Electoral Rules and Fiscal Policy Outcomes

Jason Clemens, Taylor Jackson, Steve LaFleur, and Joel Emes[1]

Introduction

The federal Liberal government's commitment to reform the nation's current electoral system in time for the next election has vaulted the issue of electoral reform to the forefront of public discourse (Liberal Party of Canada, 2015: 27). While there are a number of political and electoral aspects of this policy change to consider, one area that has been ignored thus far is how electoral rules influence government policy, particularly fiscal policy. Changing the method by which a society elects its political representatives changes the incentives and power structure of the government, which in turn influences fiscal policies.

The preponderance of empirical evidence clearly shows that moving towards a proportional electoral system would lead to higher government spending and more deficits. Put simply, changing our electoral rules doesn't just change the way we elect our political representatives; it could also fundamentally change basic government policy over time.

The first part of this chapter provides some basic definitions and clarifies several terms that will be used throughout the book. The second section provides an overview of the basic conceptual argument relating to

---

[1] The authors are all analysts with the Fraser Institute. Please see the end of this chapter for their full biographies.

why electoral systems influence not only electoral outcomes but also fiscal policy. The third section reviews existing research on the relationship between electoral rules and fiscal policy outcomes with particular emphasis on government spending and fiscal balance (deficits/surpluses). The chapter ends with a brief conclusion.

I. Terms and definitions

While covered in other chapters in this book, it is nonetheless important to define a number of key terms prior to reviewing the existing research on the relationship between electoral systems and fiscal policy. There are two broad areas of research within this sphere: governance and electoral rules. The former relates to the system of governance in place in a specific jurisdiction. These systems range from parliamentary, such as exists in Canada where there is no formal or constitutional separation of power between the executive and legislative branches of the government, to presidential systems, such as exist in the United States where the executive function (president) is constitutionally separated from the legislative powers (Congress).

There is no proposal to change Canada's governance system, so the focus of this chapter is on electoral rules.[2] There are many different types of electoral systems, but they can be grouped into four basic types: 1) plurality/majoritarian, 2) proportional representation, 3) mixed systems, and 4) other systems.

Plurality/majoritarian systems select their representatives based on the largest share of votes won in specific electoral districts. The winning candidate is not necessarily required to win a majority of the overall votes cast; a number of the plurality/majoritarian models rely on plurality voting, in other words, candidates are elected if they receive the highest percentage of votes in each electoral district (rather than an outright majority of all votes cast). Canada's system of first-past-the-post (FPTP) is a plurality sys-

---

[2] For an overview of existing electoral systems, see Reynolds, Reilly, and Ellis (2008), and O'Neal (1993).

tem. It is formally referred to as a single-member plurality system. Majority systems are used when there is a desire to have the winning candidate receive an absolute majority of votes cast; such systems include the alternative vote (AV) or two-round system (TRS).

The second category of electoral system is referred to as proportional representation (PR). These systems are designed to allocate elected representatives in a way that is based on the proportion of votes received. Such systems require multi-member districts so that elected seats reflect the broad proportion of the votes that different parties received. There are two main types of PR systems: party list systems and the single transferable vote (STV).[3]

Mixed systems use elements of plurality/majoritarian and PR systems. Other systems, meanwhile, are so diverse that they defy group classification. For the purposes of this essay, we focus on the differences between plurality/majoritarian and PR systems.

II. Why electoral systems affect fiscal policy: A conceptual and empirical argument

The link between electoral rules and fiscal policy is often over-simplified, which leads to a misunderstanding regarding the linkage. Indeed, the link

---

[3] In addition to electoral formulas, economists Torsten Persson and Guido Tabellini also stress district magnitudes and ballot structures as influential aspects of electoral rules. "District magnitudes" is the number of legislators elected per voting district. This can range from a single-member district—as is currently the practice in Canada—to a single district for the whole country, such as is used in Israel, where all members of the Knesset are chosen by the entire electorate. "Ballot structures" refers to the specific manner in which citizens vote for their representatives. Ballots are structured in two common ways. Typically voters are either asked to vote for specific candidates (as they are in Canada), or to vote for a party list. While there are different ways that party lists can be structured, typically they are closed lists, meaning that the party determines the order of the candidates and then allocates the seats the party wins to members on the list in descending order. This means that if a party's proportion of the vote share dictates that they receive nine seats, candidates one through nine on the list are elected, while candidates ten and below are excluded from the legislature.

between the two is based on an intermediary effect: the number of political parties elected.[4] It is not a plurality/majoritarian or PR system per se that influences fiscal policy, but rather the incentives embedded within each that affect the number of political parties elected. In general terms, PR systems have a built-in incentive to elect more political parties, while plurality/majoritarian systems have incentives that lead to fewer parties.[5]

A substantial amount of research supports this general view. For instance, Persson and his colleagues examined 40 parliamentary democracies from 1960 to 1998 to assess the relationship between electoral rules and government spending. Part of their analysis looked at the difference between plurality/majoritarian and PR electoral systems, and whether they governed by coalition or majorities. They found that:

> Compared to proportional rule, plurality/majoritarian rule is correlated with a less fragmented party system, a lower incidence of coalition government, and a higher incidence of single-party governments. (Persson, Roland, and Tabellini, 2007: 176)

The higher number of elected political parties in PR electoral systems leads to more coalition governments than is the case in plurality/majoritarian electoral systems. Persson and his associates note that 63 percent of the election results in plurality/majoritarian electoral systems over this period were governed by a single party compared with only 17 percent for countries with PR electoral systems (Persson, Roland, and Tabellini, 2007).

---

[4] Funk and Gathmann (2010) argued that it isn't proportional representation itself, but "the political consequences, in particular the more fragmented legislature, that generates more spending in proportional systems." This suggests that moving from a majoritarian electoral system that typically results in majority governments to a proportional system would likely lead to more fragmented legislatures, which in turn would lead to higher spending.

[5] It's worthwhile to note that a number of studies have concluded that the emergence of additional parties under PR electoral systems is a strategic response by politicians aimed at capturing additional political influence and power rather than a response to voter demands or strategic voting by the electorate. Persson, Roland, and Tabellini (2007) and Riker (1982) give additional information.

Table 1: Electoral Outcomes by Electoral System, 2000-2015

	Plurality/Majoritarian	PR
Average Number of Effective Parties	2.6	4.4
Percentage of Coalition Elections	15%	83%
Average Number of Coalition Parties	3.0	3.3

Sources:: Norwegian Centre for Research Data (n.d.); Holger Döring and Philip Manow (2016); Inter-Parliamentary Union (n.d.); authors calculations.

More recent data on elections in advanced industrial countries with different electoral systems provides further evidence to support the findings of Persson and his colleagues that plurality/majoritarian systems are correlated with lower levels of party fragmentation and lower incidences of coalition government. Table 1 summarizes the key results for a selection of industrialized countries, specifically, the average number of parties, the percentage of elections resulting in coalition governments, and the average number of parties in coalitions based on election results between 2000 and 2015.

Figure 1 shows the average number of parties in the individual countries[6] included in this analysis. From 2000 to 2015, plurality/majoritarian electoral systems had an average number of effective parliamentary parties[7] of 2.6 compared to 4.4 in PR systems[8] (table 1 and figure 1). In other

---

[6] The authors categorized the advanced industrialized countries used in this analysis based on information available from the Inter-Parliamentary Union (n.d.) and Norwegian Centre for Research Data (n.d.) databases.

[7] The measure "effective parliamentary parties" is commonly used in comparative politics literature as a means for controlling for the effects of very small parties (for example a party that runs one candidate in one constituency) and parties that are unequal in size. The estimate is based on the seat share a party received in a given election. The estimator can be expressed as $N_s = \frac{1}{\sum s_i^2}$, where s_i is the seat share of the *i-th* party (see Lijphart, 1994).

[8] While electing some members to their legislatures through majoritarian voting, both Spain and Switzerland have been included as PR countries since only two of 350

Figure 1: Average Effective Number of Parliamentary Parties for Elections between 2000 and 2015
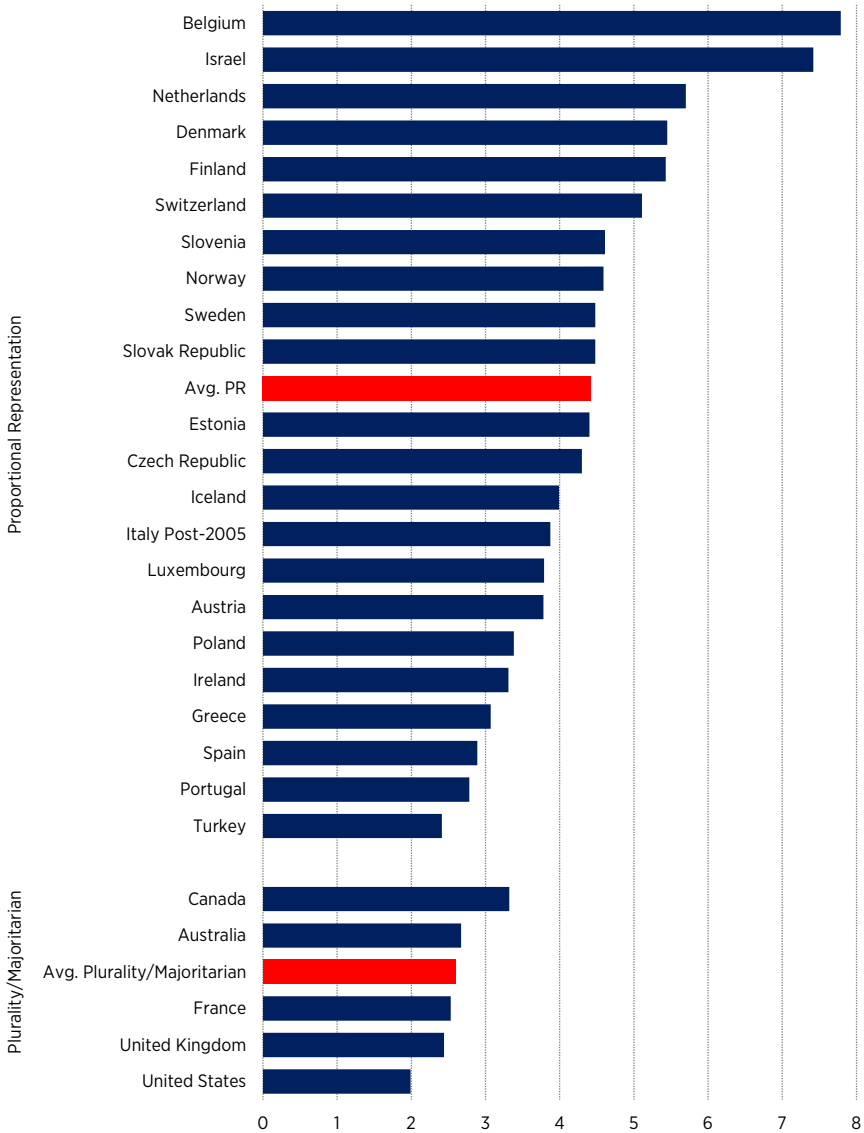
Sources: Norwegian Centre for Research Data (n.d.); Holger Döring and Philip Manow (2016); Inter-Parliamentary Union (n.d.); authors calculations.

words, countries with PR electoral rules had over 70 percent more effective parliamentary parties, on average, than countries with plurality/majoritarian election rules. Although Canada has one of the highest number of political parties in the plurality/majoritarian system, it is likely that the number would increase even more with a PR system.

In terms of coalition governments, in advanced industrialized countries with plurality/majoritarian electoral rules, only 15 percent of elections between 2000 and 2015[9] resulted in coalition governments (table 1). This result was heavily influenced by Australia, in which three out of five elections in the period resulted in coalition governments. It is worth noting, however, that Australia does not have a first-past-the-post plurality electoral system, but rather an alternative vote majoritarian system.

In countries with PR election systems, on the other hand, 83 percent of elections resulted in coalition governments. Put differently, countries with PR election rules were 5.4 times more likely to have coalition governments than countries with plurality/majoritarian election rules.

Finally, the number of parties required to form coalition governments is higher in countries with PR election rules than in countries with plurality/majoritarian systems. On average, there were 3.4 parties in the coalitions formed in countries with PR electoral rules compared to 3.0 parties in coalitions formed in countries with plurality/majoritarian electoral rules (table 1).

The idea that PR electoral systems elect more parties to the legislatures is not a controversial statement[10] since PR is designed to allow more of the smaller, vote-receiving parties to be elected than plurality/majoritarian

---

members in the Spanish Congress of Deputies are chosen through majoritarian voting and only five out of 200 members in the Swiss National Council are elected through a majoritarian system. Elections on Italy were only included after 2005, when the country switched to a PR system.

[9] Elections that resulted in another election due to the inability to form a government were not included in the analysis.

[10] To read more about PR electoral rules leading to more parties, see Rae, 1971; Taagepera and Shugart, 1989; and Lijphart, 1990.

electoral systems.[11] The link between these electoral rules and fiscal policy is referred to as a "common pool problem." This key insight into the two electoral systems is often misunderstood and generally misrepresented in public debates.

Plurality/majoritarian systems provide the incentives for political parties to form coalitions within their party. In other words, the parties and their platforms must be broad enough to bring in a number of constituency groups. An example of this is how major parties in most plurality/majoritarian countries handle voters who are focused on the environment. The incentive for each party is to have a strong enough platform to attract environmentally-motivated voters so there is no need for a stand-alone, environmentally-focused political party. In this way, the costs of the coalitions are managed and incurred within the parties themselves. In the parlance of economics, the costs of the coalitions are largely internalized to the parties themselves.

PR systems, on the other hand, encourage the creation of stand-alone, single-issue, and regional parties. This means that instead of being part of a broader coalition within a single party, as is the case in plurality/majoritarian electoral systems, smaller, single-issue parties proliferate in countries with PR electoral systems. Those smaller parties contest elections alongside the larger, broader parties. Using the environmental example above, countries with PR systems tend to have single-issue environmental parties, most notably the Green Party, elected and represented in their Parliaments.[12]

A side effect of the incentives embedded within PR electoral systems is that they are far more likely to require coalitions to govern since it is significantly more difficult for them to secure a majority in an election. However, governing by coalition means that the costs of the coalition, which take the form of policies implemented in the government, are born not by the

---

[11] For a more fulsome discussion of the links between electoral rules and party structures (as well as coalitions) see Persson, Roland, and Tabellini (2007).

[12] While the Canadian legislature does contain a Green Party MP, the party has only ever elected a single MP in a legislature of over three hundred members.

party, as is the case with plurality/majoritarian systems, but by the broader public. Smaller, single-issue, and regional parties are able to exert proportionally much more power in government under PR electoral systems than under plurality/majoritarian electoral systems because the larger parties need their elected members to form a governing coalition. This proportionally greater power results in policies favoured by these smaller parties being enacted by government as a condition of the smaller parties' support for the coalition in government. Indeed, one study of this dynamic showed that ministerial powers in coalition governments tended to be allocated to the parties with the strongest demonstrated preferences for those policy areas (Budge and Keman, 1990). The introduction of these policies by government imposes costs on the electorate.

While electoral rules do not necessarily affect fiscal policy directly, the intermediate effect of more fragmented legislatures creates the incentives for greater public spending, which is financed in part by greater deficits.

III. Reviewing research on electoral systems and fiscal policy

This section summarizes the key research on the relationship between electoral rules (or electoral systems, as they are often called) and fiscal policy, specifically the size of government spending and fiscal balance (deficits versus surpluses).

Size of government—Government spending

Given the nature of the differences between plurality/majoritarian and PR electoral systems and their influence on the number of parties in Parliament and the proclivity towards coalition governments, the key metric of how such differences affect fiscal policy is government spending.

In the countries discussed previously, there is a clear and observable relationship between electoral rules and government spending. Figure 2 uses IMF data to illustrate the average level of central government spending from 2000 to 2014 in countries with plurality/majoritarian and PR

systems.[13] Countries with PR electoral systems had average central government spending of 29.2 percent of GDP compared to 23.5 percent for countries with plurality/majoritarian election rules. In other words, as a share of the economy (GDP), central governments in countries with PR election rules were almost one-quarter (24.3 percent) larger than in countries with plurality/majoritarian election rules.

A number of academic studies have further developed the analysis of election rules and the size of government spending to account for other contributing factors that could affect government spending. Economists Yianos Kontopoulos and Roberto Perotti (1999) completed one of the first studies in this area. They examined the impact of government fragmentation (i.e., more parties and more coalitions) on fiscal policy in 20 OECD countries between 1960 and 1995. They found that government spending increased as the number of coalition parties increased and that this impact was stronger in recessions.[14] Milesi-Ferretti and her colleagues, publishing in the prestigious *Quarterly Journal of Economics,* similarly found that PR was associated with higher government spending in a sample of 20 OECD countries[15] between 1960 and 1995 (Milesi-Ferretti, Perotti, and Rostagno, 2002).

In their seminal 2003 book, *The Economic Effect of Constitutions*, Torsten Persson and Guido Tabellini examined the impact of electoral rules

---

[13] Data on central government spending as a percentage of GDP come from the International Monetary Fund's (2016) Government Finance Statistics (GFS) online database. The sector used is "central government excluding social security funds" which, for example, coincides with the National Accounts presentation for the federal government in Canada's Fiscal Reference Tables. The analysis was carried out on the same advanced industrialized countries discussed above for which we examined differences in the average number of parties and coalition governments. Countries were sorted into plurality/majoritarian and PR categories based on information from the Inter-Parliamentary Union (n.d.) and Norwegian Centre for Research Data (n.d.). Consistent with the above analysis, Spain and Switzerland were included as countries with PR systems.

[14] Specifically, at zero GDP growth, Kontipoulos and Perotti (1999) found an extra party in a coalition added 0.12 percent of GDP per year to aggregate expenditure, but this increased by 0.02 percent of GDP for every one percentage point drop in GDP growth.

[15] The study also examined 20 Latin American countries, but the evidence for a correlation between spending and electoral rules was weaker there than the relationship observed among OECD countries.

Figure 2: 2000-2014 Average, Central Government Expense as a percent of GDP
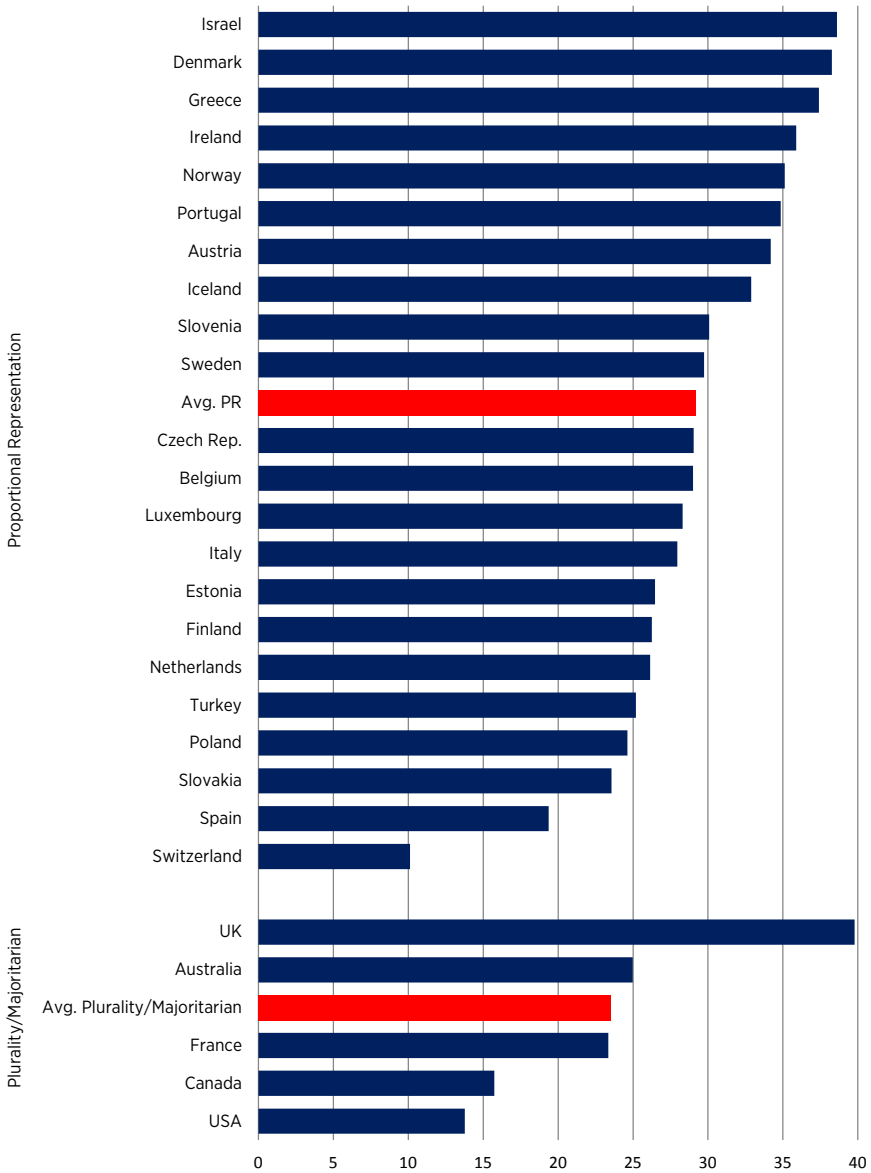
on government spending in 85 countries. Their research demonstrated that central government spending was 5.7 percent of GDP lower in countries with plurality/majoritarian compared to countries with elections held under proportional representation rules.[16],[17]

Persson and Tabellini, along with their colleague Gerard Roland, followed up on their previous work with more sophisticated analytical techniques in a watershed essay that appeared in the *Quarterly Journal of Political Science* (Torsten, Roland, and Tabellini, 2007). The study's conclusions buttressed their previous work; they determined that a switch from a plurality/majoritarian electoral system to a PR system would result in an increase in government spending of between 5 and 6 percent of GDP. Indeed, Persson, Roland, and Tabellini included a rather strongly worded conclusion regarding electoral systems and government spending:

> … results strongly suggest that plurality/majoritarian elections indeed reduce public spending because they lead to a lower incidence of coalition governments. (Torsten, Roland, and Tabellini, 2007: 179)

---

[16]   Using another technique (two-stage least squares, or 2SLS), that did not yield significant results, the authors note that, "The fact that the estimated effects remain negative, large, and not too distant from the OLS estimates, reassures us of the validity of our inference, despite the large standard errors."

[17]   A lengthy secondary literature has evaluated Persson and Tabellini's work. Their findings on the impact of electoral rules have consistently held up to scrutiny, though there has been some debate over whether they have established causality (Acemoglu, 2005; Voigt, 2011). Their hypotheses have also been tested using alternative datasets, most notably Blume et al. (2009) who extended their model from 85 to 116 countries, also finding a significant correlation between majoritarian systems and lower government expenditures. Voigt (2011) was also able to replicate their results with respect to the correlation between majoritarian electoral systems and government spending. Rockey (2012) examined Persson and Tabellini's hypotheses using both their original dataset and the extended dataset of Blume et al., also finding that majoritarian systems are associated with lower spending and fewer deficits (though noting that the results do not hold for countries that became democracies after the early 1990s). Similarly, Caruso et al. (2015) also found that the results hold for countries with a high degree of institutionalization (such as Canada), but not for less established democracies.

Finally, and more recently, Caruso and his colleagues examined Persson and Tabellini's 2003 dataset and found that countries that held elections under plurality/majoritarian rules have central government expenditures that are 6.5 percent of GDP lower than countries that hold proportional representation elections.[18]

In addition to the impact on the size of government spending, different electoral rules also appear to have an effect on the composition of government spending. Persson and Tabellini, for instance, found that moving from proportional to plurality/majoritarian electoral rules should lead to a 2 to 3 percent GDP decline in welfare spending (Persson and Tabellini, 2001).

The study led by Milesi-Ferretti referred to previously also found that governments elected under proportional systems tend to spend more on transfers, whereas governments elected under plurality/majoritarian systems tend to purchase more goods and services (Milesi-Ferretti, Maria, Perotti and Rostagno, 2002).

Fiscal balance—Deficits versus surpluses

A second fiscal policy linked with electoral rules is how the higher levels of government spending in countries with PR electoral rules are financed. There are only two options to finance additional government spending: raise taxes and/or incur larger deficits, the latter of which simply defers the payment of taxes into the future. The preponderance of the evidence suggests that PR electoral systems lead to higher deficits.

Using the same methodology employed in the previous analysis of election rules and government spending, figure 3 illustrates the average deficit

---

[18] Caruso, Scartascini, and Tommasi (2015) defined institutionalization as the degree to which political power is exercised through "formal political arenas such as the legislature or the political party system." Focusing on countries with high institutionalization, such as Canada, rather than on countries with low institutionalization is important, since the nuances of political arrangements are less salient in countries where political power can be exercised outside of formal legislative channels (i.e., where democratic institutions aren't always respected). Indeed, the authors found that using Persson and Tabellini's database, they were able to replicate the results for countries with high institutionalization, but the results were not significant for those with low institutionalization.

or surplus for the central governments of various countries with either plurality/majoritarian or PR election rules between 2000 and 2014. The overall finding is that countries with PR election rules actually maintained lower average deficits (-1.5 percent of GDP) than countries with plurality/majoritarian election rules (-2.0 percent of GDP). However, these results are inordinately influenced by Norway's large surpluses (14.2 percent of GDP) over this period (Figure 3), which are largely a function of its independent sovereign fund.[19] If Norway is removed from the analysis, the average deficit for PR countries increases to 2.2 percent of GDP, roughly 10 percent higher than the average deficits for countries with plurality/majoritarian election rules.

A great deal of academic work has extended the analysis of election rules and fiscal balance to include other pertinent variables. Grilli, Masciandaro, and Tabellini, for instance, examined fiscal outcomes in 18 OECD countries between 1950 and 1989. They found that all but one of the countries with representational electoral systems[20] had "unsustainable fiscal policies" (Grilli, Masciandaro, Tabellini, Malinvaud, and Pagano, 1991). They concluded that "representational democracies" were more likely to have public debt problems than countries relying on plurality/majoritarian electoral rules.

In their 2003 book on this subject, Persson and Tabellini examined 85 democracies between 1960 and 1998 and found that plurality/majoritarian elections resulted in roughly 2 percent lower deficits than elections under proportional representation. In a subsequent paper that extended their work further, they concluded that increased spending under proportional electoral systems is "financed by higher taxes and deficits in similar proportions" (Persson and Tabellini, 2004a).

As noted in the conceptual section of this chapter, coalition governments are much more likely to be formed under PR election rules than

---

[19] For information on Norway's sovereign wealth fund, see Murphy and Clemens (2013).

[20] The authors grouped countries with five or fewer representatives per district as majoritarian, and those with more than five as representational. While the definition of majoritarian here is broader than the typical definition, it highlights that proportionality erodes the incentives for fiscal discipline.

Figure 3: 2000-2014 Average, Central Government Net Operating Balance as a percent of GDP
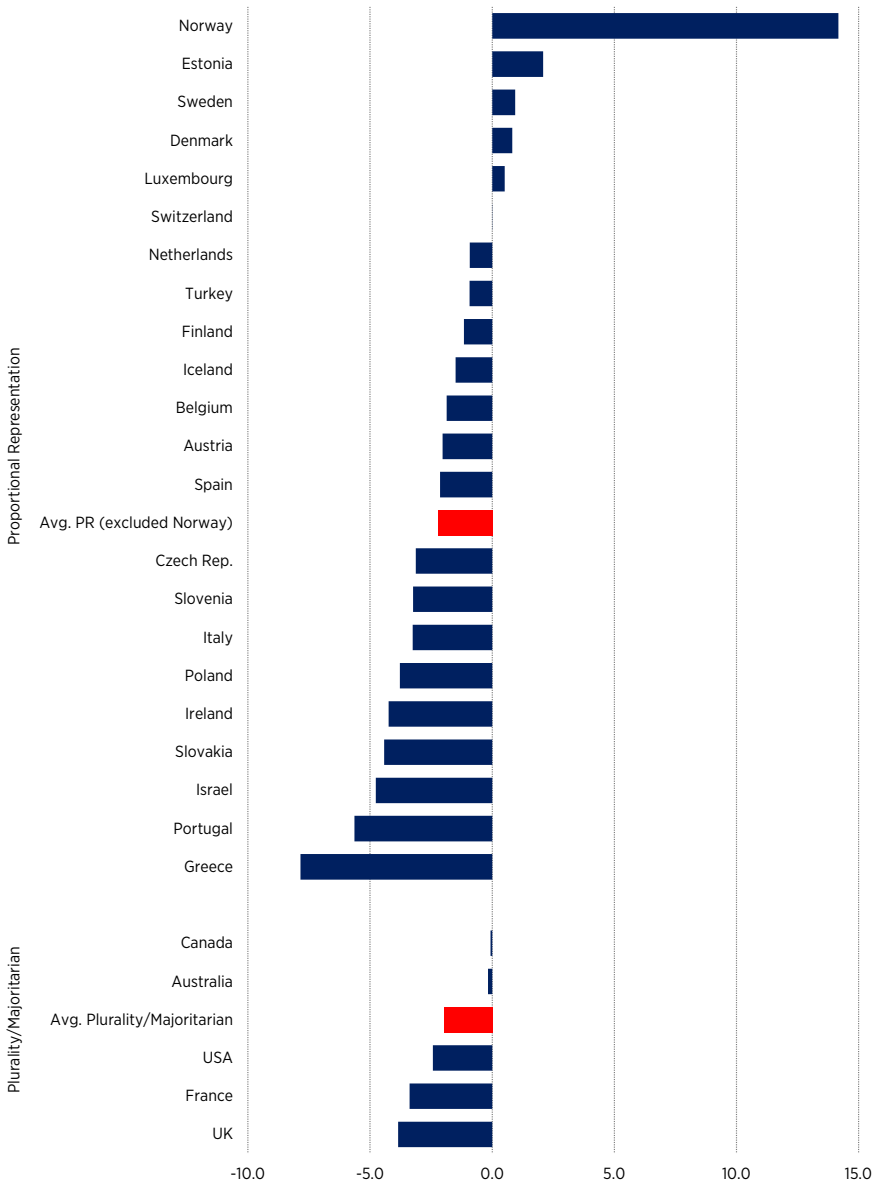
Sources: IMF (2016); Norwegian Centre for Research Data (n.d.); Inter-Parliamentary Union (n.d.); authors calculations.

under plurality/majoritarian rules. Analyzes of the link between the type of election rules and the presence and severity of deficits has generally linked PR election rules to more frequent and larger deficits. For instance, noted economists Nouriel Roubini and Jeffrey Sachs analyzed the impact of minority governments in 15 industrialized democracies between 1961 and 1985. They concluded that minority governments have 1.2 percentage points of additional budget deficits relative to majority governments (Roubini and Sachs, 1989).

Alesina and Perotti provided further evidence for this concept in a 1995 study. They examined fiscal adjustments in 20 OECD governments between 1960 and 1992 and found that "conflicts amongst coalition members and the fragility of coalition governments make it difficult to maintain a 'tough' fiscal stance, particularly when politically sensitive programs, government employment and social security are involved." They concluded that this rendered coalition governments "generally unable to carry out successful fiscal adjustments" (Alesina and Perotti, 1995: 24).

Similarly, scholars Kontopoulos and Perotti, referred to earlier, examined the impact of government fragmentation on budget deficits in 20 OECD countries from 1960 to 1995. They found a significant positive correlation between the number of parties within a governing coalition and public debt between 1984 and 1995 (Kontopoulos and Perotti, 1999).[21]

They also found that in "bad times," larger coalitions have more powerful negative effects. Specifically, they found that elections under proportional representation tended to require coalition governments more fre-

---

[21] The authors pointed out that the 1960s were characterized by "more or less stable growth and little fiscal action in most countries of the sample," which likely explains why there was no correlation between electoral rules and deficits during that period. They also pointed out that the fiscal challenges during the 1970s were due to external shocks common to all countries, which meant that the "executive decision-making process" was most important for constraining spending growth. In the 1980s "the dividing line was between those countries that engaged in large discretionary consolidations and those that did not." They argued that the number of coalition partners was a greater factor in the 1980s because "fiscal consolidation is largely political and requires a cohesive government" (Kontopoulos and Perotti, 1999: 91).

quently than plurality/majoritarian systems, suggesting that moving to PR would lead to higher government expenditures and worse deficits during negative economic shocks.

Finally, one of many studies on this issue by scholars Persson and Tabellini also found evidence that the challenges governments elected under proportional systems have in balancing their budgets may linger beyond economic downturns. Specifically, they found evidence that the type of electoral rule is correlated with the reaction of government to economic shocks. In countries with PR electoral rules, spending as a share of GDP rises in recessions but does not decline in booms, while cyclical fluctuations tend to have symmetric impacts on fiscal policy under other electoral systems (Persson and Tabellini, 2004a: 24–45).

The totality of the evidence strongly suggests that governments elected by proportional representation are more likely to run deficits than those elected through plurality/majoritarian systems. This is largely due to the increased likelihood of electing more parties that necessitate coalition governments.

IV. Conclusion

There has been a great deal of research into the impact of electoral rules on fiscal policy over the last several decades. Many of these studies have focused on the relationship between electoral systems and public spending and deficits.

The research shows that proportional electoral rules are linked with higher public spending than plurality/majoritarian systems. Moreover, the literature demonstrates a clear connection between proportional representation and deficits. Finally, the literature suggests that more fractured a government is (with larger, unstable coalitions), the more difficult a time it will have responding to fiscal crises.

The tendency of proportional electoral systems to elect minority governments is a serious consideration when weighing the benefits and costs of various electoral systems. Plurality/majoritarian electoral systems, by con-

trast, typically elect majority governments. The literature clearly suggests that a move from our plurality/majoritarian electoral system to a proportional system would likely increase both government spending and deficits.

References

Acemoglu, Daron (2005). Constitutions, Politics, and Economics: A Review Essay on Persson and Tabellini's The Economic Effects of Constitutions. *Journal of Economic Literature* 43, 4 (December): 1025–1048.

Alesina, Alberto, and Roberto Perotti (1995). *Fiscal Expansions and Fiscal Adjustments in OECD Countries.* NBER Working Paper No.5214 (August). National Bureau of Economic Research.

Blume, Lorenz, Jens Muller, Stefan Voigt, and Carsten Wolf (2009). The Economic Effects of Constitutions: Replicating—and Extending—Persson and Tabellini. *Public Choice* 139, 1-2 (April): 197–225.

Caruso, German, Carlos Scartascini, and Mariano Tommasi (2015). Are We All Playing the Same Game? The Economic Effects of Constitutions Depend on the Degree of Institutionalization. *European Journal of Political Economy* 38 (June): 212–228.

Döring, Holger, and Philip Manow (2016). Information on parties, elections, and cabinets in modern democracies. *Parliaments and Governments Database*. Development version. ParlGov. <http://www.parlgov.org/> , as of June 22, 2016.

Funk, Patricia, and Christina Gathmann (2010). How Do Electoral Systems Affect Fiscal Policy? Evidence from State and Local Governments, 1890 to 2005. CESifo Working Paper Series No. 2958. Center for Economic Studies. <https://www.aeaweb.org/conference/2009/retrieve.php?pdfid=131>, as of June 22, 2016.

Grilli, Vittorio, Donato Masciandaro, Guido Tabellini, Edmond Malinvaud, and Marco Pagano (1991). Political and Monetary Institutions and Public Financial Policies in the Industrial Countries. *Economic Policy* 6, 13 (October): 341–92.

International Monetary Fund [IMF] (2016). *Government Finance Statistics.* Web portal. IMF. <http://data.imf.org/?sk=a0867067-d23c-4ebc-ad23-d3b015045405&sId=1390030109571>, as of June 22, 2016.

Inter-Parliamentary Union (n.d.). *PARLINE Database on National Parliaments.* Web database. Inter-Parliamentary Union. <http://www.ipu.org/parline-e/parlinesearch.asp>, as of June 22, 2016.

Kontopoulos, Yianos, and Roberto Perotti (1999). Government Fragmentation and Fiscal Policy Outcomes: Evidence from the OECD countries. In J. Poterba and J. von Hagen (eds.). *Fiscal Institutions and Fiscal Preference* (University of Chicago Press): 81–102.

Liberal Party of Canada (2015). *Real Change: A New Plan for Strong Middle Class.* Liberal Party of Canada. <https://www.liberal.ca/files/2015/10/New-plan-for-a-strong-middle-class.pdf>, as of June 22, 2016>.

Lijphart, Arend (1990). The Political Consequences of Electoral Laws, 1945–85. *American Political Science Review* 84, 2 (June): 481–496.

Lijphart, Arend (1994). *Electoral Systems and Party Systems: A Study of Twenty-Seven Democracies, 1945-1990.* Oxford University Press.

Lizzeri, Alessandro, and Nicola Persico (2001). The Provision of Public Goods under Alternative Electoral Incentives. *American Economic Review* 91: 225–245.

MacRae, C. Duncan (1977). A Political Model of the Business Cycle. *Journal of Political Economy* 85, 2 (April): 239–263.

Milesi-Ferretti, Gian Maria, Roberto Perotti, and Massimo Rostagno (2002). Electoral Systems and Public Spending. *Quarterly Journal of Economics* 117, 2: 609–657.

Murphy, Robert P., and Jason Clemens (2013). *Reforming Alberta's Heritage Fund: Lessons from Alaska and Norway*. The Fraser Institute. <https://www.fraserinstitute.org/sites/default/files/reforming-albertas-heritage-fund.pdf>, as of June 22, 2016.

Norwegian Centre for Research Data (n.d.). *European Elections Database*. Norwegian Centre for Research Data. <http://www.nsd.uib.no/european_election_database/about/>, as of June 10, 2016.

O'Neal, Brian (1993). *Electoral Systems*. Canada, Library of Parliament. <http://www.lop.parl.gc.ca/content/lop/researchpublications/bp334-e.htm>, as June 22, 2016.

Persson, Torsten, and Guido Tabellini (2001). *Political Institutions and Policy Outcomes: What are the Stylized Facts?* CEPR Discussion Paper No. 2872. Centre for Economic Policy Research.

Persson, Torsten, and Guido Tabellini (2003). *The Economic Effects of Constitutions: What Do the Data Say?* MIT Press.

Persson, Torsten, and Guido Tabellini (2004a). Constitutional Rules and Fiscal Policy Outcomes. *American Economic Review* 94, 1 (March): 24–45.

Persson, Torsten, and Guido Tabellini (2004b). Constitutions and Economic Policy. *Journal of Economic Perspectives* 18, 1: 75-98.

Persson, Torsten, and Guido Tabellini (2008). Electoral Systems and Economic Policy. In Donald A. Wittman and Barry R. Weingast (eds.). *The Oxford Handbook of Political Economy* (June).

Persson, Torsten, Gerard Roland, and Guido Tabellini (2007). Electoral Rules and Government Spending in Parliamentary Democracies. *Quarterly Journal of Political Science* 2, 2: 155–188.

Rae, Douglas (1971). *The Political Consequences of Electoral Laws*, 2nd ed. Yale University Press.

Reynolds, Andrew, Ben Reilly, and Andrew Ellis. (2008). *Electoral System Design: The New International IDEA Handbook*. International Institute for Democracy and Electoral Assistance. <http://www.idea.int/publications/esd/>, as of June 22, 2016.

Riker, William (1982). The Two-Party System and Duverger's Law: An Essay on the History of Political Science. *American Political Science Review* 76, 4 (December): 753–766.

Rockey, James (2012). Reconsidering the Fiscal Effects of Constitutions. *European Journal of Political Economy* 28, 3: 313–323.

Roubini, Nouriel, and Jeffrey D. Sachs (1989). Political and Economic Determinants of Budget Deficits in the Industrial Democracies. *European Economic Review* 33, 5: 903–933.

Taagepera, Rein, and Matthew Shugart (1989). *Seats and Votes: The Effects and Determinants of Electoral Systems*. Yale University Press.

Voigt, Stefan (2011). Empirical Constitutional Economics: Onward and Upward? *Journal of Economic Behaviour & Organization* 80, 2 (October): 319–330.

About the authors

Jason Clemens is the Executive Vice President of the Fraser Institute. He has an Honors Bachelors Degree of Commerce and a Master's Degree in Business Administration from the University of Windsor as well as a Post Baccalaureate Degree in Economics from Simon Fraser University. He has published over 70 major studies on a wide range of topics, including taxation and entrepreneurship. He has published over 300 shorter articles in US, Canadian, and international newspapers.

Taylor Jackson is a Senior Policy Analyst at the Fraser Institute. He holds a BA and an MA in Political Science from Simon Fraser University. He is the co-author of a number of Fraser Institute studies, including *Safety in the Transportation of Oil and Gas: Pipelines or Rail?* and the Fraser Institute's annual *Global Petroleum Survey* and *Survey of Mining Companies*. He is also the co-author of a book chapter on the past, present, and future of Canadian-American relations with Professor Alexander Moens. His work has been covered in the media around the world and his commentaries have appeared in the *National Post, Financial Post*, and *Washington Times,* as well as other newspapers across Canada.

Steve Lafleur is Senior Policy Analyst at the Fraser Institute. He holds an MA in Political Science from Wilfrid Laurier University and a BA from Laurentian University where he studied Political Science and Economics. His past work has focused primarily on housing, transportation, local government, and inter-governmental fiscal relations. His current focus is on economic competitiveness of jurisdictions in the Prairie provinces.

Joel Emes is Fraser Institute Senior Fellow who rejoined the Institute after a stint as a senior advisor to British Columbia's provincial government. He previously served as a senior analyst, then as executive director (2009 to 2011), at the BC Progress Board. Prior to that, Joel was a senior research economist at the Fraser Institute, where he initiated and led several flagship projects in the areas of tax freedom and government performance, spending, debt, and unfunded liabilities. Joel holds a BA and an MA in economics from Simon Fraser University.

Acknowledgments

Publishing information

Distribution

These publications are available from <http://www.fraserinstitute.org> in Portable Document Format (PDF) and can be read with Adobe Acrobat® or Adobe Reader®, versions 7 or later. Adobe Reader® XI, the most recent version, is available free of charge from Adobe Systems Inc. at <http://get.adobe.com/reader/>. Readers having trouble viewing or printing our PDF files using applications from other manufacturers (e.g., Apple's Preview) should use Reader® or Acrobat®.

Media

For media enquiries, please contact our communications department at 604.714.4582 or via e-mail at communications@fraserinstitute.org. In Toronto, contact our media specialist at 416.363.6575, ext. 238.

Copyright

Date of issue

July 2016

Supporting the Fraser Institute

To learn how to support the Fraser Institute, please contact

- Development Department, Fraser Institute, Fourth Floor, 1770 Burrard Street, Vancouver, British Columbia, V6J 3G7 Canada
- telephone, toll-free: 1.800.665.3558 ext. 586
- e-mail: development@fraserinstitute.org
- website: <http://www.fraserinstitute.org/support-us/overview.aspx>

Purpose, funding, and independence

The Fraser Institute provides a useful public service. We report objective information about the economic and social effects of current public policies, and we offer evidence-based research and education about policy options that can improve the quality of life.

The Institute is a non-profit organization. Our activities are funded by charitable donations, unrestricted grants, ticket sales, and sponsorships from events, the licensing of products for public distribution, and the sale of publications.

All research is subject to rigorous review by external experts, and is conducted and published separately from the Institute's Board of Trustees and its donors.

The opinions expressed by authors are their own, and do not necessarily reflect those of the Institute, its Board of Trustees, its donors and supporters, or its staff. This publication in no way implies that the Fraser Institute, its trustees, or staff are in favour of, or oppose the passage of, any bill; or that they support or oppose any particular political party or candidate.

As a healthy part of public discussion among fellow citizens who desire to improve the lives of people through better public policy, the Institute welcomes evidence-focused scrutiny of the research we publish, including verification of data sources, replication of analytical methods, and intelligent debate about the practical effects of policy recommendations.

About the Fraser Institute

Our mission is to improve the quality of life for Canadians, their families, and future generations by studying, measuring, and broadly communicating the effects of government policies, entrepreneurship, and choice on their well-being.

Notre mission consiste à améliorer la qualité de vie des Canadiens et des générations à venir en étudiant, en mesurant et en diffusant les effets des politiques gouverne-mentales, de l'entrepreneuriat et des choix sur leur bien-être.