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Balanced Budget Provisions in Constitutions and Consensus: The Role of the Coherence of Electoral Law

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Abstract

Since governments are fragmented in their components, are short-sighted and, therefore, are unwilling to undertake ways of consolidation that alleviate the burden of debt on future generations, constitutionalization makes economic sense. The problem, which does not seem to have been adequately considered, is that if it is true that existing electoral laws have led to the constitutionalization of the public budget, it is equally true that this reform of the constitution necessarily entails an adequate electoral law to avoid perennial political instability and effective fiscal consolidation. We refer to the recent Italian case and present a simple model of consensus and political stability that requires a budgetary imbalance. All this implies that the constitutionaliation of the balanced budget necessarily requires an appropriate electoral law.

Keywords

Political Consensus, Constitutionalization, Electoral Law, Fractionalization of Parties, Interest Groups

1. Introduction

Since the sovereign debt crisis, a line of thought has been developing that suggests "tying the hands" of governments to obtain a balanced fiscal policy and to reduce the growth of the public debt. The most practical and historical solution is that of economic constitutionalism: inserting clear budgetary constraints and their definition directly into the constitution.[1]

[1]A recent review of theories and empirical work on why governments generate fiscal imbalances is that of Eslava (2011). See Persson and Tabellini (2000) for theoretical frameworks that highlight the set of incentives shaping policymakers' fiscal behaviour. Several early works, including Brennan and Buchanan (1980), propose the hypothesis of fiscal illusion to explain persistent fiscal deficits.

The use of institutional and constitutional reforms is required, because taxation and public spending sometimes tend to be independent. This independence is facilitated by some electoral laws that allow ruling coalitions to cope with fragmentation and a multitude of supporting interests for the parties that compose them. If there is a limit to taxation, then it is necessary to recreate a causal interdependence through institutional (or constitutional) reforms. For example, before the 1970s, Hoover and Sheffrin (1992) found that taxes and spending were causally independent in the US economy. Institutional changes such as the Congressional Budget and Impoundment Control Act and the Gramm-Rudman-Hollings Balanced Budget and Emergency Deficit Control Act were designed to create causal independence.[2] In this way, fiscal policy is no longer linked to the governments in charge and, therefore, to their electoral interests; rather, governments are forced to operate in compliance with the established budget constraint (see also Rose, 2010 for a discussion). Balanced budget provisions in constitutions have given rise to a wide debate, but especially in countries where electoral laws push for the formation of large government coalitions, the "constitutionalization" of the budget constraint is undoubtedly the only way forward. Since governments are fragmented in their components, are short-sighted and, therefore, are unwilling to undertake ways of consolidation that alleviate the burden of debt on future generations, constitutionalization makes economic sense. Ginsburg (2019) and Asatryan et al. (2018) provide an extended analysis of the prevalence of balanced budget provisions in constitutions over time and across countries.[3] The problem, which does not seem to have been adequately considered, is that if it is true that existing electoral laws have led to the constitutionalization of the public budget, it is equally true that this reform of the constitution necessarily entails an adequate electoral law to avoid perennial political instability and effective fiscal consolidation.

In this paper, the bound sets on the payoff vector of the ruling coalition are related to the notion of consensus marginal cost. When the cost, in terms of public expenditure and, therefore, in terms of fiscal imbalances, does not set a limit on the process of harmonizing different interests in the coalition, major institutional or constitutional change may occur to create causal interdependence between public expenditures and taxation. However, given the electoral law and the interests that form the ruling coalition, the balanced budget provisions in constitutions undermine the stability of the governments that should enforce them. Specifically, if the provisions in the constitution concern a balanced budget, the respect for the interests involved in the formation of the coalition could be undermined by the need to meet the constitutional objective through an increase in

[2]For a discussion, see, among early studies, Brennan and Buchanan (1980). Brennan and Buchanan (1981) outlined the case for constitutional rules governing monetary policy to refrain from using inflation tax: only by restraining the discretionary powers of the monetary authorities through enforceable constitutional rules will inflation be controlled.

[3]Ginsburg (2019) reports a cross-sectional analysis that tends to support the efficacy of constraining decision-making. Asatryan et al. (2018), find that the introduction of constitutional-level balanced budget rules leads to a reduction of the probability of experiencing a sovereign debt crisis.

taxation. To see this, we will refer to the recent Italian case and present a simple model of consensus and political stability that requires a budgetary imbalance. The constitutionalization of the balanced budget poses a serious threat to political stability. So, to the research question, does the constitutionalization of a balanced budget pose a serious threat to political stability? The answer of this paper is certainly yes and in order to avoid this stabilizing effect, the paper shows that balanced budget amendments need to be completed by electoral change that increases the "coherence" of interests.

The paper proceeds as follows. Section 1 reports on the introduction of the balanced budget principle into the Italian Constitution. Section 2 reviews the historical process of Italian electoral laws, highlighting the role of proportional rules. Section 3 emphasizes the role of interest groups in forming political consensus for large coalitions in office. We review the literature on political stability (fractionalization of parties and policymakers) and fiscal policy. Section 4 introduces the model of forming a stable ruling coalition, and Section 5 shows the requirements, in terms of public expenditure and taxation, for having a stable coalition with fractionalized interests. Section 6 concludes the paper.

2. The Italian Case: Introduction of the Balanced Budget Principle into the Italian Constitution

With the constitutional law of 20 April 2012 n. 1, the principle of the structural balance of revenues and expenditure of the budget, in accordance with the provisions of some international agreements, was introduced into the Italian Constitution. This constitutional reform did not depend on legally obligating Italy to choose the way of constitutional revision to implement the budget rules established in the EU; no role was played by the provisions of the treaties on the subject of economic and monetary union, the provisions of the Euro Plus Pact (11 March 2011), or European-level documents, such as Directive 2011/85/EU (8 November 2011)—contained in the so-called Six Pack and the Fiscal Compact Treaty (in force since 1 January 2013). The only legal obligation exclusively concerned the incorporation of budget rules in national laws. Therefore, the nature of the regulatory act was left to the discretion of EU member states, provided that it was a binding and permanent instrument.

In the aforementioned constitutional law, by introducing a new version of articles 81, 97, 117 and 119 into the Italian Constitution, the Italian Parliament introduced the structural principle of the balance between revenues and expenditure of the budget (the balanced budget), correlating it to a debt sustainability constraint placed on all public administrations, in compliance with the economic and financial rules deriving from European law.

In particular, the principle of balance is contained in the new article 81, which in the first paragraph establishes that the state must ensure the balance between the revenues and the expenses of its own budget, taking into account the different phases—adverse or favorable—of the economic cycle. In accordance with the balanced budget principle, the new third paragraph of article 81 provides that every law—including the budget law, which by virtue of the reform acquires a substantial character—that generates new or greater burdens must provide the means to cope with them.

Under the new sixth paragraph of article 81, the definition of the content of the budget law, the fundamental norms and the criteria aimed at ensuring the balance between the revenues and expenses of the budgets and the sustainability of the debt of the general public administration are delegated to a special "reinforced" law to be approved by an absolute majority of the members of each chamber (Chamber of Deputies and Senate).

Under the new art. 97 of the Italian Constitution, the obligation to ensure the balance of budgets and the sustainability of public debt, in line with the European Union legal order, is extended to all public administrations.

With regard to the budgetary discipline of local authorities, the constitutional law makes some changes to Article 119 of the Italian Constitution to specify that the financial autonomy of territorial bodies (municipalities, provinces, metropolitan cities and regions) is ensured with respect to the balance of the relative budgets. The principle of concurrence of these bodies with the observance of economic and financial constraints deriving from the European Union is also constitutionalized. An amendment to the sixth paragraph of article 119 also specifies that the recourse to debt, which the current constitutional law allows exclusively to finance investment expenses, is subject to the simultaneous definition of depreciation plans and the condition that the balance of the budget is respected for all the bodies of each region.

The constitutional law also modifies Article 117 of the Italian Constitution, inserting the subject of the harmonization of public budgets into the list of actions over which the state has exclusive legislative competence.

What may seem like an enigma is actually explained by a series of reasons linked to the political and economic crisis of 2011. The choice of the constitutional revision during the XVI legislature[4] was generated by a very difficult economic and financial situation for Italy during 2011-12, and it was intended to reassure European institutions, other EU members states and the markets of Italy's determination to comply with European budget rules. The question of government debt had for some time been at the center of public discussion, especially after the 2007-2009 banking crisis had been largely resolved by the burden of public budgets.

In this situation, which then led to the constitutionalization of the balanced budget principle, the role played by the famous letter addressed to the Italian government on August 5, 2011, by Trichet and Draghi, in which they "suggested" a constitutional revision with regard to the budgetary rules, was indicative: "…a constitutional reform tightening fiscal rules would also be appropri-

[4]The Berlusconi government from 8.05.2008 to 16.11.2011; the Monti government from 11/16/2011 to 28 April 2013.

ate…”.[5] Indeed, this “suggestion” was adopted very quickly and almost without discussion, given that the letter was dated August 5, 2011, and the first approval of the constitutional law was November 30, 2011 (in the Chamber of Deputies). Constitutional law n. 1 of 2012 was then definitively approved by a qualified majority of two-thirds of the members of the Chamber of Deputies and Senate on April 18, 2012.

All this has led the Italian Parliament (through the constitutional legislator), with a broad consensus reached through an “aggravated procedure”, to tie the hands of politicians and, in particular, their fiscal policy. The problem is that a serious but contingent situation such as that of the 2011 economic and financial crisis has led to a structural reform of fiscal policy that has strong implications for the maintenance of ruling coalitions and that necessarily requires electoral law reform. Certainly, these implications are related not only to the Italian case; rather, they can be generalized to all countries that have an electoral law that allows a high fragmentation of interests represented by a large number of parties.

3. Electoral Law

From 1948 to 1993, the Italian Parliament was elected through a proportional system (l. 7 October 1947, n. 1058, law 6 February 1948, n. 29). To make governments less unstable, in 1953, this system was subsequently amended (law of 31 March 1953, n. 148): for the Chamber of Deputies alone, the new law attributed a majority prize of 380 seats to the list or to the coalition of lists that, throughout the national territory, had managed to collect 50% of the votes plus one. This electoral law was repealed in 1954.

Between 1990 and 1993, some requests for referendums on electoral matters were presented. Two consultations were carried out, one concerning the abolition of multiple preference voting in the Chamber of Deputies (1991) and another that abolished the quorum for election in single-member constituencies (1993), establishing for the Senate a mixed electoral system with a prevalence majority.

After the referendum consultation, laws n. 276 and 277 of 1993 introduced a majority system with proportional correction for the election of the Chamber of Deputies and Senate (known as “Mattarellum”): 75% of the seats were assigned by the majority method and the remaining 25% by the proportional method. Italy seemed to include in its electoral system the ingredients of plurality rule (see Persson & Tabellini, 2004).

However, the Mattarellum was abolished by a new electoral law known as the “Calderoli law” (n. 270 of 2005), which introduced a fully proportional electoral system with a majority bonus and thresholds for lists and coalitions.

The 2014 Calderoli law was subjected to constitutional review. The Constitutional Court (sentence n. 1/2014) declared the majority premium and the failure to provide for preference voting to be unconstitutional. The electoral law was then transformed by the Constitutional Court into a purely proportional law,

[5] Letter from Jean-Claude Trichet and Mario Draghi to the Italian government of 5 August 2011.

with preference voting and no majority prize.

The following year, it was then the turn of the "Italicum" (Law 6 May 2015 n. 52), which should have been applied only to the Chamber of Deputies, as a procedure of constitutional revision was underway. This procedure was not successful, but it should have carried out the differentiation of bicameralism, transforming the Senate into a chamber representative of territorial bodies whose members would have been selected on the basis of an investiture modality, not by direct universal suffrage. Opposing the Italicum, appeals to the Constitutional Court were presented by several Italian courts; thus, the Supreme Court (sentence n. 15, 2017) declared the law to be in part unconstitutional. With law n. 165 of 3 November 2017 (the so-called "Rosatellum"), a new electoral system was introduced: it was a mixed system of proportional prevalence, in which one-third of deputies and senators were elected in single-member constituencies (one candidate per coalition, the one with the most votes is elected) and the remaining two-thirds were elected with a proportional list system.

Different interpretations can be drawn from this chronicle of electoral reforms in Italy. One interpretation could be concerned with the efforts of the parties to correct the purely proportional system, which is more permissive of the illegal earnings of politicians, entailing less transparency and more corruption. Another interpretation links the need for reforms with the need to carry out more balanced fiscal policies. Finally, this brief summary of the institutional and constitutional struggle shows how the parties have been engaged in a constant search to maintain a properly proportional system to secure their supporters (electorate, pressure groups, lobbies) in a highly fragmented party system.

Subsequently, we see that this system (with its innumerable variations) is no longer coherent once the balanced budget principle is constitutionalized. The inclusion of the budget constraint into the constitution has reversed the causality: the necessary electoral law is that which is consistent with this institutional constraint.

4. Political Consensus: Interests Groups

In this paper, we do not consider models of competition among interest groups, where the political mechanism is entirely described in terms of the interaction between members of interest groups, such as in Becker (1983; 1985), nor do we try to build a model of electoral competition where incumbents and opponents face voters divided into interest groups (for instance, Coughlin et al., 1990a, 1990b).[6] Rather, we are interested in investigating how the number of conflicting interests (fragmentation) affects the institutional framework, impinging on the economy. Thus, this paper takes a different approach: the analysis is based on an explicit

[6]Baroni et al. (2014) provide a solid empirical foundation for defining and classifying interest groups. Fiorentini (1999) provides a fiscal structure of a community as an equilibrium of a noncooperative game where different groups, with conflicting interests, compete to obtain distributive gains. Different models of lobbying are analyzed by Persson and Tabellini (2000) and Grossman and Helpman (2001).

model of political consensus that includes the effect of interest groups.

We assume that interest groups have identical utility functions. In choosing strategies, political parties (government parties and opposition parties) weigh the impact of their policies not on the individual voter but on groups of voters: service workers, postal workers, consumer organizations, environmentalists, nature and environmental Organizations, animal rights activists, teachers, human rights and religious associations, trade unions, etc. For example, the Italian system of interests has approximately 1600 politically active groups (Pritoni, 2017).

In our case, we focus on the consensus that pressure groups can produce so that a coalition of parties can govern. This political consensus is based on different and perhaps conflicting requests for participation in public spending by interest groups. An extensive literature (both theoretical and empirical) predicts that this expenditure is broader in parliamentary systems (and among those with a proportional electoral rule) and for governments forming a coalition (see Persson et al., 2000, 2007; Persson & Tabellini, 2000, 2003; Milesi-Ferretti et al., 2002). Many contributions stress that the party structure and the types of government shape economic policy. Common pool problems (the benefits of public spending are the prerogative of pressure groups and the electorate that supports the government, while the costs are generalized to all tax payers) are most noticeable with governments formed by coalitions of parties (see also Alesina & Perotti, 1995). The heterogeneous interests across groups of voters have been proposed by a vast literature as a reason for potentially pervasive deficits. The logic of the common-pool resource problem has generated the so-called "political fragmentation hypothesis", in which the number of politically relevant actors is positively correlated with the level of the budget deficit: the greater the number of actors, the greater the deficit. Velasco (1999) developed the common pool model as a reason for the perpetuation of fiscal deficits over time. It is also interesting to recall the literature that links the degree of social fractionalization (society is a collection of disparate groups, with each group being concerned about its own interests, at the expense of social welfare) to the political instability of governments. This literature shows how this instability can be somewhat reduced by increasing government consumption.[7]

Empirical analyses by Kontopoulos and Perotti (1999), Woo (2003), Ricciuti (2004), Wehner (2010) and many others show how public expenditures increase when the number of parties (or the number of spending ministers) that form a ruling coalition increases and that this is more likely under proportional rule (see, for instance, Scartascini & Crain, 2002; Persson & Tabellini, 2003 for a survey).[8] The fragmentation of parties with proportional systems and the difficult formation of government coalitions are very close to the interpretation of consensus that we use in our model. As is well known, fiscal imbalance derives from

[7]See, for instance, Annett (2001) for an empirical analysis with ethnolinguistic and religious groups.

[8]For a analysis of the great diversity of electoral systems (electoral formula, district magnitude, ballot structure) existing among democracies, see, among others, Blais and Massicotte (1996). See also Austen-Smith (2000) and Voigt (2011) for a survey.

the fact that policymakers do not at all internalize (or do not fully internalize) the costs of aggregate expenditure and any associated taxation. This lack of consideration of aggregate costs occurs because each party is linked to its electorate and its pressure groups and pushes for the relative public expenditure component. In these contexts, budget formulation undergoes a process of continuous requests and revisions by the various ministries that compose the governing coalition, with the foreseeable consequence that the degree of internalization of the costs of this process, in terms of public spending and public deficit, is minimal: the individual rationality of each party leads to collective irrationality.

Following Kontopoulos and Perotti's (1999; 2002) definitions of fragmentation as the degree to which individual fiscal policymakers internalize the cost of one dollar of aggregate expenditure as well as the two determinants that they emphasize, that is, the number of decision-makers (size fragmentation) and the structure of the process in which they interact (procedural fragmentation), we can define our consensus with regard to the ruling coalition as the number of interest groups that support the coalition in office and that do not allow a clear internalization of costs.[9]

Finally, in this paper, we do not consider the composition of public expenditure generated by the fragmentation of parties and policymakers and, therefore, from the high number of interests and related pressure groups. This composition is important because empirical analyses have highlighted an increase in the components relating to subsidy and transfer programs, to the detriment of public goods (Scartascini & Crain, 2002, among others). This is a distortion that has a profound effect on the effectiveness of public spending and, therefore, on the productivity of the economy; however, we do not consider it.

5. The Stability of the Ruling Coalition

We consider the optimal size of government when a coalition is in office. This form of government is widely represented in Europe.[10]

The optimal size provides the maximum number of interests (constituting their limit) that can be incorporated by the parties that form the coalition and that, therefore, can be called upon to govern.

To model the effect of different interest groups on government stability, we consider a set of parties $P=(1,2,\cdots,n)$ and assume that to be in office, a coalition z must consist of the whole of P. Furthermore, we define the payoff vector that reflects the final outcome of the n-parties game as $(x_1,x_2,\cdots,x_n)$, where (x_i) is a well-defined utility for party i. The following condition must hold:

$$\sum_z x_i \geq V(z); \quad x_i \geq V(P) \tag{1}$$

[9]See Eslava (2011) for a survey.

[10]In 2017, Spain, Germany, Ireland, Croatia, the Netherlands, Finland, Estonia, Bulgaria, Cyprus and Austria presented center-right coalitions whereas Italy, Greece, Slovakia, Lithuania, Sweden and Romania presented center-left coalitions.

In Equation (1), $V(z)$ stands for the *characteristic function* of the game, that is, the maximum payoff to coalition member z that the coalition can guarantee itself. This condition (Pareto-optimality condition) states that z (as a whole coalition) and each component of P must reach at least their security levels. If the parties are entertaining an agreement to form a coalition and the sum of the xs that will go to some members of a subset of z, for instance, w, is less than $V(w)$, the parties in w (assumed to be rational) will jointly refuse to make a binding agreement. In other words, $\sum_{w} x_i \geq V(w)$. In this case, these players will block the payoff vector $(x_1, x_2, \cdots, x_n)$, refusing to agree to z. A natural question concerns payoff vector x. What determines the vector of the payoffs that make possible the formation of a coalition capable of governing? It may be considered that in plenary sessions, parties $i = 1, 2, \cdots, n$ make proposals and that these proposals $(x_1, x_2, \cdots, x_n)$ come from a blocking process where each party in turn makes a proposal and submits it to a negotiation process. A payoff vector is in the core of the game if it satisfies the above condition or, put differently, if it survives an intense conflict of interest.

When a payoff is in the core, a cooperative equilibrium has been reached. A suitable internal distribution of the payoff can be paid out to make the parties Pareto better off than they would have been. However, this process may turn out to be arduous: an n-parties core may well be empty: there is no payoff that will not be blocked by some parties.

Clearly, if cake x is defined in terms of the public budget, the interests involved are defined in terms of public expenditure and taxation. This cake could represent the fiscal imbalance (revenue-expenditure) needed to define a coalition (and, as we will see, the interests it proposes to guarantee) capable of obtaining the majority of votes and of governing a country. Of course, the supporting interests of each party must be resolved within each x_i. This simple way of seeing the formation of a coalition of ruling parties outlines dramatic consequences for public sector decision making and for the relationship between politics and macroeconomic policies. Economic policies emerge from the resolution of a complex interlacing of conflicts of interest through the political process. In some cases, as in Italy, the coalition in office has been formed by four-five parties. The parties themselves are not homogeneous structures; rather, they are formed by several components (political currents), which, in turn, are strongly tied to different supporters: lobbies, pressure groups and different segments of voters set up a base of a pyramid and are rational agents who make demands in exchange for support.

The government's ability to make appropriate choices regarding the political economy depends on the cake (x) and how it is distributed among the members of the coalition and the interests of parties (and, ultimately, the components of the parties) involved in the coalition. Given x, the larger the set of interests involved is, the larger the probability that the government will not make an appropriate choice. In our case, an appropriate choice is one that is consistent with *x*. On the other hand, a large set of interests reflects a large amount of consensus necessary to achieve a majority and to form a ruling coalition.

Accordingly, we define a payoff configuration (x, z) as determined by the definition of an individually rational payoff configuration and a coalitionally rational payoff configuration. Since a coalition structure P is formed by n parties, $i = 1, 2, \cdots, n$, if we define j as the number of interests that a party can guarantee, each party can be expressed by an amount of consensus $C(j)$ as a function of the number of interests (notice that the interests can be considered as the number of political wings that form the party). We assume that the amount of consensus relative to each party joining the coalition in office has the following characteristics:

$$0 \le C(j) \le 1, \quad C'(j) > 0, \quad C''(j) < 0 \tag{2}$$

It seems somewhat logical to expect that the first derivative $C'(.)$ of the political consensus with respect to the number of interests is positive, while the second derivative $C''(.)$ is negative. Thus, the *marginal consensus* to form a party is positive but declining.

It is certainly important to establish the quality of the ruling coalition, which we define as the degree of stability of the coalition itself. A stable coalition indicates, on the one hand, that interests are guaranteed and, on the other hand, that parties and their representatives can be more easily re-elected. There is a high degree of stability when the interests of each party and those of all the parties forming a coalition are identical. In reality, of course, ruling coalitions are characterized by mixed interests; that is, in coalitions, there are interests to be fulfilled that are partly similar and partly dissimilar. With S, we define the stability of a coalition as a function of the security level x that the coalition can guarantee for itself. It certainly seems reasonable that consensus increases stability; however, at decreasing rates of growth, as with the increase in the number of interests, the growth of consensus tends to be reduced:

$$S'(C(j)) > 0, \quad S''(C(j)) < 0, \quad S'(x) > 0, \quad S''(x) < 0 \tag{3}$$

The *marginal stability* of z is positive and declining with respect to both consensus and the security level.

The empirical evidence confirms the convexity assumptions of equations (2) and (3). A party with a large set of interests shows a diminishing marginal consensus when it accepts a binding agreement with parties characterized by partly different interests. For the same reason, diminishing marginal consensus characterizes the stability of the coalition.

Finally, increasing the payoff vector x, which pairs the coalition structure in the payoff configuration (x, z), provides a high degree of consensus, allowing it to achieve a majority of votes. This effect is positive and declining because the increase in the payoff vector tends to increase the cost of fiscal imbalance. These are related to the total set of interests involved and the relative payoff vector. In fact, both of them, will increase taxation and, therefore, the loss of consensus for the parties forming the ruling coalition. This leads us to define the cost function

$D(x, j)$ and the *marginal costs* of building consensus to obtain a majority coalition capable of governing:

$$D'(x) > 0, \quad D''(x) \geq 0, \quad D'(j) > 0, \quad D''(j) \geq 0 \tag{4}$$

These costs are linked to the increase in interests in individual parties and in the entire coalition, first reducing their stability, making it more uncertain and, of course, increasing the fiscal imbalance. This latter increase requires higher taxation and, once again, affects the stability of the governing coalition.

Achieving a majority, a large coalition of parties faces some costs and benefits. We may relate the benefits to the stability of the coalition, which permits its members to be reconfirmed:

$$\beta'(S) > 0, \quad \beta''(S) < 0 \tag{5}$$

Thus, $\beta(S)$ represents the coalition benefit in terms of support (stability). It seems sensible to assume that marginal returns first increase and then decrease with increasing political stability.

6. The Optimal Fiscal Imbalance

Given the costs and benefits that allow the coalition to govern, we can ask ourselves what the necessary fiscal deficit to be consistent with all this is, and we can see how this varies with the interests supporting the coalition. Thus, assuming a fixed number of interests involved in the coalition in office, the payoff configuration (x,z) may be determined by resolving the following maximization problem:

$$\max_x V(x, j) = \beta\{S(x, C(j))\} - D(x, j) \tag{6}$$

with the restrictions defined by Equations (4) and (5). We note that the optimal payoff vector x, which pairs the coalition structure z, requires the following:

$$\beta'\{S(x^*, C(j))\}\frac{\partial S}{\partial x}(x^*, C(j)) - \frac{\partial D}{\partial x}(x^*, j) = 0$$

With fixed interests j, x^* represents the limit that a ruling coalition may achieve. To investigate the effect of j on the optimal security level x^*, we use the above first-order conditions:

$$\begin{aligned} &-\left\{\beta''\left[\frac{\partial S}{\partial C}\frac{\partial C}{\partial j}\frac{\partial S}{\partial x}\right] + \beta'\frac{\partial S}{\partial C \partial x}\frac{\partial C}{\partial j} - \frac{\partial^2 D}{\partial x \partial j}\right\}\mathrm{d}j \\ &= \left\{\beta''\left(\frac{\partial S}{\partial x}\right)^2 + \beta'\left(\frac{\partial^2 S}{\partial x^2}\right) - \frac{\partial^2 D}{\partial x^2}\right\}\mathrm{d}x^* \end{aligned} \tag{7}$$

We can denote with Φ the component on the left-hand side of equation (7) and with Ω the component on the right-hand side to write the following:

$$\frac{\mathrm{d}x^*}{\mathrm{d}j} = -\frac{\Phi}{\Omega} \tag{8}$$

Notice that the economic logic expressed in the above restrictions requires

$\Omega < 0$ (that is, the right-hand side of Equation (7) is negative). In other words, an increase in interests linked to the groups that support the coalition parties raises the necessary limit (the optimal security level) to maintain the stability of the coalition.

It should be noted that to be negative, Equation (8) should have on the left-hand side of Equation (7), Φ, the components $\frac{\partial^2 S}{\partial C \partial x} < 0$ and $\frac{\partial^2 D}{\partial x \partial j} \geq 0$; however, given the restrictions provided in Section 4, these components are positive and negative, respectively. The conditions $\frac{\partial^2 S}{\partial C \partial x} < 0$ and $\frac{\partial^2 D}{\partial x \partial j} \geq 0$ are not realistic. The positive increase in stability with respect to an increase in the payoff vector necessarily tends to produce an increase in the cost in terms of public expenditure, but it raises the political consensus. Therefore, this derivative is positive, and the first condition cannot occur.

However, a positive increase in the cost function with respect to an increase in the interests involved tends to curb the increase in the payoff vector for the ruling coalition. Thus, the optimal payoff vector is determined by the interests involved, and the planned fiscal deficit may be violated by an increase in the interests involved during the period in which the coalition is called upon to govern. In these cases, the political process of harmonizing interests in the economy (in a Pareto-efficient manner) may be an important determinant of unsustainable fiscal policies.

As formally argued in the literature on politics and macroeconomic policy, a high degree of proportionality and a fractionalized party system are generally likely to be associated with weak and unstable governments. Moreover, the higher the political instability is, the greater the extent to which governments are short lived, and they do not internalize the costs of leaving high public debt to their successors.[11]

Our results show that in the absence of a constitutional constraint on fiscal policy and in the presence of a proportional electoral system that generates a government with a broad coalition, we should face large fiscal deficits. It is straightforwardly clear how once the balanced budget constraint is in place in the constitution, the demands for adjustment in taxation are necessarily conditioned by the electoral rules and require a reform to make them consistent with the constitutional reform.

Suppose now that as a constraint to the coalition maximization expressed in equation (6), we impose a balanced budget, that is, $x - \tau y = 0$, where τ and y are the tax rate and gross income, respectively. Certainly, this is a very simple way of inserting the budget constraint. However, it is sufficient to highlight our

[11] Alesina and Tabellini (1990) report on these issues and, in general, on the differences in the degree of polarization and political stability. They also show that fiscal deficits are aggregate outcomes of the political conflict between different groups of citizens and voters. The empirical investigation, which starts in the 1980s, strongly supports these propositions (e.g., Roubini and Sachs, 1989; Grilli, Masciandaro, & Tabellini, 1991).

point, that is, integrating spending and tax decisions or, in other words, creating causal interdependence through a constitutional reform (see, among others, Hoover & Scheffrin, 1992). It is now easy to reframe the problem in terms of taxation. For simplicity, let us assume a constant income *y*; now, the coalition maximizes:

$$\begin{aligned} &\max_x V(x, j, \tau) = \beta\{S(x, C(j, \tau))\} - D(x, j, \tau) \\ &\text{s.t.} \quad x - \tau y = 0 \end{aligned} \tag{9}$$

Since $x = \tau y \Rightarrow x = t$, where t represents total revenues, we may rewrite Equation (9) as follows:

$$\max_t V(j, t) = \beta\{S(C(j, t))\} - D(j, t) \tag{10}$$

For a constant income, the relationship is simply sized by revenue. Of course, the additional restrictions are $D'(t) < 0$, $D''(t) \le 0$; $C'(t) < 0$, $C''(t) < 0$; the debt burden always decreases as taxation increases (decreases at decreasing rates), while the consensus (and therefore the stability of the coalition) always decreases with the increase in revenue for a given income. Now, it is necessary to find the optimal amount of tax revenue that guarantees a balanced budget, given the consensus, the stability of the coalition and the costs in terms of fiscal imbalance that the interests involved in the coalition require. The restrictions remain the same as those defined above.

In this way, we have transformed the problem of optimal fiscal imbalance, which allows the coalition to exercise its functions of government, into the problem of optimal fiscal balance, which is imposed by a balanced budget. Clearly, the latter solution, ceteris paribus, can no longer be maintained by the previous coalition.

Once the budget constraint has been "written" into the constitution, the government coalition will necessarily have to respect it, posing serious problems with respect to the interests that support it:

$$\begin{aligned} &-\left\{\beta''\left[\frac{\partial S}{\partial C}\frac{\partial C}{\partial j}\right]\left[\frac{\partial S}{\partial t}+\frac{\partial S}{\partial C}\frac{\partial C}{\partial t}\right]+\beta'\left[\frac{\partial^2 S}{\partial t \partial C}\frac{\partial C}{\partial j}+\frac{\partial^2 S}{\partial^2 C}\frac{\partial C}{\partial j}\frac{\partial C}{\partial t}+\frac{\partial^2 C}{\partial t \partial j}\frac{\partial S}{\partial C}\right]-\frac{\partial^2 D}{\partial t \partial j}\right\}\mathrm{d}j \\ &=\left\{\beta''\left[\frac{\partial S}{\partial t}+\frac{\partial S}{\partial C}\frac{\partial C}{\partial t}\right]+\beta'\frac{\partial}{\partial t}\left[\frac{\partial S}{\partial t}+\frac{\partial S}{\partial C}\frac{\partial C}{\partial t}\right]-\frac{\partial^2 D}{\partial t^2}\right\}\mathrm{d}t^* \end{aligned}$$

Now, Equation (8) becomes the following:

$$\frac{\mathrm{d}t^*}{\mathrm{d}j} = -\frac{\Gamma}{\Psi} \tag{11}$$

Even in this case, an increase in interests necessarily requires an increase in revenue (for a given income, an increase in tax rates) that would jeopardize the stability of the coalition in office. Once the numerator and denominator are removed from the secondary derivatives of the benefits that are negligible, the crucial aspect is the difference between the variations in benefits and costs. The former are defined in terms of the necessary taxation relating to the change in stability with the increase in interests in the presence of compliance with the budget constraint, while latter are defined as a positive increase in the cost function with respect to an increase in the interests involved. These costs tend to increase the revenues for the ruling coalition $\frac{\partial}{\partial t}\left(\frac{\partial D}{\partial j}\right) > 0$. To obtain a positive numerator, assume that the increase in consensus and stability of the ruling coalition, due to the increase in the number of interests, leads to a reduction in taxation. This constitutes a contradictory and noneconomic condition, given the assumption of a balanced budget.

In line with the political economy literature, another element that can generate political tension is the lack of accountability and transparency.[12] With a coalition in office, there is no significant accountability; therefore, there is no full awareness of the aggregate costs of the individual fragmented requests. If the coalition is supported by a large number of parties with heterogeneous interests, it is generally difficult for voters and interest groups to identify who is responsible for the fiscal consequences of their political decisions.

Finally, the role of output growth in the stability of the coalition in office is an additional aspect of instability that emerges from the introduction of the balanced budget constraint in Equation (10): every negative shock that impacts output will reduce revenue (for given tax rates) and will make it impossible to maintain the interests of supporters, making the government coalition fragile (see, for instance, Persson & Tabellini, 2003, among others). Thus, with constant public spending and tax rates, *ceteris paribus*, it is expected that in recessionary phases, the political tension between coalition parties will increase and the consensus will decrease. Since the budget constraint in the constitution prevents any increase in expenditure without adequate revenue coverage, to deal with this shock, the ruling coalition must undertake a reduction in interests and/or reshuffle them, inevitably leading to a potential government crisis. As evidence of this political tension generated by a slowdown or drop in GDP, it is sufficient to remember that since the beginning of the crisis in Italy in 2007, there have been 4 legislatures and 8 governments.[13]

Thus, adjustments of spending and taxation to economic shocks can cause government crises when a balanced budget is constitutionalized. Making the causal relationship between expenditure and taxation closer through an "institutional regime change", such as the inclusion of balanced budget provisions in the constitution, requires a coherent electoral law, that is, a law that reduces the proportional share and the number of interests that the parties that are part of the ruling coalition must support.

[12]See, for instance, Persson and Tabellini (2000) and Besley and Smart (2007). See also Lowry et al. (1998), among others.

[13]There was the Prodi government until the end of the XV legislature; then, there was the fourth Berlusconi government, followed in the same legislature (XVI) by the Monti government. In the XVII legislature, the Letta, Renzi and Gentiloni governments followed one another. Finally, in the XVIII legislature, there are the two Conte governments.

7. Conclusion

In standard theory, fiscal deficits are tied to attempt on the part of government to smooth consumption. Changes in public spending and taxation in various cyclical phases produce deficits in economic downturns, whereas surpluses are generated by the phases of economic recovery. Increases in debt levels, which are inconsistent with consumption smoothing theories and are found in all democratic countries, have led to considerations of the influence of politics on the fiscal policy decision-making process. Among the various theories that link politics to fiscal imbalances, those based on the heterogeneity of fiscal preferences and on the conflicts of interest that develop within the parties that form government coalitions are of particular interest. The heterogeneity and pervasiveness of interests that are generated and developed by the coalition in office are not necessarily linked to "partisan preferences"; rather, they are structural with respect to the various political camps, characterizing the level of cohesion (or fragmentation) within the coalition in office. Since the works of Weingast et al. (1981) and Baron and Ferejohn (1989), the literature has emphasized the fiscal consequences of this phenomenon, placing in relation the fiscal deficit with the number and the size of interest participants. Under some circumstances, fiscal adjustment is somewhat problematic, giving rise to a sort of "war of attrition", and balanced budget provisions in the constitution might be a solution. In Italy, a constitutional amendment was adopted in 2012; however, we show that unless we define a coherent electoral law and a more hierarchical and transparent set of budgetary institutions, such amendments undermine the stability of the coalition in office.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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