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Are we all playing the same game? The economic effects of constitutions depend on the degree of institutionalization

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ABSTRACT

This paper addresses an important source of variation within democracies — the degree of institutionalization. The concept of institutionalization describes the extent to which politics takes place, and is believed to take place, via formal political institutions. Countries vary in their degree of institutionalization, hence, in the degree to which political actors pursue their goals via conventional politics or via "alternative political technologies". This paper postulates that if politics is conducted largely outside of formal channels, the structure of the formal channels should not matter much as a determinant of policy outcomes. To address this issue this paper proposes a new index of institutionalization and with it revisits seminal work regarding the impact of constitutions on public spending. The findings show that the effect of constitutional rules on policy outcomes is conditional on the degree of institutionalization.

1. Introduction

This paper addresses an important source of variation within democracies — the degree of institutionalization. The concept of institutionalization, owing originally to Huntington (1968) loosely describes the extent to which politics takes place, and is believed to take place, via formal political institutions. This notion has been more recently formalized by Scartascini and Tommasi (2012) who study political actors' choice to pursue their goals via conventional politics or via "alternative political technologies" (e.g. protest). Their model gives rise to multiple equilibrium levels of institutionalization; thus we shouldn't expect all democracies to "progress" to the heavily institutionalized politics of the US or Northern Europe. This then leads to a natural empirical question: if politics is conducted outside of formal channels, should the structure of those formal channels matter less as a determinant of government spending? To address this question this paper proposes a new index of institutionalization and uses it to revisit the seminal work of Persson and Tabellini (2003) regarding the impact of constitutions on policy outcomes.

The formal analysis of the effects of institutional rules over policies has progressed dramatically in the last couple of decades.[1] The stylized models have tended to assume that the political action relevant to the policymaking process takes place within relatively formalized institutional arenas (the voting booth, the building of Congress, etc.), and that the incentives of the participants are

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[1] Some of this progress is summarized by textbooks such as Persson and Tabellini (2000, 2003), Mueller (2003), and Gehlbach (2013).

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bound by formal institutional rules (electoral rules, committee rules, etc.). These simplifications of complex realities are reasonable ones for various countries at some moments in time, but are a much rougher approximation of policymaking in other places.

Countries differ widely in the extent to which public policy decisions are processed more or less with regard to the spirit of constitutional rules.[2] In some countries, power in the streets, the threat of violence or economic disruption, control of the press, or access to bribing the President may be as valuable as the power in Congress and other formal institutions. Consequently, the structure that determines who controls the street, the press, or the access to back rooms may be as much a determinant of policy outcomes as electoral and legislative rules. If countries vary in the degree to which the formal institutions of government such as Congress, political parties, and the judiciary are the central conduits of political pressuring and bargaining, we might expect the relative impact of the rules regulating behavior in such official channels (constitutions) to vary as well.

This paper takes a step in the direction of exploring the conditional effects of constitutional rules on policy outcomes, focusing on well-known results connecting forms of government and electoral rules on government spending. Theory and previous evidence suggest that proportional representation systems tend to favor larger governments than majoritarian systems, and that presidential forms of government lead to smaller governments than their parliamentary counterparts. In this paper, we reproduce such exercises, but taking into consideration the degree of institutionalization of political institutions across countries.

We define institutionalization as the degree to which formal political arenas such as the legislature or the political party system are indeed the loci of political power, and we use some empirical proxies for the institutionalization of the policymaking process by considering jointly the degree of institutionalization of congresses, parties, judiciaries, and bureaucracies. We cluster countries according to the level of institutionalization of their political institutions, and perform the analysis within each group. While the standard results are confirmed (and even strengthened) within the sample of high-institutionalization countries, almost none of those results are obtained for the low-institutionalization countries. The analysis is robust to different clustering techniques, outliers, and misclassification, and it is also robust to endogeneity concerns. We also perform the analysis in a more continuous manner by interacting the constitutional variables with our index of institutionalization, and also find that the absolute value of the relevant coefficients to be increasing in institutionalization. Additionally, results are also robust to endogenous selection into the subsamples. Moreover, our results cannot be replicated by partitioning the sample of countries using alternative criteria (placebo exercises). The combination of all of these results suggests that the split of countries on the basis of our proxies for institutionalization is capturing something relevant.

Even though the indicators of institutionalization used here could be improved upon, we take the results of the paper as indication that further work in the area is warranted. The logic and findings here suggest that it is necessary to develop a broader class of models that make endogenous the degree to which formal institutional arenas are indeed the key loci of political decision-making. Moving in that direction will allow a more integrated study of policymaking across countries of different degrees of institutionalization, as well as a better understanding of the role and effects of political institutions, an important endeavor from both an academic and a policy perspective.

The rest of the paper is organized as follows. Section 2 presents the basic conceptualization behind institutionalization, which is complemented in Section 3 where we develop the basic framework. Section 4 presents our measures of institutionalization. Section 5 summarizes the literature that looks at the relationship between constitutions and economic policy. Section 6 presents the empirical analysis, and Section 7 concludes.

2. The institutionalization of policymaking

Institutions are social order structures and mechanisms that regulate the behavior of individuals. The term “institution” is commonly applied to important habits and customs within a society, as well as to the particular forms in which government and bureaucracy are organized (Rhodes et al., 2006). In particular, the concept of “political institutions” refers to both the combination of constitutional and electoral game rules that define what various political actors can and cannot do, and to certain formal governmental or quasi-governmental organizations, such as the legislature, the judiciary, public administration, political parties, etc. Institutionalization is a characteristic of those systems of interaction that are associated with greater recognition and formalization of certain ways of making decisions and enforcing them. The notion of institutionalization within the context of political institutions has been underlined by outstanding authors in the tradition of democratization studies, such as Samuel Huntington in his famous Political Order in Changing Societies (Huntington, 1968). Beyond this very general discussion, the subject of institutionalizing political institutions has also been tackled in political science regarding certain arenas or specific sub-systems, such as the institutionalization of political parties, of legislatures, and of judiciaries.

An institutionalized system of political parties implies stability in inter-party competition, the existence of parties with more or less stable roots in society, the acceptance of parties and elections as legitimate institutions that determine who will govern, and party organizations with reasonably stable rules and structures that wield influence on the direction of party policy and determine the party leadership (Jones, 2010; Mainwaring and Scully, 1995).[3] The institutionalization of legislatures has been the subject of

[2] Two countries such as Argentina and the U.S. have similar constitutional rules, yet their processes of producing public policies couldn't be more different (Spiller and Tommasi, 2003, 2007; The Economist, 2014). More generally, the study of policymaking in countries in Latin America (see for instance Stein and Tommasi, 2008, and Scartascini et al., 2010) suggests that many aspects of formal models of policymaking within institutional rules often sound foreign to the policymaking practices observed there.

[3] The literature has also developed a series of measures of political party institutionalization, which include notions of in-party investment (questions such as “Does the party organization have structure and resources?”), as well as notions regarding the beliefs held about the institution by both those within the organization as well as by wider social actors (questions such as “Do people have confidence in political parties?”).

attention in a specialized literature since the pioneering work of Nelson Polsby (1968) regarding the institutionalization of the United States Chamber of Representatives.[4] There is also a burgeoning literature on judicial institutionalization, which defines institutionalization as a regularized system of decision-making, including the capabilities of judicial offices as well as norms such as judicial independence (McGuire, 2004).

By heavily synthesizing a wide range of writings on institutionalization from Huntington until the present day, and translating some of the fundamental ideas to the language of game theory, we can argue that institutionalization is a process that happens over time as a consequence of the investments made by diverse political actors, and that it is associated with particular configurations of beliefs.[5] An important group of actors (politicians, lobbyists) invest heavily in the US Congress precisely because they believe it is a key arena of United States policymaking, which is in turn confirmed in equilibrium owing precisely to those investments and their consequences.

The next section summarizes a framework that builds on this conceptualization of investments and beliefs as the basis of institutionalization. The section after that describes the variables that proxy for the institutionalization of various political arenas, to prepare the terrain for the analysis of the conditional effects of constitutions on policies.

3. A framework

The typical exercise analyzing the effects of political institutions on policy outcomes represents such constitutional (say electoral or legislative) provisions as the rules of a political game within which policies are decided. Those exercises tend to assume that all the relevant action takes place within such formal political arenas as congress, the party system, or the voting booth. But other than voting, forming political parties, bargaining in the legislature, and the like, there are a number of alternative political technologies (such as bribes, or threats of violence and of disruption of economic activity) that individuals or groups could utilize in order to influence collective decisions.[6]

Hence, a broader conceptual framework would consider the presence of alternative means to influence policymaking. Fig. 1 presents a schematic representation of such logic. Panel (a) encapsulates the typical exercise that assumes away alternative routes for influencing policymaking.[7] Panel (b) represents a more general situation in which the game of panel (a) is just one (institutionalized) part of a broader policymaking game, which possibly includes various arenas as well as the interactions among those arenas. It also includes a stage prior to actual policymaking in which actors decide whether to invest in formal or in alternative policymaking arenas. Borrowing the language used by Acemoglu and Robinson (2006a, 2006b), we call de jure political power the one assigned by formal political institutions, and de facto political power the one assigned by the technologies of alternative political action. For instance, if the alternative to institutionalized decision-making were the threat of violence, such power would be conferred by the capacity to exercise violence.

When studying the effects of formal political institutions on policy outcomes, then, it is possible that the implications derived from models in the spirit of panel (a) might not be so straightforward once one considers the possibility of broader interactions as those depicted in (b).

Furthermore, if there are some strategic complementarities in the choice of investments in one or the other arena, it is possible that these broader models would present multiplicity of equilibria, with behavior in some equilibria being similar to the one predicted by models that assume that all the action takes place in institutionalized arenas, while in other equilibria many other things might happen, and the effects of formal rules on outcomes might be less straightforward.

Scartascini and Tommasi (2012) present one specific model within that general spirit. In that model, agents have to decide whether to invest in the ability to exercise power in Congress or in an alternative (less institutional) political arena. After that, a policymaking game ensues in which there are specific bargaining protocols within as well as across arenas. Whether actors choose to focus their political energies on institutional arenas such as Congress, the party system, or the judiciary—or in alternatives such as the streets or the back rooms of the presidential palace—depends on their expectations on which course of action is most profitable. Actors' choices of investing in playing in formal institutions or through alternative means in turn have implications for the characteristics of policymaking in the country, so that these expectations tend to be fulfilled in equilibrium, leading some countries to more institutionalized and other countries to less-institutionalized policymaking. The model in Scartascini and Tommasi (2012) delivers two types of equilibria, with high and low levels of institutionalization respectively. Under certain conditions, only formal institutions matter. In such cases, we would expect that the predictions of theoretical models that take for granted that all the relevant action is within formal institutions should work well. In other cases, formal institutions tend to be circumvented and actors' use of alternative political technologies will be higher. In such scenarios, the predictions of models that assume away such alternative behavior away might not be too pertinent.

[4] Polsby developed a series of indicators of institutionalization and argued that, according to these indicators, the United States Congress became increasingly institutionalized over the years from its beginnings in 1789 up to the time of Polsby's study. Palanza et al. (2012) attempt to build cross-national comparisons of the causes and consequences of congressional institutionalization.

[5] Institutions reflect past investments, summarize information, beliefs and expectations, and incorporate self-reinforcement effects. This notion is anchored in the view of "institutions as equilibria" by authors such as Aoki (2001) and Greif (2006).

[6] For example, in some countries in Latin America it has become common to attempt to affect policies by the threat of violence, for instance by staging road blockades that disrupt lives and economic activity; some governments regularly cave in to these protests by providing particularistic benefits to those who stage them. In other cases, constitutionally powerful institutions such as Congress are commonly bypassed by executives who rule surrounded by informal circuits of power, as was the case in Mexico during the 70 years of PRI domination (Lehoucq et al., 2008).

[7] In this policy game, formal institutions (electoral systems, forms of government) affect the incentives of the actors, which determine policy outcomes.

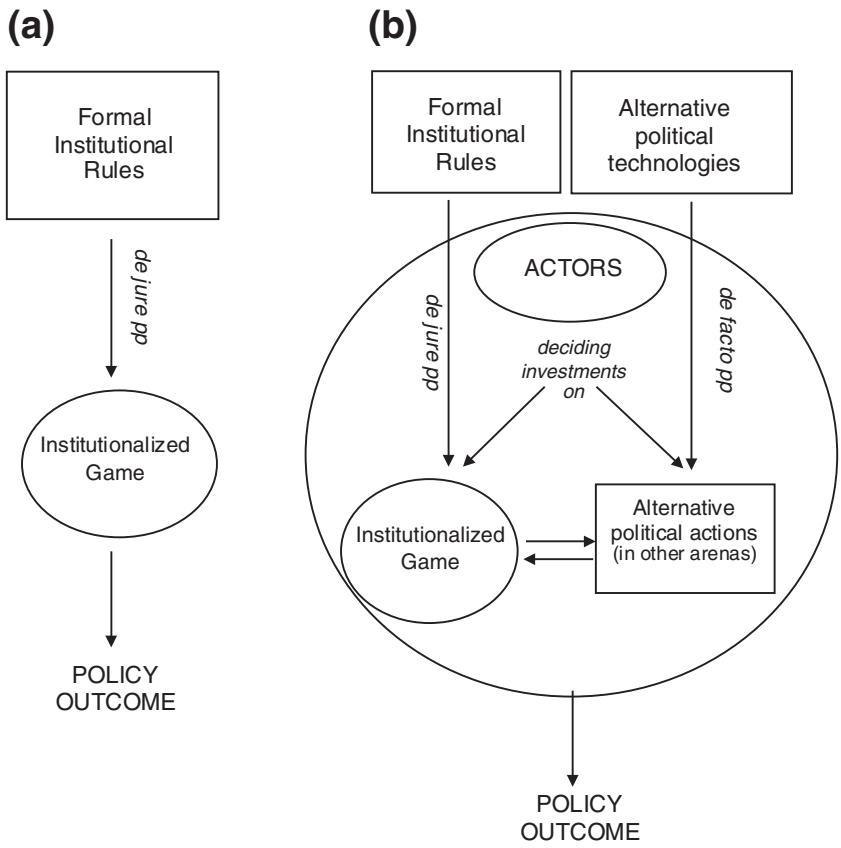

Fig. 1. Summary of the framework. Panel (a). Traditional framework. Panel (b). Enlarged framework.

There are various possible mechanisms by which the effects of specific constitutional rules on policy outcomes might be conditional on the degree of institutionalization. For instance, Fumagalli and Narciso (2012) argue that the channel connecting forms of government to policy outcomes is political participation. But, on the other hand, Machado et al. (2011) find that in countries with weakly institutionalized political institutions, citizens tend to rely more on channels of participation such as street protests and less on more institutionalized channels such as voting. Hence, it is likely that the effect of rules regulating formal political behavior will be less important in weakly institutionalized environments.

Relatedly, Aidt et al. (2008, pp. 199) argue that "in societies with weak institutions, political power has more to do with the capacity to organize collective action, access to economic resources, personal political connections and so on than with bare numbers" or with rules regulating formal participation, we would add.

Other arguments linking formal institutions to policy outcomes suggest that parliamentary regimes are characterized by votes of confidence procedures which in turn lead to legislative cohesion, which leads to broader and more generous spending in public goods (Persson and Tabellini, 2000, pp. 252–253). But, again, low institutionalization might dampen the supposed effects of legislative cohesion, for instance because more decisions are taken outside the legislature.

4. Measuring institutionalization

In order to ascertain the extent to which policymaking is institutionalized in different countries, we focus on the main institutional and governmental arenas where, according to constitutional rules, policymaking is supposed to transpire. It is common to conceptualize the policymaking process as developing through a number of stages which include identification of issues, discussion of alternatives, actual decision and approval of the policy, implementation, and control. Standard accounts often give a prominent role in some of these different stages to political parties as conduits of the demands of various societal actors, to the legislature which ponders alternatives (often fed by technical actors in government agencies) and finally approves a particular policy, to the bureaucracy that implements, and to the judiciary which controls the constitutionality and legality of various of those steps.

In a way implicitly consistent with this view, formal models which have attempted to analyze the effects of constitutional rules on policy often take for granted that the action takes place in arenas such as congress, that the incentives of key players derive from the

fact that political parties are crucial institutional players, and that the bureaucracy is ready to effectively implement over time any policy which has been agreed upon by parties in the legislature.[8]

For those reasons, and in line with the theoretical notion of institutionalization of the previous section, we attempt to measure the institutionalization of different political systems by looking into a number of features of various key arenas of the politico-institutional landscape: the national legislature, the political party system, the judiciary, and the public administration. The features we ideally would like to measure include the accumulated capabilities, the reputation, and the consolidated practices of those arenas.

The indicators we have been able to draw from widely available international sources are rough, but serve the purposes of this initial empirical cut.[9] Because institutionalization depends on a series of investments made over time, the indexes do not evaluate recent country trends but long-term equilibria. Consequently, the components of each index have a relatively long time span. In some cases the international indicators used for constructing the indexes capture mostly subjective impressions of actors about these institutions. Such impressions are relevant from the perspective of capturing "beliefs," but it would be desirable to complement them in future work with more objective indicators of the strength and cumulative investments in each of those institutions. Still, the fact that each index is constructed on the basis of several different sources over a long time period reduces some of the concerns coming from the literature regarding measurement and sentiment bias. Additionally, the indicators used here have been assembled within the context of a wider investigation, in which in-depth indicators were constructed for the case of 18 Latin American countries on the basis of expert surveys and comparative studies of public policymaking (Inter-American Development Bank, IDB, 2005; Scartascini et al., 2013; Stein and Tommasi, 2008). The indicators used here, compiled from international databases, show high levels of correlation with the other in-depth indicators constructed for the Latin American cases.[10]

The indicator of congress institutionalization combines information taken from the Global Competitiveness Report (GCR) about legislature effectiveness with a measure from the World Values Survey (WVS) regarding the confidence people have in their parliament.[11] The index of party system institutionalization is made up of five variables that measure the stability and capacity of political parties to aggregate preferences (from the Bertelsmann Transformation Index, BTI (n.d.)), public confidence in the parties (WVS and Barómetros), voter volatility, party longevity and election impartiality (from the Database of Political Institutions, DPI). Judicial independence is proxied by measuring interference with the judiciary by government or other actors, using variables from three sources (GCR, BTI and the Fraser Index). The fourth indicator measures bureaucratic capacity and is constructed using data from the Columbia State Capacity Survey and the International Country Risk Guide. In some of the exercises we also use a composite index, the institutionalization index, which averages the individual components. Appendix B discusses the data in detail.[12]

5. The effects of constitutions on public policy

The literature on the effects of political institutions on various outcomes of interest is by now quite large, and it has addressed numerous independent as well as dependent variables.[13] In order to explore our idea that the effects of institutional rules ought to be conditional on the level of institutionalization of policymaking, of those numerous exercises we focus on one very prominent and central set of exercises which takes two of the most basic and more studied constitutional factors (form of government and electoral rules) and studies their effects on fiscal policy outcomes. We chose this exercise since fiscal policy is a more direct output of the political interactions that constitutional rules are supposed to guide, and fiscal policy outcomes such as public spending constitute a very natural and measurable focus (Voigt, 2011).

The study of constitutional rules on fiscal outcomes has a number of antecedents in the literature on constitutional political economy (Mueller, 2003; Voigt, 2011), yet this stream has been clearly reinvigorated and brought to the forefront of academic spotlight by the work of Persson and Tabellini and collaborators. In a stream of papers (for instance Persson et al., 1997, 2000), and two important books (Persson and Tabellini, 2000, 2003), Persson and Tabellini (PT) have argued theoretically and provided evidence for various propositions relating constitutional rules to policy outcomes. Among those, they find that the electoral system and the form of government have economically and statistically significant effects on various fiscal variables. In particular, central government spending over GDP is smaller in majoritarian systems than in proportional representation systems, and also government spending over GDP is substantially lower in presidential than in parliamentary systems.

The empirical analysis of PT has been criticized among others by Acemoglu (2005), who emphasizes the non-exogeneity of constitutional rules as well as the inadequate instruments they chose. This research effort has been also extended and improved upon by various authors. For instance, Blume et al. (2009) replicate and extend their analysis, finding that details of the electoral system such as district magnitude and the proportion of individually elected candidates have significant effects on the variables of interest but presidentialism does not. Rockey (2012) addresses the concerns of Acemoglu, making some measurement and methodological

[8] Just to give one example, many theoretical arguments relate fiscal outcomes to a common pool problem in the public budget, a problem that intensifies the larger the number of parties in the legislature or in government. But such analyses implicitly assume that parties are indeed strong enough (institutionalized enough) to act as unified actors. Otherwise, the headcount of players will not focus on parties.

[9] Data drawn from Franco Chuaire et al. (2013). In this version of the paper we are using the June 2014 update version of the dataset.

[10] For instance, Palanza et al. (2012) provide a comparison of the shallow international indicators with the more detailed indicators for 18 Latin American countries for the concept of congress institutionalization.

[11] Details about the indexes, variables, and methods of construction are provided in Section 1 of Appendix B.

[12] These indicators have been utilized in a number of studies, which find them to be important predictors of more effective policies and of better development outcomes. See Section 1 of Appendix B and Franco Chuaire and Scartascini (2014) for a review of such studies.

[13] For a good updated survey see Voigt (2011).

refinements to the identification strategy of the causal effects of constitutional rules, and finds a quantitatively large and statistically significant relationship between constitution type and government size. In what follows, we use PT and Rockey's specification as the baseline for our analysis.

6. The conditional effects of constitutions on fiscal policy

Political arenas such as party systems or legislatures are the spaces where the rules studied in the formal literature are operational. We suspect that the theories and models that study the impact of formal political rules on economic policy outcomes might have less predictive power in cases of lower institutionalization. For example, an important literature centered on the U.S. case has exalted the importance of legislative committees in American policymaking.[14] Hence, some of the implications of political rules are supposed to operate through their impact on the structure and incentives of such policy committees. But committees and other congressional institutions have a much smaller role in some other countries. For instance, in Argentina a former president and leader of the governing party at the time had no qualms about declaring he was not concerned about the opposition gaining control of the legislative committees in Congress because his party still "controlled the streets."[15] A statement like this could be hardly imagined by American politics scholars. Such statement was not only a reflection of a low degree of institutionalization (or how little certain formal institutions matter), but also an explicit act of further de-institutionalization.

In terms more specific to the literature that has focused on the effect of constitutions on fiscal policy (Blume et al., 2009; Persson and Tabellini, 2003; Rockey, 2012), the selection of presidential or parliamentary systems matters for fiscal outcomes because it affects party discipline, the degree of collusion between the executive and the legislature, and the incentives for fiscal discipline.[16] The electoral system affects the electoral connection between the legislators and the voters in terms of how much and what type of expenditures to provide to their constituents.[17] When negotiations take place in non-institutionalized settings, some of these mechanisms break down. For example, if decision making takes place outside Congress, the electoral connection breaks down—people participate directly without having to go through their representatives—and this might also affect the incentives for party discipline and for collusion across branches.

In order to ascertain whether the policy effects of constitutions are conditional on whether a country policymaking is institutionalized or not, in this section we replicate the empirical exercises in Persson and Tabellini (2003) and Rockey (2012) on the overall size of government using the same data and the same estimation procedures.[18] According to that theoretical framework and empirical analysis, it is expected that presidential countries and countries with majoritarian electoral systems would tend to present governments of smaller size and programs that are narrower in scope (e.g., smaller social security systems).

PT (2003) basic model is the following:[19]

$$Y_i = \beta_1 Presidentialist_i + \beta_2 Majoritarian_i + \gamma X_i + \mu_i$$

where $Presidentialist_i$ is a dummy variable that is equal to 1 when the form of government of country i is presidentialist and 0 otherwise, $Majoritarian_i$ is a dummy variable that is equal to 1 when the electoral rule of country i for the lower or only house is majoritarian and 0 otherwise, X_i is a set of controls for each country (definitions in Appendix A). Y_i is a measure of central government expenditure as a percentage of GDP of country i, as reported in the GFS Yearbook ($CGEXP_i$ in PT, 2003).[20]

[14] See, for instance, Shepsle and Weingast (1987) and Cox and McCubbins (2005).

[15] "If they want to take us out from every one of the (congressional) Committees, let them do it; we have the streets of the people" — our translation. Original in Spanish available at http://www.lanacion.com.ar/1204204-kirchner-si-nos-quieren-echar-de-todas-las-comisiones-que-lo-hagan-tenemos-las-calles-del-pueblo. Accessed 1 September 2014.

[16] "Our results suggest that the two political regimes are associated with very different policy outcomes. Separation of powers in the presidential–congressional regime produces a smaller government… Intuitively, separation of powers enables the voters to discipline the politicians, and this reduces waste and moderates the tax burden… Legislative cohesion in the parliamentary regime, on the other hand, leads to a larger government…Intuitively, there is now further scope for collusion among politicians (…)" PT (2000, pp. 252).

[17] "…going from single to multiple districts — from what we labeled proportional to majoritarian elections — induces politicians to target equilibrium redistribution toward a more narrow group of voters. As a result, public-good provision, or more generally, provision of non-targeted policies, is always more generous under proportional elections." PT (2000, pp. 239).

[18] We have chosen this dependent variable because it is the one for which the theoretical predictions are relatively consistent and are confirmed by their empirical analysis (see Table 9.1 in PT, 2003). We have also performed the same analysis presented in this paper using the other fiscal dependent variables in PT (2003). Such analysis, omitted here for brevity, can be seen in an earlier working paper (Caruso et al., 2013). As in PT, results for rent extraction are ambiguous because of the correlation between district size and electoral formula. The district size and ballot structure commonly found in majoritarian systems tend to pull in opposite directions. We have also performed the same exercise using budget deficits as dependent variable. It turns out that our replication of the PT exercise for the full sample in that case does not deliver the exact same results they report.

[19] Several chapters in PT are devoted to explaining their estimation procedures and assumptions. Here we present only a brief account. For detailed explanations see PT (2003), Blume et al. (2009), and Rockey (2012).

[20] Summary statistics are provided in Table A1 in Appendix A.

We evaluate our hypothesis in several ways. In Section 6.1 we use a cluster analysis methodology to split PT sample into countries of different degrees of institutionalization, and run the regressions within each sample separately. This procedure produces very intuitive and easily comparable results, which are robust to different groupings and different clustering techniques. The finding, in a nutshell, is that the standard results hold within the high institutionalization group, while the results vanish within the low institutionalization group. In Section 6.2 we perform the same exercise but with various placebo variables and we don't find the same patterns we do when using the institutionalization variables. In Section 6.3 we use IV to control for potential endogenous institutional variables and we show that the results are also robust to such potential endogeneity biases (Rockey, 2012). To address potential small sample concerns in the subsamples, in Section 6.4 we run the regressions with the full sample but adding interaction terms for the index of institutionalization with the variables of interest (presidentialist and majoritarian). This in turn is done in two different ways: using a dichotomous version that takes value one for countries of high institutionalization, and by using the more continuous institutionalization index. Finally, in Section 6.5, in order to address the concern that countries may be selecting themselves into the groups, and this selection being driven by some of the same factors that drive fiscal policy, we follow Caner and Hansen (2004) instrumental variable estimator for threshold models for estimating the value at which countries divide themselves into those of high and low institutionalization. As we will see, all these exercises reveal a pattern in which the standard results only hold for high institutionalization countries but not for low institutionalization countries.

6.1. Splitting the sample clustering countries by their degree of institutionalization

For splitting the sample, we have used the four indicators mentioned in Section 4 (and explained in detailed in Appendix B) and proceeded to cluster the countries according to their degree of institutionalization. Using a multivariate procedure, instead of relying on an aggregate indicator or focusing in one of them individually, allows us to exploit the multi-arena nature of institutionalized policymaking processes. Consequently, we build the clusters by using k-means and the L1-norm, [21] and the index of Calinsky and Harabasz in order to determine the optimal number of clusters, which in this case happens to be two.[22] We run this procedure 100 times by assigning a different random seed each time. This procedure provides us with 6 potential groupings — the distribution of clusters is presented in Table A2 in Appendix A. While there is a set of countries that is always assigned to the same group (35 to the high institutionalization group and 28 to the other), there are 10 countries that switch groups with some likelihood. We also group the countries using the composite index (univariate procedure). The clusters according to the composite index are stable and never change. The list of countries included in each group is presented in Appendix B. As standard notation, we are going to refer as Group 1 to the group that contains the highly-institutionalized countries, and Group 2 to those countries considered to be of low institutionalization. Even though some of the groupings are more likely than others, we run the empirical analysis using all the possible combinations for robustness. [23]

Table 1 presents the outcomes of the empirical exercises for the two more likely groupings (clustering #1 and #6 which account for almost 70% of the cases), which are also the most different (9 countries switch groups), and for the clustering coming from the univariate exercise (using the composite institutionalization index). The complete set of regression tables is included in Appendix B (Section 3).

The first column in each block shows the results from replicating the exercises of Persson and Tabellini (2003). Following PT, in the first block we present the baseline results; in the second block, the results when additional control variables are included. The second and third columns in each block reproduce the same regressions for each group in our partition. The interpretation of the results in Table 1 is straightforward. The results found by PT (negative and significant coefficients for presidentialism and majoritarian) are almost identical to those for the group of high institutionalization, and in some cases the results are even stronger for this group. The same models do not provide the same results for the group of low institutionalization; in this group the coefficients are not significant (and in a few cases the signs are different too). These results are consistent in every one of the 7 country groupings. In every case, PT results are replicated in the sample of high institutionalization and they are not significant in the sample of low institutionalization.

The pattern of results is also robust to restricting the analysis to those countries with stronger and longer lasting democracies (Gastil > 3.5), and to using central government revenues instead of expenditures.[24] Results are also robust to measuring the institutionalization variable in other time periods.[25]

[21] k-Means is the better known and more widespread clustering procedure that yields a partition of the space (Wong, 1980). Furthermore, it generates uniformly consistent estimations of the underlying density. Because k-means is a distance-dependent procedure, we need to define a distance norm (Caruso et al., 2014) According to the characteristics of our data, we decide to use the L1-norm where the distance between two observations y_i and y_j is given by $d_{ij} = \sum_{l=1}^{p} |y_{il} - y_{jl}|$.

[22] This technique uses the output of any clustering algorithm (for example, k-means) and it compares the change in within-cluster dispersion with the between-cluster dispersion. The way to determine the optimal number of groups is calculating the index for each partition and selecting the partition with the greatest value of the index. According to Savova et al. (2006) the index of Calinsky and Harabasz outperforms the other methods that have been suggested in the literature. In our application, the same result obtains if we use the gap statistic developed by Tibshirani et al. (2001).

[23] The different political institutions are reasonably well represented in all the subsamples.

[24] Those results can be consulted in the working paper version of the paper (Caruso et al., 2013).

[25] In the results we present here, we are using the latest version of Franco Chuaire et al. (2013), which was updated in June 2014. Results are equivalent if we use the November 2013 version, the variables as presented by Berkman et al. (2009), and by evaluating institutionalization in 2002.

Table 1
The effects of constitutions for countries with high and low institutionalization.
Source: own estimates based on dataset from Persson and Tabellini (2003) and Franco Chuaire et al. (2013).

Dependent variable: central government expenditure/GDP						
	Baseline			Added control variables		
	All countries (PT sample)	High institut. countries (Group 1)	Low institut. countries (Group 2)	All countries (PT sample)	High institut. countries (Group 1)	Low institut. countries (Group 2)
Clustering group #1						
Presidentialist	−5.923***	−5.459**	−5.013	−4.918**	−7.948***	−3.722
	(1.940)	(2.123)	(3.353)	(1.907)	(2.769)	(4.680)
Majoritarian	−3.496**	−6.381**	1.077	−6.096***	−7.632**	−4.669
	(1.688)	(2.329)	(3.312)	(1.873)	(3.590)	(3.457)
Control variables	Narrow	Narrow	Narrow	Broad	Broad	Broad
Sample restriction	None	None	None	None	None	None
Estimation	OLS	OLS	OLS	OLS	OLS	OLS
Observations	79	38	41	79	38	41
Adj *R*-squared	0.603	0.650	0.503	0.662	0.667	0.555
Clustering group #6						
Presidentialist	−5.923***	−6.923***	−5.856	−4.918**	−7.606***	−7.153
	(1.940)	(2.029)	(5.923)	(1.907)	(2.159)	(4.980)
Majoritarian	−3.496**	−6.451***	3.012	−6.096***	−5.592**	−5.302
	(1.688)	(1.927)	(3.743)	(1.873)	(2.736)	(4.010)
Control variables	Narrow	Narrow	Narrow	Broad	Broad	Broad
Sample restriction	None	None	None	None	None	None
Estimation	OLS	OLS	OLS	OLS	OLS	OLS
Observations	79	47	32	79	47	32
Adj *R*-squared	0.603	0.705	0.47	0.662	0.714	0.528
Clustering group #7 (composite index)						
Presidentialist	−5.923***	−7.634***	−3.433	−4.918**	−8.523***	−4.622
	(1.940)	(1.706)	(3.846)	(1.907)	(1.920)	(5.457)
Majoritarian	−3.496**	−6.084***	2.808	−6.096***	−5.009*	−4.491
	(1.688)	(1.893)	(3.787)	(1.873)	(2.697)	(4.441)
Control variables	Narrow	Narrow	Narrow	Broad	Broad	Broad
Sample restriction	None	None	None	None	None	None
Estimation	OLS	OLS	OLS	OLS	OLS	OLS
Observations	79	43	36	79	43	36
Adj *R*-squared	0.603	0.784	0.617	0.731	0.827	0.722

Notes: Robust standard errors in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1
Narrow set of control variables includes the following: (Log of) GDPpc, Openess, Perc. population 15–64, Perc. population > 65, Gastil, OECD, Federal.
Broad set includes the following: narrow set + British Colony, Spanish Colony, other colonies, Africa, Latin America, East Asia.

These results are also robust to using different clustering techniques. In addition to the clustering analysis based on k-means and the L1 norm for the selection of the groups, we have also estimated the model by splitting the sample according to the combinations that result from using K-medians and the Euclidian distance instead.[26] Results, included in Appendix B (Section 4), are the same (negative and significant only in the high institutionalization sample).

6.2. Is it institutionalization or is it something else? Placebo exercises

Looking at the results so far, it is natural to wonder whether they are actually driven by institutionalization, or by something else that happens to correlate with our measure of institutionalization. To explore that, we have attempted to check whether these systematic differences in results across groups for the size of the government could be replicated by using criteria other than our institutionalization metrics to split the samples (placebo test). As a guide for selecting other criteria, we have followed the work of authors who have already shown some skepticism about the robustness of the results across groups of countries. For

[26] The most popular clustering method is the k-mean algorithm because of its excellent performance on real data examples (Coates et al., 2011). The k-means algorithm classifies any observation based on the distance to the mean of each cluster (centroid). Other algorithms like k-medias determine the classification of each observation based on the distance to the median of each cluster (centroid). Both of these methods are sensitive to the choice of a distance measure. The two most popular distance measures are the Euclidean distance, which is appropriate for unconstrained continuous variables, and the L1 norm, which is appropriate for continuous and mixed variables (Hand et al., 2001).

Table 2
Summary results from splitting the sample using alternative criteria.
Source: own estimates based on dataset from Persson and Tabellini (2003), Franco Chuaire et al. (2013), and other secondary sources.

	Summary of previous results		GDP		OECD		Primary schooling	
	High inst (Group 1)	Low inst (Group 2)	Group 1 (higher)	Group 2 (lower)	Group 1 (OECD)	Group 2 (other)	Group 1	Group 2
Presidentialist	−	0	−	0	0	0/−	0	−
Majoritarian	−	0	0/−	0/−	0	0/−	0/−	−
	Summary previous results		WGI control of corruption		WGI regulatory quality		WGI rule of law	
	High inst (Group 1)	Low inst (Group 2)	Group 1 (higher)	Group 2 (lower)	Group 1 (higher)	Group 2 (lower)	Group 1 (higher)	Group 2 (lower)
Presidentialist	−	0	0/−	0	−	0	−	0
Majoritarian	−	0	0	0/−	−	0	0/−	0/−
	Summary previous results		WGI government effectiveness		WGI political stability		WGI voice and accountability	
	High inst (Group 1)	Low inst (Group 2)	Group 1 (higher)	Group 2 (lower)	Group 1 (higher)	Group 2 (lower)	Group 1 (higher)	Group 2 (lower)
Presidentialist	−	0	−	0	−	0	−	0
Majoritarian	−	0	0/−	0/−	−	0	−	−
	Summary previous results		Gastil		Gini		Ethnolinguistic fractionalization	
	High inst (Group 1)	Low inst (Group 2)	Group 1 (more dem)	Group 2 (less dem)	Group 1 (less uneq)	Group 2 (more uneq)	Group 1 (higher)	Group 2 (lower)
Presidentialist	−	0	−	0	0	−	−	0
Majoritarian	−	0	−	−	−	0/−	0	−
	Summary previous results		Legal origin		Checks		Central bank independence	
	High inst (Group 1)	Low inst (Group 2)	Group 1 (common law)	Group 2 (rest)	Group 1 (more)	Group 2 (fewer)	Group 1 (higher)	Group 2 (lower)
Presidentialist	−	0	0	−	0/−	0	−	−
Majoritarian	−	0	−	0	0	0/−	0	−

Note: Following PT, the coding in the table is as follows: "−" and "+" means that the variable is negative and significant across specifications. "0/+" and "0/−" mean that the variable is statistically significant in some but not all of the specifications. "0" means the variable is not significant in any specification.
The summary of previous results comes from Table 1.

instance, Milesi-Ferretti et al. (2002), in exploring the effects of electoral rules on spending, found differences across samples of OECD and LAC countries. North (2009), in a relatively different context, does also present some qualms about looking at all the countries in the world with the same lenses. Following such intuitions, countries were separated in terms of their economic development according to their membership to the OECD (members in Group 1 and non-members in Group 2), to per capita GDP (the richer countries in Group 1 and the poorer ones in Group 2), and their levels of primary schooling (more educated countries in Group 1 and the rest in Group 2).

Additionally, countries were also split according to the six World Bank Governance Indicators (to check whether our variables are capturing "something else"). We also run the analysis clustering the countries according to the Gastil Index of Democracy (to check if our institutionalization variables are just capturing degree of democracy), the Gini coefficient and the index of Ethnolinguistic fractionalization (to check if somehow we are capturing inequality and fractionalization of the citizenry), Legal Origin (to check that we are not capturing fundamental differences in the country's organizational determinants), Checks (as a proxy for the number of veto players), and the degree of Central Bank Independence (to check if we are somehow capturing the ability of countries to commit to certain institutional arrangements).

Table 2 summarizes the results for the multiple regressions by using the same coding mechanism as PT.[27] A negative (positive) sign indicates that the constitutional rule has a negative (positive) and statistically significant effect across regressions. A 0 indicates an inconclusive empirical result. The first column in Table 2 summarizes the regressions presented in Table 1 (PT results can only be replicated in the sample of highly institutionalized countries but not in the other one). The other three columns in Table 2 show that in only two out of 15 cases (for WGI Regulatory Quality and WGI Political Stability) we find the same pattern of results that we find with our institutionalization variables. According to the WGI codebook, Regulatory Quality includes

[27] We present such summary table for brevity. Each cell in the table summarizes the results from running OLS regressions for the baseline, and with additional controls. Complete regression tables are available in Appendix B (Section 5).

Table 3
The effects of constitutions for countries with high and low institutionalization (IV estimates — 2SLS).
Source: own estimates based on dataset from Persson and Tabellini (2003) and Franco Chuaire et al. (2013).

Dependent variable: central government expenditure/GDP							
	All countries (PT sample)	Clustering group #1		Clustering group #6		Clustering group #7	
		High institut. countries (Group 1)	Low institut. countries (Group 2)	High institut. countries (Group 1)	Low institut. countries (Group 2)	High institut. countries (Group 1)	Low institut. countries (Group 2)
Presidentialist	−9.891***	−8.406**	1.775	−10.203***	−4.661	−9.826***	3.212
	(3.047)	(3.576)	(6.138)	(2.462)	(8.046)	(2.576)	(5.913)
Majoritarian	−0.340	−7.325**	9.280*	−8.637***	8.182	−10.750***	12.654**
	(2.252)	(3.620)	(5.144)	(3.310)	(5.260)	(2.213)	(5.533)
Endogenous variables	Pres, Maj	Pres, Maj	Pres, Maj	Pres, Maj	Pres, Maj	Pres, Maj	Pres, Maj
Included instruments	Narrow set	Narrow set	Narrow set	Narrow set	Narrow set	Narrow set	Narrow set
Excluded instruments	Age set	Age set	Age set	Age set	Age set	Age set	Age set
Estimation	2SLS	2SLS	2SLS	2SLS	2SLS	2SLS	2SLS
1st-stage *F*-statistic of excluded instruments presidentialist	5.44***	28.70***	9.99***	21.42***	6.81***	16.92***	14.14***
1st-stage *F*-statistic of excluded instruments majoritarian	11.42***	7.74***	8.70***	3.69***	5.79***	5.30***	6.50***
Underidentification test (Kleibergen-Paap rk LM statistic):	12.09**	5.58	14.99**	7.32	8.31*	8.96	13.95***
Hansen J statistic (overidentification test of all instruments):	3.90	10.54**	3.52	9.41*	–	6.97	2.71
Weak identification test (Kleibergen-Paap rk Wald *F* statistic):	6.61**	1.19	3.02	1.82	4.24	2.60	4.46
Observations	79	38	41	47	32	43	36
R-squared	0.593	0.725	0.486	0.739	0.58	0.747	0.439

Notes: Robust standard errors in parentheses. *** p < 0.01, ** p < 0.05, * p < 0.1
Narrow set of control variables includes the following: (Log of) GDPpc, Openess, Perc. population 15–64, Perc. population > 65, Gastil, OECD, Federal.
Age set includes the following: age, age^2, British Colony, Spanish Colony, Excolony, Share of Catholic population.

measures of the incidence of market-unfriendly policies such as price controls or inadequate bank supervision, as well as perceptions of the burdens imposed by excessive regulation in areas such as foreign trade and business development. Given the nature of the variable we have no reason to believe that it could somehow suggest that our measures are picking up some substantive relationships between regulatory quality, political institutions, and the size of the government instead of the relationships proposed by the analytical framework about the role of institutionalization. In the case of WGI's Political Stability, this measure combines several indicators that measure perceptions of the likelihood that the government in power will be destabilized or overthrown by possibly unconstitutional and/or violent means. It is worth noting that this result is not robust to the same tests we have performed to our measures (small changes to the sample in terms of countries and years changes the pattern of results presented in the Table 2). On the other hand, it wouldn't be surprising if such a variable had a connection to the degree of institutionalization.[28]

6.3. Endogenous formal institutions

In addition to the previous robustness exercises, Table 3 shows the results when using an empirical strategy that addresses causal identification concerns regarding the potential endogeneity of the institutional variables (Persson and Tabellini, 2003; Rockey, 2012). In particular, these models include instruments already used by Persson and Tabellini (2003) such as the age of democracy (age), as well as those instruments added by Rockey (2012): age^2, which provides a parsimonious way to capture any non-linearities in the history of constitutional fashion, being a former colony (excolony), a former British colony, a former Spanish Colony, and the share of Catholics. We also use two alternative instruments to age of democracy, which are date of elections and date of constitutions, which have a similar logic to age (Rockey, 2012).[29]

In this paper, we don't discuss in detail the properties of these instruments and methods because they have been extensively and carefully described in Rockey (2012) and shown to reduce the concerns raised about the exclusion restriction in papers such as Acemoglu (2005). Still, it is important to mention that in the case of age of democracy and its proxies, the instrument picks up the fact that constitutional reforms are often adopted during political regime transitions, for which there is little reason to expect a

[28] For example, the use of protest and violent means is an equilibrium result for countries of low institutionalization in Scartascini and Tommasi (2012). Machado et al. (2011) presents empirical evidence supporting those findings for Latin America.
[29] As in Rockey (2012), the alternative measures that proxy age of democracy are used in separate regressions. Results are presented in Appendix B.

systematic effect on fiscal performance (Persson and Tabellini, 2003, p. 130). The rest of the instruments reflect the influence of colonial experience (and culture) on the form of government, and thus, echo the choices of political elites under different initial conditions, and the legacy of different types of colonial institutions. As argued in Rockey (2012), other than through their impact on the form of government, it is hard to envisage another mechanism through which colonial era variables consistently affect the size of government to any meaningful extent (p. 315).

Table 3 shows the results for 3 of the groupings and the rest are presented in Appendix B. Once more, the pattern of the results in Table 3 is consistent with the results obtained before. The negative effect of presidentialism and majoritarian elections holds in the group of high institutionalization but it doesn't hold in the other group. It is interesting that in this and some of the subsequent specifications, the effect of electoral rules is reversed (positive and significant) for the low institutionalization group.[30]

One of the main concerns in IV strategies is the presence of weak instruments that may bias the estimation results. To address this concern and the fact that samples are small, we also follow Rockey (2012) strategy and run the regressions using Fuller's modified LIML estimator, which has been shown to have a superior performance in a scenario of potential weak instruments and small sample (Hahn and Hausman, 2003). For space considerations, we present Table A3 in Appendix A and full results are presented in Appendix B (Section 6). Once more, in no case we can recover PT results in the sample of low institutionalization countries. The negative relationship between institutions and government size happens for some specifications in the high institutionalization countries sample.

6.4. Interacting constitutional variables with the degree of institutionalization

A concern with the exercises above might be that the smaller sample sizes could be explaining a lower degree of significance in the partitions. This concern in principle does not seem to invalidate our interpretation, since it should be parallel for both groups and it would not help to explain the change in signs that sometimes takes place for the low institutionalization group. Nonetheless, we have also estimated the models by including interaction terms for the degree of institutionalization and the variables of interest (*Presidentialist* and *Majoritarian*). For this purpose, we have created two variables for "institutionalization": a dichotomous variable that takes value 1 for the countries in the high institutionalization group — according to the 7 groupings, and the continuous institutionalization variable with potential range 0 (low institutionalization) to 4 (high institutionalization). The hypothesis to test here is once more whether the effect of political institutions is conditional on the degree of institutionalization. Our expectation is (again) that the result in the literature would only be present for the countries of high institutionalization. Summary results are presented in Appendix A (Table A4) and full results are presented in Appendix B (Section 7). In each case, the first column shows the results for the dichotomous variable and the second for the continuous variable.[31] As it can be observed from the table, the interactions with the institutionalization variable are negative (and significant for Majoritarian) which indicates that the negative effect of these variables would tend to be more prevalent in countries of high rather than low institutionalization.[32]

6.5. Endogenous thresholds

Another relevant concern is that given that our underlying story is one of multiple equilibria (some countries end up in a low institutionalization equilibrium and others in a high institutionalization equilibrium), and this is what drives institutional investments in the longer run, it may be the case that the selection of equilibria is endogenous and possibly driven by some of the same factors as those which drive fiscal policy and/or the choice of constitutional rule.[33] In order to address this concern, we use the methodology applied by Aidt et al. (2008) to estimate threshold models, in particular the Caner and Hansen (2004) Instrumental Variable Estimator. This model requires a variable that can identify the different equilibria and allows the independent variables to be endogenous, in our case, the variables for presidentialism and majoritarian (Caner and Hansen, 2004). Given the unidimensional nature of this procedure, we use the institutionalization variable for measuring the level of institutionalization in each country. The procedure runs as follows. We estimate first the threshold endogenously (10,000 repetitions), and once the thresholds are determined we run the IV models described above.[34] Letting the groups to be chosen endogenously generates a split of 44 countries in Group 1 and 35 countries in Group 2, which is different to any of the groupings generated by the clustering analysis (it differs by one country with clustering Groups 5 and 7). As it can be observed in the Table 4, results are analogous to the ones described previously.

[30] This seems consistent with the result in historical panel data found in Aidt et al. (2006), where the change from majority to PR did not lead to growth expansion. One possible reason for that might be the lack of institutionalization at the time. Clearly, more specific analysis of the effects of particular institutional variables in low institutionalization equilibria is an important next step in this agenda.

[31] Since our main empirical strategy may be vulnerable to a weak-instrument bias, in all the instrumental variables regressions we test for the presence of weak instruments. The results of the *F*-test in the first stages for the excluded instrument are rejected in all the specifications.

[32] Even though the interaction coefficient for presidentialism is not significant, the marginal effect is only negative and significant for the high institutionalization countries. Results are basically the same when we use date of elections or date of constitutions instead of age of democracy. See Section 7 of Appendix B.

[33] Aidt et al. (2008) deal with a similar situation and apply the same IV estimation to study the relationship between corruption and growth in a model of multiple equilibria based on the quality of institutions.

[34] We show the graphical representation of the computation of the threshold in Appendix B.

Table 4
The effects of constitutions for countries with high and low institutionalization (endogenous partitions).
Source: own estimates based on dataset from Persson and Tabellini (2003) and Franco Chuaire et al. (2013).

Dependent variable: central government expenditure/GDP				
	Institutionalization (threshold = 1.94509292)			
	High institut. countries (Group 1)	Low institut. countries (Group 2)	High institut. countries (Group 1)	Low institut. countries (Group 2)
Presidentialist	−9.865*** (2.657)	2.997 (5.991)	−9.795*** (3.134)	1.520 (5.238)
Majoritarian	−10.93*** (2.172)	14.26** (6.019)	−11.80*** (2.588)	12.03** (4.965)
Endogenous variables	Pres, Maj	Pres, Maj	Pres, Maj	Pres, Maj
Included instruments	Narrow set	Narrow set	Narrow set	Narrow set
Excluded instruments	Age set	Age set	Age set	Age set
Estimation	2SLS	2SLS	Fuller (4)	Fuller (4)
1st-stage *F*-statistic of excluded instruments presidentialist	17.57***	8.97***	17.57***	8.97***
1st-stage *F*-statistic of excluded instruments majoritarian	5.59***	5.30***	5.59***	5.30***
Underidentification test (Kleibergen-Paap rk LM statistic):	8.248	12.069***	8.248	12.069**
Hansen J statistic (overidentification test of all instruments):	7.636	2.989	7.236	3.262
Weak identification test (Kleibergen-Paap rk Wald *F* statistic):	2.44	2.992	2.44	2.992
Observations	44	35	44	35
R-squared	0.745	0.389	0.733	0.441

Notes: Robust standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$
Narrow set of control variables includes the following: (Log of) GDPpc, Openess, Perc. population 15–64, Perc. population > 65, Gastil, OECD, Federal.
Age set includes the following: age, age2, British Colony, Spanish Colony, Excolony, Share of Catholic population.

7. Conclusion

The field of political economy has developed rapidly in the last 50 years, and mainstream economists have embraced the notion that institutions matter. The reason is simple: institutions shape the rules of the political game and hence shape the incentives of politicians and other relevant political actors. Most of the best analysis so far has relied on the role of formal institutions as they affect the incentives of actors playing in formal arenas. However, in many countries policymaking may not be completely bound by formal rules, as part of the action takes place in less formal arenas and in a less formal manner. This may imply that the effects of formal political rules might not be so significant for policy determination in some cases.

Consistent with this intuition, the empirical analysis in this paper suggests that some of the results in the literature do not hold for countries with low levels of institutionalization. That is, they do not hold for those countries in which actors tend to invest little in the formal institutions of democracy, such as political parties, Congress, the judiciary, and the bureaucracy.

These results, even though provisional, suggest various areas in which further research seems warranted. It would be desirable to develop a broader class of theoretical models that, instead of taking as given that all political action takes place in an institutionalized manner according to formal political rules, makes endogenous the degree to which formal institutional arenas are indeed the key loci of political influence and policymaking. Introducing the possibility of using both standard formal political technologies as well as alternative political technologies would make the analysis richer and would facilitate the integrated study of policymaking across countries of different degrees of institutionalization.

On the empirical side, the measures of institutionalization used in this paper are those that we could construct from readily available data, but there is ample room to improve upon our definitions and to develop richer and more accurate measures.

We also believe that in order to better understand the concept and the process of institutionalization, deeper studies of experiences at the country level should be developed, along the lines of the analytical narratives also suggested by Rodden (2009). The study of specific dynamics of specific institutions in specific countries seems important for understanding the mechanisms through which political institutions affect the design and implementation of public policies, and hence social welfare.

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Appendix A

Table A1
Summary statistics and description of the variables.

Variable	Obs	Mean	Std. dev.	Min	Max	Definition	Source
Central gov expenditure/ GDP (cgexp)	79	28.83	10.53	9.74	51.18	Central government expenditures as a percentage of GDP.	Persson and Tabellini (2003)
Presidentialism (pres)	79	0.41	0.49	0.00	1.00	Dummy variable for forms of government, equal to 1 in presidential regimes, 0 otherwise.	
Majoritarian (maj)	79	0.37	0.49	0.00	1.00	Dummy variable for electoral systems equal to 1 if all the lower house is elected under plurality rule, 0 otherwise.	
(Log of) GDP per capita (lyp)	79	8.46	0.96	6.27	9.94	Natural log of per capita real GDP (RGDPH). RGDPH is defined as real GDP per capita in constant dollars (chain index) expressed in international prices, base year 1985.	
Gastil	79	2.39	1.22	1.00	4.89	Average of indexes for civil liberties and political rights, where each index is measured on a one-to-seven scale with one representing the highest degree of freedom and seven the lowest.	
Openness (trade)	79	77.29	48.35	17.56	343.39	Sum of exports and imports of goods and services measured as a share of GDP.	
% pop above 65 (prop65)	79	8.51	4.90	2.34	17.43	Percentage of the population over the age of 65 in the total population.	
% pop between 15 and 65 (prop1564)	79	62.04	5.75	49.05	71.70	Percentage of the population between 15 and 64 years old in the total population.	
Federal political structure (federal)	79	0.16	0.37	0.00	1.00	Dummy variable, equal to 1 if the country has a federal political structure, 0 otherwise.	
OECD member (OECD)	79	0.29	0.46	0.00	1.00	Dummy variable, equal to 1 for all countries that were members of OECD before 1993, 0 otherwise, except for Turkey coded as 0 even though an OECD-member before the 1990s	
British colonial origin (col_uka)	79	0.28	0.39	0.00	0.93	British colonial origin (=1 if the country is a former UK colony) discounted by the number of years since independence.	
Spanish colonial origin (col_espa)	79	0.06	0.14	0.00	0.79	Spanish colonial origin (=1 if the country is a former colony of Spain or Portugal) discounted by the number of years since independence.	
Other colonial origin (col_otha)	79	0.20	0.34	0.00	0.98	Other colonial origin (=1 if the country is a former colony of a country other than Spain, or Portugal, or the UK) discounted by the number of years since independence.	
Share of Catholic population (catho80)	79	43.15	38.98	0.00	97.30	Percentage of a country's population belonging to the Roman Catholic religion in 1980.	
Africa region (africa)	79	0.13	0.33	0.00	1.00	Regional dummy variable, equal to 1 if a country is in Africa, 0 otherwise.	
Latin America and the Caribbean region (laam)	79	0.27	0.44	0.00	1.00	Regional dummy variable, equal to 1 if a country is in Latin America, Central America or the Caribbean, 0 otherwise.	
East Asia region (asiae)	79	0.15	0.36	0.00	1.00	Regional dummy variable, equal to 1 if a country is in East Asia, 0 otherwise.	
Age of democracy (age)	79	0.22	0.22	0.03	1.00	Age of democracy, defined as follows: AGE = (2000 − DEM_AGE) / 200 and varying between 0 and 1, with US being the oldest democracy (value of 1).	
Date of elections (me)	79	1.15	1.06	0.19	4.50	Date of elections	Rockey (2012)
Date of constitution (mc)	79	1.13	1.07	0.19	4.82	Date of constitution	
Former colony (excolony)	79	0.77	0.42	0.00	1.00	Dummy variable that denotes whether a country was colonized at some point.	
Institutionalization index	79	2.11	0.67	0.77	3.46	Institutionalization index	Franco Chuaire et al. (2013)
Congress institutionalization	76	1.71	0.75	0.24	3.77	Legislature effectiveness from the Global Competitiveness Report (GCR) and confidence in the parliament from World Values Survey (WVS).	

Table A1 (*continued*)

Variable	Obs	Mean	Std. dev.	Min	Max	Definition	Source
Party system institutionalization	79	1.54	0.43	0.75	3.33	Made up of five variables that measure the stability and capacity of political parties to aggregate preferences (from the Bertelsmann Transformation Index, BTI), public confidence in the parties (WVS and Barómetros), voter volatility, party longevity and election impartiality (from the Database of Political Institutions, DPI).	
Judicial independence	76	2.54	0.90	0.44	3.89	Proxied by measuring interference with the judiciary by government or other actors, using variables from three sources (GCR, BTI and the Fraser Index).	
Bureaucratic capacity	74	2.33	0.73	0.77	3.57	Measure of country's bureaucratic quality based on data from the Columbia State Capacity Survey and the International Country Risk Guide.	
Primary schooling	75	105.01	10.42	60.76	144.25	The gross enrollment rate (GER) in the primary education for the total population (average 2000–2010).	Quality of Government (2013) (QoG) from UNESCO Institute for Statistics
WGI control of corruption	79	0.46	1.09	−1.26	2.46	"Control of corruption" measures perceptions of corruption, conventionally defined as the exercise of public power for private gain (average 2000–2010).	QoG from the World Bank - Worldwide Governance Indicators
WGI regulatory quality	79	0.55	0.89	−2.00	1.86	"Regulatory quality" includes measures of the incidence of market-unfriendly policies such as price controls or inadequate bank supervision, as well as perceptions of the burdens imposed by excessive regulation in areas such as foreign trade and business development (average 2000–2010).	
WGI rule of law	79	0.43	1.01	−1.69	1.94	"Rule of law" includes several indicators which measure the extent to which agents have confidence in and abide by the rules of society. These include perceptions of the incidence of crime, the effectiveness and predictability of the judiciary, and the enforceability of contracts (average 2000–2010).	
WGI government effectiveness	79	0.55	0.98	−1.21	2.20	"Government effectiveness" combines into a single grouping responses on the quality of public service provision, the quality of the bureaucracy, the competence of civil servants, the independence of the civil service from political pressures, and the credibility of the government's commitment to policies (average 2000–2010).	
WGI political stability	79	0.15	0.92	−2.03	1.54	"Political stability" combines several indicators which measure perceptions of the likelihood that the government in power will be destabilized or overthrown by possibly unconstitutional and/or violent means, including domestic violence and terrorism (average 2000–2010).	
WGI voice and accountability	79	0.53	0.78	−1.48	1.62	"Voice and accountability" includes a number of indicators measuring various aspects of the political process, civil liberties, and political rights. These indicators measure the extent to which citizens of a country are able to participate in the selection of governments and indicators measuring the independence of the media (average 2000–2010).	
Gini	57	41.62	10.18	25.00	63.90	Gini index measures the extent to which the distribution of income or consumption expenditure among individuals or households within an economy deviates from a perfectly equal distribution. A coefficient equal to 100% denotes maximal inequality (average 2000–2010).	QoG from World Development Indicators (WDI)
Ethnolinguistic fractionalization	79	0.37	0.24	0.00	0.93	The index involves a combination of racial and linguistic characteristics where 1 denotes maximal fractionalization (average 2000–2010).	QoG from Alesina, Devleeschauwer, Easterly, Kurlat, & Wacziarg
Legal origin	79	0.39	0.49	0.00	1.00	Identifies the legal origin of each country. It is equal to 1 if the origin is English Common Law and 0 otherwise (French, socialist, German, Scandinavian).	QoG from La Porta, López-de-Silanes, Shleifer & Vishny
Central bank independece	70	0.63	0.22	0.16	0.92	The index varies theoretically between 0 and 1, where higher values indicate greater central bank independence. Based on IMF data pertaining to the year 2003.	QoG from Crowe & Meade; Eijffinger & Geraats, and Cukierman et al.
Checks	79	3.68	1.25	1.00	10.36	Number of veto players' average (2000–2010).	Database of Political Institutions (DPI) (2012)

Table A2
Distribution of groups after clustering.

Clustering group ID#	High institutionalization countries (Group 1)	Low institutionalization countries (Group 2)	# of occurrences (out of 100 iterations)
Multi-variate clustering (using individual components)			
1	35	37	44
2	36	36	7
3	37	35	1
4	39	33	7
5	40	32	16
6	44	28	25
Uni-variate clustering (using composite index)			
7	43	36	100

Notes: In the 100 iterations, 35 countries are always included in Group 1 and 28 are always included in Group 2.
For the regression samples, 3 countries are imputed to Group 1 and 4 countries are imputed to Group 2 according to the univariate clustering procedure. This way, Cluster group #1 will have 38 and 41, and so forth.

Table A3
The effects of constitutions for countries with high and low institutionalization (IV estimation — Fuller (4)).
Source: own estimates based on dataset from Persson and Tabellini (2003) and Franco Chuaire et al. (2013).

Dependent variable: central government expenditure/GDP							
	All countries (PT sample)	Clustering group #1		Clustering group #6		Clustering group #7	
		High institut. countries (Group 1)	Low institut. countries (Group 2)	High institut. countries (Group 1)	Low institut. countries (Group 2)	High institut. countries (Group 1)	Low institut. countries (Group 2)
Presidentialist	−9.956* (3.098)	−9.505 (6.353)	1.170 (5.752)	−10.551* (2.995)	−4.169 (8.599)	−9.775* (2.974)	2.071 (5.405)
Majoritarian	−0.310 (2.271)	−6.811 (5.815)	8.682** (4.789)	−8.858*** (4.108)	8.725 (5.697)	−11.533* (2.580)	11.245*** (4.893)
Endogenous variables	Pres, Maj	Pres, Maj	Pres, Maj	Pres, Maj	Pres, Maj	Pres, Maj	Pres, Maj
Included instruments	Narrow set	Narrow set	Narrow set	Narrow set	Narrow set	Narrow set	Narrow set
Excluded instruments	Age set	Age set	Age set	Age set	Age set	Age set	Age set
Estimation	Fuller (4)	Fuller (4)	Fuller (4)	Fuller (4)	Fuller (4)	Fuller (4)	Fuller (4)
1st-stage *F*-statistic of excluded instruments pres	5.44*	28.70*	9.99*	21.42*	6.81*	16.92*	14.14*
1st-stage *F*-statistic of excluded instruments maj	11.42*	7.74*	8.70*	3.69*	5.79*	5.3*	6.50*
Underidentification test (Kleibergen-Paap rk LM statistic):	12.09***	5.58	14.99***	7.32	8.31**	8.96	13.95*
Hansen J statistic (overidentification test of all instruments):	3.891	10.50***	3.64	9.32**	–	6.66	2.76
Weak identification test (Kleibergen-Paap rk Wald *F* statistic):	6.61***	1.19	3.02	1.82	4.24	2.60	4.46
Observations	79	38	41	47	32	43	36
R-squared	0.592	0.717	0.5	0.736	0.573	0.736	0.469

Notes: Robust standard errors in parentheses.
Narrow set of control variables includes the following: (Log of) GDPpc, Openess, Perc. population 15–64, Perc. population > 65, Gastil, OECD, Federal.
Age set includes the following: age, age2, British Colony, Spanish Colony, Excolony, Share of Catholic population.
* $p < 0.01$.
** $p < 0.1$.
*** $p < 0.05$.

Table A4
The effects of constitutions for countries with high and low institutionalization (interaction models).
Source: own estimates based on dataset from Persson and Tabellini (2003) and Franco Chuaire et al. (2013).

Dependent variable: central government expenditure/GDP						
Institutional variable	Clustering group #1		Clustering group #6		Clustering group #7	
	Discrete	Continuous	Discrete	Continuous	Discrete	Continuous
	(1)	(2)	(1)	(2)	(5)	(6)
Presidentialist * High inst	−5.680 (7.438)	−1.019 (5.190)	−0.734 (8.275)	−1.019 (5.190)	−5.549 (6.877)	−1.019 (5.190)
Majoritarian * High inst	−8.907* (4.390)	−8.564** (2.662)	−11.852** (3.972)	−8.564** (2.662)	−12.724** (4.570)	−8.564** (2.662)
Presidentialist	−4.099 (4.764)	−4.329 (13.501)	−8.268 (7.865)	−4.329 (13.501)	−3.633 (6.534)	−4.329 (13.501)

Table A4 (*continued*)

Dependent variable: central government expenditure/GDP						
	Clustering group #1		Clustering group #6		Clustering group #7	
Institutional variable	Discrete	Continuous	Discrete	Continuous	Discrete	Continuous
	(1)	(2)	(1)	(2)	(5)	(6)
Majoritarian	5.069 (3.550)	18.380* (7.910)	6.176*** (3.508)	18.380* (7.910)	7.189*** (4.324)	18.380* (7.910)
Institutionalization index	5.405*** (2.905)	3.500 (2.868)	3.328 (4.131)	3.500 (2.868)	7.271* (3.455)	3.500 (2.868)
Endogenous variables	Pres, Maj, Pres ∗ High inst, Maj ∗ High inst	Pres, Maj, Pres ∗ High inst, Maj ∗ High inst	Pres, Maj, Pres ∗ High inst, Maj ∗ High inst	Pres, Maj, Pres ∗ High inst, Maj ∗ High inst	Pres, Maj, Pres ∗ High inst, Maj ∗ High inst	Pres, Maj, Pres ∗ High inst, Maj ∗ High inst
Included instruments	Narrow set	Narrow set	Narrow set	Narrow set	Narrow set	Narrow set
Excluded instruments	Expanded age set	Expanded age set	Expanded age set	Expanded age set	Expanded age set	Expanded age set
Estimation	2SLS	2SLS	2SLS	2SLS	2SLS	2SLS
1st-stage *F*-statistic of excluded instruments presidentialist	12.85**	4.44**	7.72**	4.44**	6.25**	4.44**
1st-stage *F*-statistic of excluded instruments majoritarian	7.82**	5.20**	5.05**	5.20**	4.58**	5.20**
1st-stage *F*-statistic of excluded instruments pres ∗ High inst	82.45**	8.24**	24.12**	8.24**	27.93**	8.24**
1st-stage *F*-statistic of excluded instruments maj ∗ High inst	10.57**	5.38**	7.96**	5.38**	6.11**	5.38**
Underidentification test (Kleibergen-Paap rk LM statistic):	9.18	13.39	9.05	13.39	11.36	13.39
Hansen J statistic (overidentification test of all instruments):	10.44	9.31	9.38	9.31	–	9.31
Observations	79	79	79	79	79	79
R-squared	0.564	0.571	0.586	0.571	0.549	0.571

Notes: Robust standard errors in parentheses.
Narrow set of control variables includes the following: (Log of) GDPpc, Openess, Perc. population 15–64, Perc. population > 65, Gastil, OECD, Federal.
Expanded age set includes the following: age, age2, British Colony, Spanish Colony, Excolony, Share of Catholic population, age ∗ High inst, age^2 ∗ High inst, British Colony ∗ High inst, Spanish Colony ∗ High inst, Excolony ∗ High inst, Share of Catholic population ∗ High inst, Institutionalization.
* $p < 0.05$.
** $p < 0.01$.
*** $p < 0.1$.

Appendix B. Supplementary data

Supplementary data to this article can be found online at http://dx.doi.org/10.1016/j.ejpoleco.2015.02.007.

References

Acemoglu, D., 2005. Constitutions, politics and economics: a review essay on Persson and Tabellini's The Economic Effects of Constitutions. J. Econ. Lit. 43, 1025–1048.
Acemoglu, D., Robinson, J.A., 2006a. De facto political power and institutional persistence. Am. Econ. Rev. 96, 325–330.
Acemoglu, D., Robinson, J.A., 2006b. Paths of economic and political development. In: Weingast, B.R., Wittman, D. (Eds.), The Oxford Handbook of Political Economy. Oxford University Press, Oxford, United Kingdom.
Aidt, T.S., Dutta, J., Loukoianova, E., 2006. Democracy comes to Europe: franchise extension and fiscal outcomes 1830–1938. Eur. Econ. Rev. 50, 249–283.
Aidt, T.S., Dutta, J., Sena, V., 2008. Governance regimes, corruption, and growth: theory and evidence. J. Comp. Econ. 36, 195–220.
Aoki, M., 2001. Toward a Comparative Institutional Analysis. MIT Press, Cambridge.
Berkman, H., Scartascini, C., Stein, E., Tommasi, M., 2009. Political institutions, state capabilities, and public policy: an international dataset. Inter-American Development Bank, Washington, DC (Available at: http://www.iadb.org/en/research-and-data/publication-details,3169.html?pub_id=DBA-012. Accessed 1 September 2014).
Bertelsmann Transformation Index (BTI), d. Various years. Available at, http://www.bertelsmann-transformation-index.de/11.0.html?&L=1 (Accessed 1 September 2014).
Blume, L., Müller, J., Voigt, S., Wolf, C., 2009. The economic effects of constitutions: replicating—and extending—Persson and Tabellini. Public Choice 139, 197–225.
Caner, M., Hansen, B.E., 2004. Instrumental variable estimation of a threshold model. Economic Theory 20, 813–843.
Caruso, G., Scartascini, C., Tommasi, M., 2013. Are we all playing the same game? The Economic Effects of Constitutions Depend on the Degree of Institutionalization. IDB Working Paper 237. Inter-American Development Bank, Washington, DC
Caruso, G., Sosa-Escudero, W., Svarc, M., 2014. Deprivation and the dimensionality of welfare: a variable-selection cluster-analysis approach. Rev. Income Wealth http://dx.doi.org/10.1111/roiw.12127 (Published online: 6 MAY 2014).
Coates, A., Lee, H., Ng, A.Y., 2011. An analysis of single-layer networks in unsupervised feature learning. Proceedings of 14th International Conference on Artificial Intelligence and Statistics (AISTATS).
Cox, G., McCubbins, M., 2005. Setting the Agenda: Responsible Party Government in the U.S. House of Representatives. Cambridge University Press, New York.
Franco Chuaire, M., Scartascini, C., 2014. The politics of policies: revisiting the quality of public policies and government capabilities in Latin America and the Caribbean. IDB Policy Brief 220. Inter-American Development Bank, Washington, DC.

Franco Chuaire, M., Scartascini, C., Berkman, H., Focanti, D., Stein, E., Tommasi, M., 2013. Political institutions, state capabilities, and public policy: an international dataset — 2013 update. IDB Database No. 112. Inter-American Development Bank, Washington, DC (Available at: http://www.iadb.org/en/research-and-data/publication-details,3169.html?pub_id=IDB-DB-112. Accessed 1 September 2014).
Fumagalli, E., Narciso, G., 2012. Political institutions, voter turnout, and policy outcomes. Eur. J. Polit. Econ. 28, 162–173.
Gehlbach, S., 2013. Formal Models of Domestic Politics. Cambridge University Press, Cambridge, United Kingdom.
Greif, A., 2006. Institutions and the Path to the Modern Economy: Lessons from Medieval Trade. Cambridge University Press, Cambridge, United Kingdom.
Hahn, J., Hausman, J., 2003. Weak instruments: diagnosis and cures in empirical econometrics. Am. Econ. Rev. 93, 118–125.
Hand, D., Mannila, H., Smyth, P., 2001. Principles of Data Mining. MIT Press, Cambridge.
Huntington, S.P., 1968. Political Order in Changing Societies. Yale University Press, New Haven.
Inter-American Development Bank (IDB), 2005. The Politics of Policies. Inter-American Development Bank and David Rockefeller Center for Latin American Studies. Harvard University, Washington, DC.
Jones, M.P., 2010. Beyond the electoral connection: political parties' effect on the policymaking process. In: Scartascini, C., Stein, E., Tommasi, M. (Eds.), How Democracy Works: Political Institutions, Actors and Arenas in Latin American Policymaking. Harvard University Press, Cambridge.
Lehoucq, F., Negretto, G., Aparicio, F., Nacif, B., Benton, A., 2008. Policymaking in Mexico under one-party hegemony and divided government. In: Stein, E., Tommasi, M. (Eds.), Policymaking in Latin America: How Politics Shapes Policies. Inter-American Development Bank and Harvard University Press, Washington, DC.
Machado, F., Scartascini, C., Tommasi, M., 2011. Political institutions and street protests in Latin America. J. Confl. Resolut. 55, 34–365.
Mainwaring, S., Scully, T., 1995. Building Democratic Institutions: Party Systems in Latin America. Stanford University Press, Stanford.
McGuire, K., 2004. The institutionalization of the U.S. Supreme Court. Polit. Anal. 12, 128–142.
Milesi-Ferretti, G.M., Perotti, R., Rostagno, M., 2002. Electoral systems and public spending. Q. J. Econ. 117, 609–657.
Mueller, D., 2003. Public Choice III. Cambridge University Press, New York.
North, D., 2009. What is missing from political economy. In: Weingast, B., Wittman, D. (Eds.), The Oxford Handbook of Political Economy. Oxford University Press, Oxford, United Kingdom.
Palanza, V., Scartascini, C., Tommasi, M., 2012. On the institutionalization of congress(es). in Latin America and Beyond, Legis. Stud. Quart. Forthcoming. A draft version published as IDB Working Paper No. 363. Inter-American Development Bank, Washington, DC.
Persson, T., Tabellini, G., 2000. Political Economics: Explaining Economic Policy. MIT Press, Cambridge, United States.
Persson, T., Tabellini, G., 2003. The Economic Effects of Constitutions. MIT Press, Cambridge.
Persson, T., Roland, G., Tabellini, G., 1997. Separation of powers and political accountability. Q. J. Econ. 112, 1163–1202.
Persson, T., Roland, G., Tabellini, G., 2000. Comparative politics and public finance. J. Polit. Econ. 108, 1121–1161.
Polsby, N.W., 1968. The institutionalization of the House of Representatives. Am. Polit. Sci. Rev. 62, 144–168.
Rhodes, R.A.W., Binder, S., Rockman, B., 2006. The Oxford Handbook of Political Institutions. Oxford University Press, New York.
Rockey, J., 2012. Reconsidering the fiscal effects of constitutions. Eur. J. Polit. Econ. 28, 313–323.
Rodden, J., 2009. Back to the future: endogenous institutions and comparative politics. In: Lichbach, M., Zuckerman, A. (Eds.), Comparative Politics. Cambridge University Press, New York, pp. 333–357.
Savova, G., Therneau, T., Chute, C., 2006. Cluster stopping rules for word sense discrimination. Paper presented at the 11th Conference of the European Chapter of the Association for Computational Linguistics, April 3–7, Trento, Italy.
Scartascini, C., Tommasi, M., 2012. The making of policy: institutionalized or not? Am. J. Polit. Sci. 56, 787–801.
Scartascini, C., Stein, E., Tommasi, M., 2010. How Democracy Works: Political Institutions, Actors, and Arenas in Latin American Policymaking. Inter-American Development Bank and Harvard University Press, Washington, DC.
Scartascini, C., Stein, E., Tommasi, M., 2013. Political institutions, intertemporal cooperation, and the quality of public policies. J. Appl. Econ. 16, 1–32.
Shepsle, K., Weingast, B., 1987. The institutional foundations of committee power. Am. Polit. Sci. Rev. 81, 85–104.
Spiller, P., Tommasi, M., 2003. The institutional foundations of public policy: a transactions approach with application to Argentina. J. Law Econ. Org. 19, 281–306.
Spiller, P., Tommasi, M., 2007. The Institutional Foundations of Public Policy in Argentina. Cambridge University Press, New York.
Stein, E., Tommasi, M., 2008. Policymaking in Latin America: How Politics Shapes Policies. Inter-American Development Bank and Harvard University Press, Washington, DC.
The Economist, 2014. The parable of Argentina. Available online at, http://www.economist.com/news/leaders/21596515-there-are-lessons-many-governments-one-countrys-100-years-decline-parable (Accessed 16 February 2014).
Tibshirani, R., Walther, G., Hastie, T., 2001. Estimating the number of clusters in a data set via the gap statistics. J. Roy. Stat. Soc. B Met. 63, 411–423.
Voigt, S., 2011. Empirical constitutional economics: onward and upward? J. Econ. Behav. Organ. 80, 319–330.
Wong, M.A., 1980. Asymptotic properties of the k-means algorithm as a density estimation procedure. Working Paper 1101-80. Massachusetts Institute of Technology, Sloan School of Management, Cambridge.