE*	*(7) PCSE with fixed effects*	*(8) PCSE with fixed effects*
Proportion of population aged under 16 or over 64	**0.226*** (0.066)**	**0.294*** (0.079)**	**0.305*** (0.081)**	**0.303** (0.096)**
Interaction between lag of government deficit and number of parties	–0.051 (0.034)		**–0.071* (0.028)**	
Interaction between lag of government deficit and ideological distance		**–0.091*** (0.024)**		**–0.107*** (0.030)**
Constant	**–0.053* (0.022)**	**–0.073** (0.025)**		
R-squared	0.914	0.924	0.994	0.994
Observations	356	324	544	428

	(9) Other economic indicators (PCSE with fixed effects)	*(10) Other economic indicators (PCSE with fixed effects)*	*(11) OECD: PCSE with fixed effects*	*(12) OECD: PCSE with fixed effects*
Lag of government spending as a fraction of GDP	**0.687*** (0.05)**	**0.644*** (0.06)**	**0.773*** (0.061)**	**0.772*** (0.066)**
Lag of government surplus (deficit) as a proportion of GDP	**0.219** (0.07)**	**0.182*** (0.05)**	**0.184* (0.086)**	**0.232*** (0.064)**
Number of parties in government	–0.002 (0.00)		0.001 (0.002)	
Ideological distance between coalition partners		–0.002 (0.00)		–0.002 (0.001)
Annual rate of change in real GDP per capita	**–0.040*** (0.01)**	**–0.039*** (0.01)**	**–0.040*** (0.011)**	**–0.042*** (0.011)**
Proportion of population aged under 16 or over 64	**0.422*** (0.09)**	**0.417*** (0.10)**	**0.270** (0.099)**	**0.263* (0.119)**
Interaction between lag of government deficit and number of parties	**–0.065* (0.03)**		–0.025 (0.034)	
Interaction between lag of government deficit and ideological distance		**–0.100** (0.03)**		**–0.080** (0.031)**
Lag of relative GDP per capita	0.000 (0.00)	0.000 (0.00)		
Lag of the level of trade openness	0.025 (0.01)	0.021 (0.01)		
R-squared	0.895	0.995	0.995	0.996
Observations	419	419	356	324

Note: Numbers in parentheses are panel corrected standard errors.

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

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provide a different perspective. The results endorse the veto player model according to which the main consequence of a coalition government, especially if it is ideologically diverse, is to increase the number of veto players, which impels a status quo bias, as suggested by Tsebelis (1995; 2002). Coalition governments spend more than single-party governments when they are in a difficult fiscal context, but they spend less when the fiscal situation is rosy. It all depends on the fiscal context.[9]

One may raise the question why our result is strikingly contrary to the conventional wisdom. For example, as we cited in an earlier section, Bawn and Rosenbluth find a very strong positive impact for the number of coalition partners. One reason we can suggest for this is that countries experience deficits more often than surplus. For example, 383 cases out of 550 in Bawn and Rosenbluth's sample experience fiscal deficit. It may be the case that the presence of a coalition more often leads to increased spending but we would point out that this is the case only because deficits are more frequent than surpluses.

This study is one step further toward understanding the behavior of coalition governments under different fiscal pressures. We considered the number of parties in government and ideological distance between coalition partners as a measure of veto players, which are Tsebelis' partisan veto players. In future research, it would be interesting to examine how institutional veto players behave under different fiscal conditions.

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About the Authors

André Blais is a Professor in the Department of Political Science at the University of Montréal. He holds a Canada Research Chair in Electoral Studies (http://www.crcee.umontreal.ca) and he is the principal investigator of the 'Making Electoral Democracy Work' project (http://www.electoraldemocracy.com). His research interests are elections, turnout, electoral systems and methodology.

André Blais, Department of Political Science, University of Montréal, Pavillon Lionel-Groulx, 3150, rue Jean-Brillant, Montréal (Québec) H3T 1N8, Canada; email: *andre.blais@umontreal.ca*

Jiyoon Kim is a Postdoctoral Fellow with the Canada Research Chair in Electoral Studies (http://www.crcee.umontreal.ca) at the University of Montréal. Her research interests are elections, methodology, political economy and political participation.

Jiyoon Kim, Department of Political Science, University of Montréal, Pavillon Lionel-Groulx, 3150, rue Jean-Brillant, Montréal (Québec) H3T 1N8, Canada; email: *jiyoon.kim@umontreal.ca*

Martial Foucault is an Assistant Professor in the Department of Political Science at the University of Montréal. He is associate researcher at the CIRANO (Montréal) and the Centre d'Economie de la Sorbonne (Paris CNRS). His research interests are political economy, electoral behavior, public policy and statistics.

Martial Foucault, Department of Political Science, University of Montréal, Pavillon Lionel-Groulx, 3150, rue Jean-Brillant, Montréal (Québec) H3T 1N8, Canada; email: *martial.foucault@umontreal.ca*

Notes

1 We follow Tsebelis (2002, p. 168), who argues that what matters 'is not the relative strength of different parties in government or parliament, but the fact that each of them needs to agree in order for legislation to pass'.

2 For instance, in the case of Israel, average military spending consists of about 30 per cent of total government spending. We also performed regression analyses using total spending including military spending and interest payments as a dependent variable; the results are quite similar.

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3 We used *Keesings' World Archive* for the analysis of government composition.

4 We tested the existence of multicollinearity among independent variables and we found none.

5 We use *xtserial* command in STATA and obtained *F-statistics* of 38.225 from the Wald test, which far exceeds the significance level at 0.05.

6 We do not include number of parties and ideological distance together in the same model because of the presence of multicollinearity. Indeed, the correlation coefficient between ideological distance and number of parties is 0.71.

7 The simulation is based on the OLS estimation with PCSE in the first column of Table 4.

8 We do not report all the results here, but they can be obtained by request.

9 It must be noted that fiscal deficits are more frequent than surpluses. Therefore in the majority of cases, conventional wisdom and the veto player model have similar predictions. Yet surpluses represent 36 per cent of the cases in our sample, and in those cases the predictions diverge.

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