

THE ECONOMIC EFFECTS OF POLITICAL INSTITUTIONS: ARE POST-COMMUNIST COUNTRIES DIFFERENT?

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Abstract

The paper is analyzing the relations between constitutional rules, political systems and economic policies in 27 post-communist countries during the transition period. It is proven that post-communist countries form a category that has its own strong institutional identity. This institutional specificity has an impact on both the political system and the economic outcomes, and some of the empirical findings are contradicting the existing theoretical frameworks and the results of previous studies that have focused on other areas.

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Introduction

The research will analyze the influence of political institutions such as electoral laws and the form of government on economic policies, focusing on the size of government and the patterns of government spending (broad vs. targeted spending) in post-communist countries. The aim is to establish if the findings of researchers that have only taken into consideration advanced democracies can be confirmed for young democracies as well. Since no previous studies have used data on all post-communist countries, it would be useful to see if the overlapping of economic and political transition had an impact on the relation between political institutions and economic policies. If it will be proven that post-communist countries follow a different pattern than the generic one that has been identified in the literature, the next step would be to build a different model that could better explain the situation in this region.

Iversen and Soskice (2005) show how different patterns of distribution in developed countries are rooted in historical institutions that go back as far as the 19th century. But such a framework does little to explain the distribution patterns in countries such as those in Central and Eastern Europe, that do not seem to fit any of the models outlined by them. Still, given the common past that these countries share, we could expect them to approach similar problems in a similar fashion, and this would justify choosing this particular area for analysis.

The research will follow the causal chain that starts with constitutional rules, looks at their political consequences and in the end identifies the effects that these political circumstances

have on economic outcomes. Researchers have usually been analyzing only one of the sides of this relation at a turn, but given the fact that the number of countries I will be looking at is relatively small, it will be possible to depict all the steps of the relation.

The next chapter will emphasize the relevance of performing this research on this particular area, and the one after will present the theoretical framework as well as the results of previous empirical studies. The third chapter will present the research methodology. The empirical analysis in the fourth chapter will reveal a series of intriguing findings that are being addressed in the final chapter.

I. Characteristics of post-communist countries and research relevance

The collapse of communism in Central and Eastern Europe and the dissolution of the Soviet Union led to the emergence of new constitutional orders that had to be built for the newly emerging democracies. Yet, a big part of the literature on the political and economic environments that characterize post-communist states does not focus on the institutional variables, since it is widely stated that these variables are not as relevant in new democracies as they are in the established ones. The argument here is that the democratic process needs time in order for political actors to learn the new mechanisms and adapt to them. Still, the new constitutional rules were not only a part of the transition process, but were also the ones that shaped and constrained the process itself. This means that even if other variables (such as the cultural ones, like different perceptions on corruption and the social ones, like the importance of clientelistic or even clan structures) had a stronger impact on the political and economic system in post-communist countries, the institutional ones have to be taken into consideration as well.

During communism, the big majority of these states had single-member majority electoral systems, but true electoral competition was missing, or it was rather a competition between personalities than one between ideologies or policy proposals (Birch, 2003). After the fall of

communism, most countries underwent one or several processes of electoral reform. While some of them copied the old system in the new constitutions, others have changed it several times (Kyrgyzstan for example changed the electoral system four times, and Macedonia three times). This disproves one of the conclusions formulated by Birch (2001, p. 136), that the common view of electoral systems as “sticky” institutions is sustained by the post-communist experience, and that once adopted, the electoral systems proved hard to change. The changes covered not only the electoral formula but also other elements such as the district magnitude, the electoral threshold and the ballot structure. Other institutional variables were changing at the same time, and along with them, the whole political, social and economic system was being rebuilt. Changes have been dramatic in some of the states, while others are still keeping many of the elements of the communist regime, and this difference is reflecting in the current political system and democratic performance of these countries.

Birch (2001, p.10) identifies some of the characteristics that distinguish the democratization process in post-communist countries from the process that took place a century ago in Western Europe. While most of today’s old democracies underwent this process as well established states, many of the post-communist countries had to go through the process of autonomous state formation while they were at the same time trying to democratize. The difference also rests with the scope of the state: while in Western Europe the state grew along with democracy, in Eastern Europe on the contrary, a very strong state had to be reduced during the transition period. The most important distinction is considered to be the timing for party system formation. In Western countries, parties existed prior to the expansion of franchise, but in post-communist states voting rights preceded the party system formation.

All these elements show that we have strong reasons to look at post-communist countries, and the transition process they went through, separately from other countries that went the way towards democratization. If there are so many elements that distinguish developed democracies from emerging ones, the assumption that institutions should function similarly in both cases needs to be questioned. Also, the differences are likely to reflect not only in the political system, but they probably also have economic consequences as well. For instance, if we accept that for established democracies the patterns of redistribution are rooted in historical institutions, then we could ask how these patterns are forming in new democracies, since the starting points are, as we have seen, very different.

One of the possible criticisms that needs to be addressed regards the inclusion of all post-communist countries into one category. Most researchers prefer to distinguish between the countries in Central and Eastern Europe and the ones in Central Asia, though the demarcation lines are never very clear. The reason for rejecting such an approach is that what unites these countries is much more important than what divides them. The transition from communism to democracy, a process which they all went through approximately at the same time, was not just a political change. Due to the authoritarian nature of the communism in most of these countries, in which the state had full control over individual lives, the changes that these countries had to go through did not resume to the political environment, but had broad implications at the social and economic levels. The stages all these states went through are amazingly similar, even if sometimes the timing was different. We would then expect them to show at least a similar institutional structure, built in response to similar challenges.

We need to test the existence of a post-communist institutional specific, in order to be able to prove that the research is indeed relevant. If there is nothing special about post-communist

countries, then it would not make much sense to include them all in the same category and to perform the analysis on this specific group.

A series of simple statistical tests (t-tests and chi-squared statistics) were performed in order to check the assumption that post-communist countries can be thought of as an area with strong, specific characteristics that distinguish it from other areas. The data used comes from the Quality of Governance database, (Teorell et al., 2007), the cross section data set which brings together several sources on political and economic variables. The institutional variables that we should be looking at, according to the literature and the purpose of this study are: electoral formula (and the variation within different types belonging to the same broad category), district magnitude, ballot structure, electoral threshold, number of legislative chambers, the degree of centralization and the regime type. All the analysis were performed by looking at democratic countries, in which those who govern are selected through contested elections (and leaving out countries in which the chief executive is not elected, the legislature is not elected, there is no more than one party, or there has been no alternation in power; the variable comes from the Golder 2005 database), and the measurement years varied slightly between variables, most of them being recorded in 2000, 2002 or 2006.

There is a significant difference between post-communist countries and other democratic countries in the world when it comes to the electoral formula used in parliamentary elections. There are much less countries that use (at the time of measurement) a majoritarian formula in the group of post-communist countries represented in this database, slightly more proportional systems and much more mixed systems than expected (double than expected, $\chi^2(2, N = 107) = 10.98, p < .01$).

Electoral System Type 2 * Post communist countries = 1 Crosstabulation

			Post communist countries = 1		Total
			0	1	
Electoral System Type 2	Majoritarian	Count	35	1	36
		Expected Count	29.6	6.4	36.0
		% within Electoral System Type 2	97.2%	2.8%	100.0%
	Proportional	Count	39	10	49
		Expected Count	40.3	8.7	49.0
		% within Electoral System Type 2	79.6%	20.4%	100.0%
	Mixed	Count	14	8	22
		Expected Count	18.1	3.9	22.0
		% within Electoral System Type 2	63.6%	36.4%	100.0%
Total	Count	88	19	107	
	Expected Count	88.0	19.0	107.0	
	% within Electoral System Type 2	82.2%	17.8%	100.0%	

Table 1 Regime type. Characteristics of post-communist states.

When taking into consideration that the total number of mixed systems in the world is very little compared to other formulas, then we can conclude that the specific of this area is given by the concentration of mixed systems. A more specific analysis has also been performed, since we aim to see if there is a significant difference between post-communist countries and the rest of democratic countries in the world when it comes to more detailed aspects of electoral formulas. The *Electoral system design* variable from the International Institute for Democracy and Electoral Assistance has been used for this purpose, and the results show that post-communist countries use much more mixed member proportional systems, parallel systems and two round systems than expected, and only slightly more list proportional representation systems than expected ($\chi^2(9, N = 108) = 11.73, p < .05$). It would thus make sense to see how the findings in the literature that usually distinguish between PR and majoritarian systems, hold in this situation, where there are so many mixed systems. This

can be done by focusing on the effects that each mixed systems have on the political environment (the number and relative power of the parties) and on their economic consequences. The results hold even when the democracy requirement is relaxed and we look at all the systems used over time in these countries. The number of majority systems increases in this situation, but the prevalence of mixed systems remains a characteristic.

A t-test for independent means shows that the district magnitude is significantly bigger in post-communist countries ($M=32.18$, $SD=47.41$) than in the rest of the world ($M=11.24$, $SD=23.41$), $t(93) = 2.75$, $p = .007$. There is no difference between post-communist countries and the rest of the world when it comes to ballot structure ($\chi^2(1, N = 66) = .35$, $p > .1$), the number of legislative chambers ($\chi^2(1, N = 101) = .28$, $p > .1$), or the existence of sub-national governments ($\chi^2(1, N = 70) = .26$, $p > .1$) but the vote threshold for representation in the lower house is bigger in this area ($M=5.38$, $SD=5.07$) than in others ($M=1.67$, $SD=2.3$), $t(79) = 4.44$, $p = .007$.

Parliamentarism * Post communist countries = 1 Crosstabulation

			Post communist countries = 1		Total
			0	1	
Parliamentarism	Presidential	Count	26	1	27
		Expected Count	22.3	4.8	27.0
		% within Parliamentarism	96.3%	3.7%	100.0%
	Semi-Presidential	Count	15	9	24
		Expected Count	19.8	4.2	24.0
		% within Parliamentarism	62.5%	37.5%	100.0%
	Parliamentary	Count	48	9	57
		Expected Count	47.0	10.0	57.0
		% within Parliamentarism	84.2%	15.8%	100.0%
Total	Count	89	19	108	
	Expected Count	89.0	19.0	108.0	
	% within Parliamentarism	82.4%	17.6%	100.0%	

Table 2 Electoral system. Characteristics of post-communist states

Another characteristic of this area is the prevalence of semi-presidential regimes, double than expected, and the existence of much less pure presidential or parliamentary regimes ($\chi^2(2, N = 108) = 10.28, p < .05$). Again, even if the numbers for presidential regimes increase when we include all the countries, regardless of their score on democracy, that for semi-presidential systems is still high when compared to other regions in the world.

There are several possible explanations for the high number of mixed and semi-presidential systems in this area. The first one would originate in the way decisions about the new constitutional rule were made in most of these countries. Usually the new institutional framework was the result of a negotiation process among political elites, the two sides being the reformers and the conservatives. While the group which had the lowest (or most divided) support at that time would have been advantaged by a parliamentary system with proportional representation, the strong group would have preferred a presidential system and majority, single member districts. Since the political context was new to both sides, none had enough information about where exactly they were standing in the electorate's preferences, so a compromise solution, with which everybody could agree was that of mixed electoral systems and/or semi-presidentialism (the classical example is that of the Round Table negotiations in Poland, which resulted in semi-presidentialism, see Benoit and Hayden, 2004).

Another explanation could be that the constitution designers (seen here as benevolent and non self interested), being able to learn from the experience of other countries, wanted to combine the advantages of both types of systems: the high degree of accountability characteristic to single member districts and presidentialism and the broad representation of interests characteristic to PR systems and parliamentarism (see Shugart and Watenberg, 2001).

Table 3 summarizes the characteristics of post-communist countries as a group, when compared to other countries in the world:

Institutional variables	Characteristic of the area
Electoral formula	Much more mixed systems than expected
Regime type	Much more semi-presidential systems
District magnitude	Higher
Ballot structure	No difference
Electoral threshold	Lower
Number of legislative chambers	No difference
Degree of centralization	No difference

Table 3 Characteristics of the area - summary

What the table says is that in order to capture the consequences of this mix of constitutional provisions that is characteristic to this area, the focus should fall on the distribution of power and especially on the structure of checks and balances that underlines this distribution. For instance, the combination of lower threshold and higher district magnitudes should lead to more proportionality and broader representation, but since these elements are constrained by the electoral formula, the impact of mixed systems should be assessed.

Also, since there is no difference between post-communist countries and other democracies in the world with respect to the number of legislative chambers and the degree of centralization, then it means that the actual number of veto players is strongly influenced by the regime type and the relations between the parties that control the main institutions (the president's party and the party that has the majority in the parliament for example). For this

reason, the focus should be on the role played by semi-presidentialism in this situation. The next section will review the main theoretical models and empirical studies that link the three types of variables that we are interested in: constitutional provisions, characteristics of the political system and government economic policies.

II. Theoretical background

1. Political effects of constitutional provisions¹

There is a broad literature on the political effects of institutions such as electoral systems and the forms of government. The electoral formula used to transform votes into seats, the district magnitude, the ballot structure, the electoral threshold and their effects on the number, size and structure of the party system have been under survey for several decades now, through the work of scholars such as Lijphart (1994, 1999), Cox (1990, 1997), Sartori (1994), Taagepera and Shugart (1989).

Most of these studies have focused on the distinction between proportional representation systems (PR), plurality systems and mixed systems that combine some elements of both. Researchers have focused on the tension between accountability (higher under plurality rule, in single member districts and when the ballot is not on a closed list) and broad representation of interests (higher under PR rule, big magnitude districts and low thresholds). Majority and plurality systems decrease the number of parties in the system (Duverger's law), but the party system is also influenced by other factors such as cleavages and historical trends. Unlike in the case of plurality or majority elections, when the contest is of a "winner takes all" type, and where it is possible that unless voters vote strategically, a large share of their votes will be lost, in the proportional system the share of wasted votes is much smaller, and voters know that if they vote sincerely, they can still see their party in the legislature. Thus, while the

¹ "Constitutional provisions" refer to electoral rules and the form of government, as in Persson and Tabellini (2003, 2006, 2007).

number of parties is restricted by a majority or plurality rule, more groups and interests can be represented in a PR system, and so the number of parties is only influenced by the existing cleavages in the society. Usually, the number of parties in a plurality system is close to two, and for proportional systems the average is bigger.

District magnitude is one of the most important elements that determine the proportionality of an electoral system. Big electoral districts are usually associated with increased levels of representation when combined with PR or mixed systems designed to enhance proportionality (strong correlation between the number of votes and the number of seats received by a party). On the other hand, small districts are thought to increase accountability, but reduce proportionality, since small parties have little chances of getting seats in these districts. For this reason, it is believed that the number of legislative parties increases with district magnitude. District magnitude and the electoral formula used to translate votes into seats are strongly linked, and as Kenneth Benoit shows (2001), the consequences of district magnitude are strongly biased when the electoral system variable is omitted. Also, candidate and party entry in the electoral race actually increases with district magnitude under plurality elections, but only when we are no longer talking about single member plurality but multi-member plurality systems.

In this paper, by electoral threshold we understand legal threshold, the minimum percent of votes that a party needs to receive in order to be allowed to occupy seats in the legislative, and not effective threshold, which is the minimum percent of votes needed by any party in order to get at least one seat in the assembly. The main purpose of the electoral threshold is to limit the number of parties represented in the parliament. It is believed that by limiting the number of legislative parties government stability is being increased, and the electoral

threshold has been usually increased in countries that have previously experienced prolonged and repeated government crisis, as in the case of Romania for example, which changed the threshold from zero, to three and ultimately to five in less than a decade.

The first consequence of adopting one type of ballot structure or the other is on the strength of the parties in the system. When the lists are closed, party leaders have the final word on who the candidates are and what their position on the list is, which means that they have stronger control over the party members, and the party's strength increases. One of the consequences of strong parties could be increased government stability, since it would be more costly for legislators to deviate from the party policy, and at the same a more efficient decisional process that would ensure the smooth passage of laws in the parliament.

Proportional representation leads to more fragmented party systems and so the incidence of coalition governments also increases. Since no single party is able to form the government, more parties have to negotiate the formation of a coalition, and this has a strong impact on policy choices. It is not only the fact that the policy decisions are being made by various actors with various ideological positions that matters, but also the fact that they have to negotiate in order to divide the executive power, before or after the elections (depending on other factors such as the minimum threshold for representation, the coalition formation process is more likely to happen before the elections or afterwards). However, it is not always the case that a government has to have a majority in the parliament in order to be in power. Executives that do not need to be confirmed in the legislature can govern even if they only have the support of a minority (the classical case is the one of Ireland, where for a long time minority governments have been the rule and not the exception).

More subtle aspects of the electoral system such as the exact formula for transforming votes into seats and redistributing the seats that were not initially allocated can also shape the political environment by favoring either small or big parties. This in turn affects the government formation process. Thus, there are other institutional factors that have an impact on the number of parties in the system, and on the number of parties in a government coalition, besides proportional representation which allows for an increased number of parties in the system and makes the existence of government coalitions more likely.

Scholars have also looked at the characteristics of a presidential as opposed to a parliamentary regime. They have found that the form of government has an impact on the distribution of power among political actors and this way it shapes the political environment in the country, though the effects differ based on which electoral system they are associated with. The division of powers is stronger in presidential regimes, the executive has more autonomy and the number of veto players is bigger. In a parliamentary system on the other hand the power is more concentrated, since the government needs the support of the legislative, which is linked with increased party discipline and stronger parties. Thus, a prime-minister that controls the majority in the parliament is the head executive and is usually also the leader of the largest party in the parliament has more freedom to take decisions and more power than a popularly elected president.

With respect to post-communist countries, the results of several studies are worth mentioning. Sarah Birch finds that the single-member districts are indeed associated with less parliamentary parties in post-communist countries overall, but that the effect is not so clear in the former Soviet states (2001, p. 137), where single member districts can also have a fragmenting effect. At the same time, she finds that at least in Central Europe, mixed systems

have a moderating effect on the size of the party system, but this result is contingent upon the degree of social and cultural fragmentation. The study also finds that personal vote tends to fragment the party system but finds no significant effects of other variables such as the regime type and the degree of democratization. The reason for this might be that the study does not properly cover the countries in Central Asia and the problem of missing data for the countries from the former republic of Yugoslavia does not seem to be solved.

Moser (1995) studies the mixed electoral contest held in Russia in 1993 and finds that contrary to the common held view, single member districts led to a proliferation of small parties, while the proportional representation reduced the number of parties. Moser's explanation for this is a cultural one: the tendency of Russians to support charismatic independent candidates rather than party candidates. But Clark and Wittrock's explanation for the same phenomenon is an institutional one: it is actually strong executives that reduce the incentives for parties to control the legislative agenda, thus weakening parties, lowering the competition levels and allowing for more small competitors to make it to the top, reducing the importance of other institutional constraints. (Clark and Wittrock, 2005)

2. Economic effects of constitutional provisions

Relatively recently, researchers have started paying attention to the link between electoral institutions and economic policies, and the authors that have analyzed this problem in grater detail are Torsten Persson and Guido Tabellini (2000, 2003, 2006, 2007 with Gerard Roland). This research will start from the theoretical model they are building in the book "The Economic Effects of Constitutions" (2003) and will test some of their results for post-communist countries, while at the same time adding some new elements to their framework.

They are taking into consideration three important electoral rules: the electoral formula, the magnitude and the ballot structure, and try to observe the effects they have on fiscal policy, rent extraction and economic performance. They also link these economic factors to the form of government (presidential or parliamentary democracy).

While they fail to reach significant results with respect to economic performance, they find that corruption and rent seeking behavior are associated with list voting (especially when the lists are closed) and larger district sizes, and that majoritarian elections induce narrow spending, decrease overall government spending and also public deficits. Accountability provides the explanation for the findings about corruption. The smaller the district and the more visible the candidate, the more incentives she has to perform better and not lose the voters' support. Representation on the other hand is being given as the main explanation for the second set of findings. In multimember districts and under PR representation, the competition between parties is more diffuse, and they have the incentive to seek the support of broader coalitions in the population and provide more public goods. In single member districts and under plurality exactly the opposite happens: if competition is intense in a district, politicians have more to gain if they appeal to the voters in these districts, and they will target those voters, and spend less on broad transfers. On the other hand, an important distinction has to be made between geographical targeting, and narrow spending on small groups, but which are spread across districts, and this distinction is not always clear in the literature.

Presidentialism is also found to reduce the size of the government and public spending. Power is more balanced in a presidential system, there are more checks and the number of veto players is bigger. This has two effects: first of all, the increased accountability of

executives, which is usually associated with less propensity to set high taxes and extract rents, and second, a tendency to maintain the status quo (since it is harder to change it when there are multiple veto players).

On the other hand, with respect to new democracies, there are studies that find no relation between institutional variables and economic policies. Philip Keefer (2005) is comparing old and new democracies and reaches the conclusion that political and electoral institutions make no difference when it comes to government economic policies, and that actually the variable that makes politicians under-provide non-targeted goods and over-provide targeted goods in young democracies is the inability to make credible commitments to voters.

Given the specific of this area, the focus should be on the effects of semi-presidentialism and mixed electoral systems, but few studies have addressed this issue. Thames and Edwards (2006) analyze the relation between mixed member systems and government spending, and their study covers most of the mixed systems existent in post-communist countries between 1990 and 2000. They find that mixed member systems in which the proportional component prevails are associated with higher levels of government spending than the ones in which the majoritarian part is more important. But the study does not provide a comparison of mixed systems and the other two type pf electoral systems, PR and majoritarian, which would be important for this area.

Persson and Tabellini cover over 80 democracies in their study, but only 10 of these are post-communist countries, almost all being countries in Central and Eastern European, so not all the variation among ex-communist countries is being covered. By looking at all post-

communist countries, we would have enough variation among electoral systems, regime types and other political institutions to be able to say if their results hold or not in this area.

3. The relation between political systems and economic policies

What Persson and Tabellini (2006) acknowledge is that going from the electoral rules straight to their economic effects actually means ignoring the mechanism through which this is happening in reality. Constitutional provisions shape the party system, influence the political power distribution and provide incentives for political actors, and this way they create the conditions for certain economic policies to be adopted.

The variables that other studies suggest should be taken into account are the number of parties running in the elections, the number of parties represented in the parliament, the share of the votes received by the winning party, the number of parties in the government coalition and the share of votes they represent. Bawn and Rosenbluth (2006) use data on 17 western European democracies to show that the size of the public sector increases with the number of parties in the government coalition. On the other hand, their study finds no relation between the overall number of legislative parties and government spending. That would mean that the electoral system has to “allow” for more parties to enter the legislative but other factors such as the relative strength of these parties has to be taken into consideration as well. A system that ensures a high degree of representation could translate into a fragmented party system in which all parties have approximately the same electoral weight or it might as well translate into a system in which the party system is fragmented on only one side of the political

spectrum, in which situation we would expect at least in some periods the government made by a “long coalition” (Bawn and Rosenbluth, 2006).

This is one of the reasons why not only the relation between electoral institutions and economic policy should be analyzed in post-communist countries, but also the political effects of electoral laws, which are in fact the mechanisms through which policy outcomes are being shaped. Persson, Roland and Tabellini (2003, 2007) try to identify one of these mechanisms. They find that single party governments spend less than coalition governments, and the main reason for this is the existence of an “electoral common pool problem” within coalition governments, where parties in the coalition do not fully internalize the fiscal costs of spending.

The partisan theory says that the ideological inclination of the government is affecting the size and type of government spending. But there is no clear consensus in the literature on whether the theory is indeed true or not, and researchers keep finding conflicting evidence. Blais, Blake and Dion (1993) show that indeed parties of the left do spend more than parties on the right, but the difference only emerges for majority governments that remain unchanged for a long period of time. On the other side we have evidence provided by researchers like Imbeau, Petri and Lamari (2001, p. 1191), which show that “the average correlation between the party composition of government and policy outputs is not significantly different from zero”. Since due to lack of data most of the studies exclude big part of post-communist countries, testing this theory for the area will prove useful.

Christine Lipsmeyer (2000) brings evidence from six post communist countries, which supports the partisan theory. She finds that left governments tend to spend slightly more than

right governments, but that there is also a difference in the patterns of spending for different budgetary components. While both types of governments provide large social benefits during the transition period, governments of the right are more drastic in reducing the size and duration of these benefits for the unemployed and the pensioners over time, and tend to shift the responsibility for health care towards the private system more than left governments do. This has an impact on the total size of the government. While the study does shed some light on the situation in these countries, Lipsmeyer's findings can not be generalized for the whole region, mainly since her data comes from only six post communist countries which are all clustered in Central Europe and are the most developed ones in the list of post-communist countries in the region.

If we take on the hypothesis that the ideological orientation of the government has an impact on the size of public spending, and as Iversen and Soskice (2006) show, proportional representation favors center-left governments which have a propensity for increased spending, then the relation between the electoral system and the type of government should be tested for post-communist countries. The idea is that in a majoritarian electoral system, which favors a two-party system, the middle class will rather vote for the party on the right because it is afraid that the left wing party will increase taxes in order to redistribute to the poor, while in a proportional system with three parties, the middle class would rather vote for the center-left party (but under the assumption that the poor should always receive more than the middle class and the middle class more than the rich). The theory is worth testing for our area of interest, though one might argue that the assumptions are not always met in this case, since the transition has very often led to situations in which the redistribution was not always from the rich towards the poor, but sometimes the other way around, with the middle class

taking much of the burden. Still, it would be informative to see what the situation is in the post-communist world.

The type of political competition that is induced by the electoral rules is another mechanism through which economic outcomes are produced, though different studies have found different results on this issue. While Persson and Tabellini (2000) claim that large districts where voters' preferences are more heterogeneous and the competition between parties is intense reduce targeted spending, Rickard (2006) shows that when we take into consideration the increased competition both between parties and between candidates within parties, large districts favor narrowly targeted transfers.

III. Methodology

1. Country selection

The analysis includes 27 ex-communist countries: Albania, Armenia, Azerbaijan, Belarus, Bosnia Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Macedonia, Moldova, Mongolia, Poland, Romania, Russian Federation, Slovakia, Slovenia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan. Other studies have usually focused on geographical areas that separate these countries, such as Central and Eastern Europe or Central Asia, but as we have seen, such a division fails to capture the important common denominator of all these countries: their communist past and the fact that they started the transition process at approximately the same time, being confronted with similar political and economic problems.

Since most of these countries had new constitutions and new electoral rules by 1993, the study will cover the 12 years period between 1993 and 2004. The upper limit had to be set because of missing data constraints. The initial idea was that countries that do not fully meet the requirements of democracy, or which receive low scores on this indicator have to be eliminated from the analysis, but since it is rather hard to draw the line especially for this particular area and this period of time, a different approach was taken. The countries have been left in the analysis and a control measure for the level of democracy has been introduced in all the models.

2. Research questions

Building on the theoretical foundations, the questions that this study is trying to answer are:

- Are the political effects of constitutional provisions in post-communist countries consistent with the findings that refer to advanced democracies?

I will be looking at the party system but also at the relative political power that is given to political actors under different institutional settings. One important aspect that has been largely ignored in the literature regards the difference between different formulae in proportional systems. Given the fact that some of them favor large parties while others favor small parties, this could prove important when looking at the number of parties in the government coalition. Another aspect that should be considered is the fact that constitutional provisions other than electoral rules and the form of government can also have an impact on the number of veto players in the system (see Tsebelis, 1999). The federal or centralized character of the system, the size of the winning coalition and the distinction between unicameralism and bicameralism (Lijphart, 1999) should also be considered and incorporated in the analysis.

- Are the relations between constitutional rules and economic policies in post-communist countries the same as those in other countries?

I will specifically be looking at the relation between detailed electoral rules and the other relevant institutions identified earlier on one side, and the size of government and the patterns of spending on the other. Since usually studies on the post-communist transition have focused

on corruption and rent seeking behavior, this aspect will be left out from this study. With respect to the overall size of governments, the most used measure, in basically all other studies, is government spending as percent of GDP, though, Persson and Tabellini also consider central government revenues as percent of GDP. In this study I will be using the first measure. Since the period under analysis starts with 1993, there will be no problems with finding data for post-communist countries.

One of the first problems that this study has to address is that there is no unanimously agreed upon measure of broad vs. targeted spending, as researchers use different indicators to account for the type of redistribution. In their 2003 book, Persson and Tabellini use the level of social security and welfare spending as a measure of broad spending, and spending on goods and services as a measure of benefits that can be targeted to narrow geographical constituencies. Ferretti et al, 2001, use a slightly different measure of targeted spending. They are taking the sum of social security payments and other transfers to families, plus subsidies to firms on one side, and the sum of current and capital spending on goods and services (government consumption and capital spending) on the other side. Their idea is that purchases of goods and services are easier to target geographically, and transfers are easier to target across social groups. They find that transfer spending is higher in proportional systems and public good spending is higher in majoritarian systems. Since one of our purposes is to connect government ideological positions with the type of spending, we will have to distinguish at some point between geographical targeting and social targeting, and proceed with the analysis of the later category only.

- How do specific characteristics of the political system shape economic policies?

I will focus on the number of legislative parties, but also on the number of parties in government, the patterns of electoral competition and coalition formation and the ideological orientation of the parties in government. The number of veto players is another variable that has to be taken into consideration, and it has been included into the category of systemic variables, and not in the category of institutional variables because the “effective” number of veto players will be taken into consideration (for instance, cases in which there formally exist a second chamber but it has no real powers in the decision making process are not considered to have an extra veto point, represented by the second chamber). The idea is to see exactly how the mechanism that leads to certain economic policies functions, where the difference between overall government of spending in various post-communist countries comes from and most important, what affects the composition of spending.

Table 4 shows the expected relations between constitutional, systemic and economic variables.

Constitutional provisions		Political system characteristics	Government spending
Regime type	Parliamentary democracy	Concentration of power – the head of the executive has the support of the legislative	Higher government spending, broad spending
	Presidentialism	Separation of power – increased accountability, checks and balances, more veto players	Lower spending, targeted spending
Electoral system	PR	More frequent center-left governments	More redistribution, higher spending
		Increased representation More fragmented party systems - larger incidence of coalition governments - more parties in the government coalition	More public goods, broad spending Higher spending
	Majority	Less parties	Less spending, more targeted

District magnitude	Big districts	Increased fragmentation	Increased government spending
		Stronger proportionality, various interests represented	More broad spending
Ballot structure	Closed lists	<i>Reduced accountability</i>	More spending
	Preferential voting	<i>Individual accountability</i>	Targeted spending
Electoral threshold	High	More fragmented party system - larger incidence of coalition governments - more parties in the government coalition	Higher spending
Legislative chambers	Bicameralism	More checks and balances, more veto players	Less spending
Degree of centralization	Sub-national governments	<i>Increased accountability</i>	Smaller government More targeted spending

Table 4 Expected relations

In the end we should be able to see if young post-communist democracies follow the trends set by mature democracies or on the contrary, the relations between political institutions and economic policies in post-communist countries are significantly different and can be better explained by alternate models.

3. Methodology

The main source of data needed to address the first question and the third is the Quality of Governance dataset which has data for all the countries under analysis. Other data sources that were used are the Comparative Data Set for 28 Post-Communist Countries, 1989 – 2006 (Armingeon and Careja, 2006) of the Swiss National Science Foundation and the Comparative Study of Electoral Systems (Module II). Since no database which combines all the political variables with the economic ones for these countries exists, it will be created by gathering the economic data and adding it to the political indicators. The size of government

is provided by the European Bank for Reconstruction and Development (EBRD). For the type of government spending the only data source are the IMF government finance yearbooks, which were reproduced in the EBRD dataset.

The method that used is statistical analysis. A series of linear least squares regressions were performed. Since the study will use time series data, dummy variables for country and time were created and introduced in the models (time was introduced for the variables for which we believe it to have a significant effect). The first problem we had to confront was that of missing data. The database built for the purpose of this study used multiple sources, and combined indicators from previous research with new ones that were gathered now. Still, on some of the indicators the missing data was still biasing the results when the classical list wise deletion method was being used.

In order to address this issue properly, the study will report the results of both the analysis that handles missing data with list wise deletion and the results of the analysis that uses multiple imputation. The statistical packages used for multiple imputation are Amelia (II) and Zelig (see King, Honaker and Blackwell, 2007) Amelia imputes values for each missing cell in the original data set, and creates as many data sets as is desired (in this case, we have created 5 data sets, which is the standard for the program), making sure at the same time that the uncertainty about the missing data is reflected in these data sets. The procedure used to combine the results is performed automatically when using Zelig (another software for R) to do the data analysis.

Most of the missing data was in the variables that define the political environment: the government majority, the legislative and government fractionalization. Less missing data

instances exist for constitutional variables, since the gaps here are easier to fill. For the economic variables, a relatively low number of empty cells were encountered, and all of them were from the beginning of the transition process in the area (1993-1995), when the international organizations were not very involved in the process and probably also due to political and economic unrest the data were not collected.

The problem here is not one variable that has multiple missing values, but the fact that for some countries, there are situations in which the missing data problem leads to their exclusion from the analysis. This is not hard to imagine, since there are only twelve entries for each country, corresponding to each year. Again, this would not be a big problem in itself, if the selection of these countries would have been random. But most of the countries that have missing data problems also share other characteristics. These are: Azerbaijan, Belarus, Bosnia, Kazakhstan, Kyrgyzstan, Moldova, Mongolia, Russia, Turkmenistan, Tajikistan and Uzbekistan, and apart from the geographical proximity, what some of these countries are sharing is a low degree of democratization associated with majoritarian institutions, like presidentialism, unicameralism and majority voting. This would mean that by eliminating these countries from the analysis through list wise deletion we would be reducing the influence of these characteristics.

Of these countries, during the analysis it resulted that the only ones that had to be completely removed at some point were Bosnia, Turkmenistan and Tajikistan. The interesting thing here, and the element that makes the analysis with multiple imputations very useful, is that the missing data for these countries is not for the same variables, and for instance for Russia we have all the cells filled except for the ones on government spending on transfers and subsidies, from which more than half are missing.

The first chapter of the empirical analysis part will look at the way constitutional provisions shape the political environment in post-communist countries, the second one will look at how particular characteristics of this environment influence the size and type of government spending, and the last one will look at the straight connection between constitutional rules and government spending. The new emerging puzzles will be briefly analyzed in the fifth chapter and the last part of the paper will present the conclusions and suggest future lines of inquiry.

IV. Empirical testing

The variables that are used in the analysis are:

Constitutional variables

Regime type – dummies for the three types of regime were created, and the reference category was set as parliamentarism. The dummies are PRESID and SEMIPRES, and most of the data, comes from the classification of Gerring et al. (2005), reproduced in the QoG database.

Electoral system – dummies for the three types of electoral systems were also created, with the reference category being proportional representation. The dummies are MIXED and MAJORIT, and the main source from which they were compiled is the *Electoral system design* variable from the International Institute for Democracy and Electoral Assistance, reproduced in the QoG dataset.

District magnitude – for statistical purposes, the logarithm of the average district magnitude was used in all the models, LogMDM.

Ballot structure – a dummy that captures whether the system uses closed or open lists was created, CLOSED, but since we want to use in the analysis is actually a measure of the openness of the system to the will of the citizens, single member districts in which there are no party lists were also coded as open (0).

Electoral threshold – the legal threshold is used, THRESH, since what we are trying to

emphasize is the degree of constraints imposed on the number of parties that can win seats in the parliament. For majoritarian systems, the threshold was set to zero if the plurality rule was used and .5 if majority rule was used.

Legislative chambers – BICAMER is the dummy for bicameralism, zero if there is only one legislative chamber and 1 if there are two.

Federalism – FEDERAL is the dummy variable for federal as opposed to unitary states.

Political system variables

Majority/minority government – GOVMAJ is the variable from the Database of Political Institutions (DPI, Beck et al, 2001), and it represents the percent of seats that the government party or coalition controls in the legislative.

Checks and balances – CHECKS represents the number of veto players, from the same database.

Government ideology – GOVIDEO takes values from 1 to 3, one corresponding to left governments and 3 to right wing governments. It was compiled by using various sources, among which the DPI and the Dataset of 28 Post-communist countries.

Proportionality – DISPROP is actually the degree of disproportionality of the system, the discrepancy between vote share and seats share, as measured by the Gallagher index. Of very much help filling in the missing cases was Micheal Gallagher's excel file for calculating the 3 indices that are widely used in the analysis of elections: least squares index, effective number of elective parties and effective number of legislative parties (available online, Gallagher, 2008).

Legislative fragmentation – LEGFRAC

Government fragmentation – GOVFRAC, from the DPI.

Economic variables

Size of government – the government expenditure as percent of GDP data were retrieved from the EBRD dataset on all post-communist countries.

Type of spending – the variable represents the share of government spending on subsidies and transfer in the total government expenditure. It was created by dividing the “Subsidies and current transfers (in percent of GDP)” variable from the EBRD dataset to the “Government expenditure (as percent of GDP)”, from the same dataset.

1. Effects of constitutional rules on the political system

Several models that link constitutional rules with characteristics of the political system are being tested in this subsection.

The first model is testing whether the degree of proportionality of the electoral system, measured through the Gallagher index of disproportionality, is influenced by the same variables as the ones that have usually been identified in the literature. Testing this relation is important as a pre-step towards the next models, where we are looking at the degree of fractionalization. It would be important to see how the variables that we are taking into account influence the translation of votes into seats, and if they do it the way we would expect them to, since otherwise it would not be reasonable to make further assumptions about the voters’ and parties’ behavior that would lead to a change in the number of legislative or governmental parties. The model is:

$$DISPROP = MIXED + MAJORIT + LogMDM + THRESH + DEMOCR$$

According to the literature, these are the most important variables that can have an impact on the degree of disproportionality of the electoral system. We would expect the degree of disproportionality to increase when moving from a PR system to both a majoritarian and a mixed one and when electoral thresholds are higher and, and to decrease with district magnitude. Democracy is introduced as control variable.

For the model without multiple imputations, the adjusted R squared is .35, $F(199) = 22.61$, $p < .01$. Due to lack of data, some countries are completely removed from the analysis. These are: Azerbaijan, Belarus, Mongolia, Moldova, Tajikistan, Turkmenistan and Uzbekistan. All the variables are significant at the 95% level, except for the dummy for majoritarian system, which is significant at 90% level and the legal threshold for legislative representation which fails to reach statistical representation. All the variables have the expected sign, which implies that the translation of votes into seats follows the same rules in post communist countries as in the rest of the world.

On the other hand, by running the same model, but this time after using Amelia to fill in the missing cells, we only get significant results for one of the five variables that we considered to be important: district magnitude. This is in accordance with the findings of other researchers who have concluded that when proper controls were introduced, the district magnitude is the only factor that significantly influences proportionality. Since there were so many countries that were initially eliminated from the analysis, when they are now introduced the variation is bigger and the results change.

	DISPROP Index of disproportionality		LEGFRAC Legislative fractionalization		GOVFRAC Government fractionalization		GOVMAJ Government majority		IDEOGOV Government ideology	
	Classical OLS	Amelia / Zelig	Classical OLS	Amelia / Zelig	Classical OLS	Amelia / Zelig	Classical OLS	Amelia / Zelig	Classical OLS	Amelia / Zelig
SEMIPRES Dummy semi- presidentialism	-			-	-.218 (.00)	-.193 (.01)	-.183 (.00)	-.214 (.00)	.601 (.00)	.575 (.00)
PRESID Dummy presidentialism	-			-	-.974 (.00)	-.718 (.00)	.383 (.00)	.166 (.25)	.365 (.40)	.413 (.38)
MIXED Dummy mixed electoral system	.015 (.04)	.011 (.42)	.167 (.00)	.140 (.01)	.615 (.00)	.476 (.00)	-.124 (.04)	.015 (.83)	-.140 (.50)	-.298 (.28)
MAJORIT Dummy majority/pluralit y electoral system	.055 (.05)	.01 (.78)	.218 (.00)	.142 (.06)	.588 (.00)	.515 (.00)	-.085 (.21)	.088 (.19)	-.470 (.04)	-.492 (.07)
LogMDM Mean district magnitude	-.009 (.00)	-.009 (.06)	-.002 (.87)	-.001 (.91)	-.043 (.04)	-.014 (.44)	-.011 (.38)	-.005 (.72)	-	
THRESH Electoral threshold	.289 (.34)	.009 (.98)	-4.73 (.04)	1.44 (.45)	11.23 (.00)	-4.17 (.02)	-1.49 (.40)	-5.04 (.00)	-	
CLOSED Dummy closed lists	-		.021 (.81)	.004 (.94)	.247 (.03)	.031 (.69)	.097 (.16)	-.057 (.31)	-	
BICAMER Dummy bicameralism	-			-	-.131 (.23)	.052 (.47)	.064 (.22)	.077 (.10)	-	
FEDERAL Dummy federalism	-			-	-.09 (.56)	.447 (.00)	-		-	
Control variables										
ETHNFR Ethno-linguistic fractionalization			-.004 (.27)	.01 (.03)	-.006 (.31)	.060 (.00)	.005 (.11)	-.022 (.02)		
DEMOCR Index of democracy	-.013 (.00)	-.007 (.16)	.027 (.04)	.03 (.00)	.05 (.00)	.059 (.00)	-.050 (.00)	-.032 (.00)	.056 (.02)	.050 (.30)

Table 5 Effects of constitutional rules on political system variables. Regression results.

In the second model the dependent variable is the degree of legislative fractionalization. The purpose is to see which of the constitutional variables have an impact on the number of legislative parties, and to assess the direction and strength of these relations. We would expect the number of parties in the parliament to increase with district magnitude and the

level of ethno-linguistic fractionalization in the country. We would also expect it to be lower in a majority/plurality or mixed electoral system, where the lists are closed (since this measure is supposed to strengthen the parties) and when the thresholds are high. The model is:

$$LEGFRAC = MIXED + MAJORIT + LogMDM + THRESH + CLOSED + ETHNFR + DEMOCR$$

For the first version of the model, that without multiple imputations, the adjusted R squared is .42, $F(256) = 7.252$, $p < .01$, and the countries that were eliminated from the analysis are Tajikistan and Turkmenistan. Dummies for the countries were also introduced as controls. Some of the relations run in the expected direction: an increase in the vote threshold leads to a decrease in the number of legislative parties while better democracy scores are associated with an increase in legislative fractionalization (which is natural given the time span covered in the analysis, which coincides with the transition from single parties systems to pluralism). The ballot structure does not seem to have a significant impact on the number of legislative parties, and surprisingly, when dummies for the countries are introduced neither do the district magnitude and the degree of ethno-linguistic fractionalization.

But what is unexpected here is the relation between the type of electoral system and the degree of legislative fractionalization. Moving from proportional representation (which is the baseline category) to a majority or plurality system does not lead to a decrease in the number of parties, as we would expect, according to the theory and empirical findings from other countries, but on the contrary, it seems to be associated with an increase in the number of

parties, and the relation is significant ($p < .01$). The same is true about moving from PR to a mixed system, and even if the relation is weaker, it is still statistically significant ($p < .01$).

The intriguing results hold, and are statistically significant in the Amelia version of the model as well, which suggests that the result is robust, and the fact that imputations for two countries were introduced does not change it. On the other hand, in this second analysis, the statistical significance for the legal threshold is being lost, but it seems that when the cells for Tajikistan and Turkmenistan are filled along with other missing data, ethno-linguistic fractionalization becomes positively associated with the number of parties in the parliament, and the result is significant.

Given this finding, the next step would be to see how the constitutional variables influence government fractionalization, since the number of legislative and governmental parties are strongly related. Again, we are expecting the level of fractionalization to increase with district magnitude and the level of ethno-linguistic fractionalization in the country, and decrease where we do not have proportional representation, where the lists are closed and the thresholds are high. We would also expect the number of parties in the government coalition to be influenced by the regime type (decrease in presidential regimes where it is most of the time the case that governments can survive even without controlling the majority in the parliament) and the existence of either one or two chambers (since governments are proven to be less stable in bicameral systems).

The model has government fractionalization as independent variable:

$$GOVFRAC = SEMIPRES + PRESID + MIXED + MAJORIT + LogMDM + THRESH + CLOSED + BICAM + FEDERAL + ETHNFR + DEMOCR$$

Without multiple imputations, Bosnia, Tajikistan and Turkmenistan had to be removed from the analysis, and the value of the adjusted R squared after controlling for countries is: .50, $F(249) = 8.84$, $p < .01$. Most of the independent variables in the model reach statistical significance, and among them, again, like in the previous model, we have the dummy for majoritarian electoral system, which indicates an increase in government fractionalization when moving from proportional representation to a mixed or majority/plurality system. Other two significant variables are democracy and closed lists, which both increase the number of parties in the government coalition (this is surprising for the ballot structure since our expectation was that closed lists increase the power of parties and might reduce the incentives to split or to form new political organizations). Moving from a parliamentary system to either a semi-presidential or presidential one decreases the number of parties in the government coalition and so do bigger electoral thresholds and larger districts. The relation between district magnitude and the number of parties in the government coalition contradicts the theory, since we would have expected to see more parties in the government where districts are larger, and allow for a broad representation of interest. Ethno-linguistic fractionalization, the existence of two legislative chambers and federalism do not have a statistically significant impact on the degree of government fractionalization.

The results do not change much when the missing data are treated with multiple imputations. We basically have the same or very similar results for democracy and the electoral system and regime type variables and some of the coefficients are no longer significant (district magnitude and ballot structure). On the other hand, the most interesting thing is that the result

for the electoral threshold changes dramatically. If in the first case we could see that government fractionalization increases with the electoral threshold, which we found surprising, when the empty cells are being filled the relation changes in the expected direction: the higher the threshold, the lesser parties we have in the government coalition. This puzzle will be addressed in the next chapter. Federalism and ethno-linguistic fractionalization also seem to play a significant role for the number of governmental parties, both of them increasing government fractionalization.

The literature suggests that not only government fractionalization has an impact on the size of government, but also the percent of the legislature that is controlled by the government, so before looking at the economic indicators, we have to check the connection between constitutional variables and the size of the government coalition. The same logic as in the same model applies here as well, and the expected relations run in the same direction as the one previously described.

$$GOVMAJ = SEMIPRES + PRESID + MIXED + MAJORIT + LogMDM + THRESH + CLOSED + BICAM + ETHNFR + DEMOCR$$

Few of the variables are statistically significant, and the analysis without multiple imputations is excluding Bosnia, Tajikistan and Turkmenistan; dummies for the countries were introduced and the R^2 is .50, $F(254) = 13.52$, $p < .01$. As expected, when moving from proportional representation to either a mixed electoral system or a majority/plurality system, the incidence of large governments decreases (since PR should be equivalent to broad representation of interests and plurality to a concentration of interests), but only SEMIPRES reaches statistical significance at a 90% confidence level. The more democratic a country is,

the smaller the government majority, and this appears to be natural especially for this area and this period of time.

The intriguing relation is that between the regime type and the type of government. A change from a parliamentary regime to a presidential regime would increase the share of legislative seats controlled by the government party or coalition, but a change towards a semi-presidential system would reduce the seats share controlled by the government, and both relations are statistically significant, $p < .01$. This confirms the theory according to which semi-presidential regimes are characterized by a low degree of coordination between the executive and the legislative, which means that it should be more difficult to reach agreements between the two branches, and this should lead to a reduction in government spending and a reduction in narrow spending (the executive and legislative act as veto players). This strange phenomenon seems to be happening even when we exclude the bias resulting from the exclusion of these three countries (each of which representing a different electoral system but sharing low scores on democracy and competitiveness of elections), even if when Amelia is used, the coefficient for presidentialism is no longer statistically significant. We no longer see a relation between mixed systems and government majority, but we do see that higher vote thresholds and ethno-linguistic fractionalization decrease the percent of legislative seats controlled by the government.

The last model that links the institutional and the systemic variables is testing the hypothesis that the ideological orientation of the government is influenced by the electoral system, with more left governments in proportional representation systems and more right wing governments in majority/plurality systems. We are assuming that parliamentarism is associated with a concentration of power that would lead to increased spending, and since it

is believed that left governments are the ones that spend more on redistribution, we are also checking the relation between the government ideology and the type of regime.

$$IDEOGOV = SEMIPRES + PRESID + MIXED + MAJORIT + DEMOCR$$

The model has an adjusted R squared of .50, $F(296) = 10.91$, $p < .01$. Bosnia, Tajikistan and Turkmenistan had to be eliminated from the analysis due to lack of data, and besides the country dummies, we have also introduced time in the analysis. The results are surprising: we should have seen a positive sign for the MIXED and MAJORIT dummies, corresponding to an increase on the scale from left to right, but instead, the results show that when moving from PR to majority or mixed systems, governments tend to be placed more often on the left of the political spectrum (though the coefficient is statistically significant only for majoritarian systems). Since the relation has been tested for other countries, and the two most important variables that could change things (democracy and the passing of time) have been introduced, it seems like this is a characteristic of the area. According to the literature, left governments spend more, so it seems reasonable to ask whether we should expect to see a positive relation between majority/plurality systems and government expenditure for this area, which would contradict the existing theoretical framework.

The other finding is that when moving from a PR system to a semi-presidential one we see more governments of the right, and the relation seems to be statistically significant, unlike that between presidentialism and government ideology, which has the same sign but is not statistically significant. The left has decreased in strength in this area with the passing of time.

Almost the same results are obtained after dealing with missing data by using Amelia. Semi-presidentialism is associated with governments of the right and majority/plurality elections with more governments of the left. Possible explanations for this finding are being offered in the next chapter. When all the countries are included in the analysis, and missing data are imputed, democracy loses its significance.

2. Effects of constitutional rules on the size of government and the patterns of government spending

The first model is testing the link between constitutional variables and government expenditure as percent of GDP. According to the literature that has usually dealt with developed democracies, we should be expecting lower levels of government spending in semi-presidential and presidential regimes as compared to parliamentary ones, in mixed and majoritarian electoral systems as opposed to PR, where the district magnitude is smaller, the thresholds are higher and we have a federal state structure. The logic behind this is that of representation: the more interests are represented in the political system, the more government spending. On the other hand, if we have more veto players in the system, we would expect to have lower spending and also have less spending where the voting lists are open, since this entails more individual accountability. The adjusted R squared for the OLS model without multiple imputations and after we have introduced country dummies and have controlled for time is .84, $F(219) = 33.2$, $p < .01$.

$$GOVSPEN = SEMIPRES + PRESID + MIXED + MAJORIT + LogMDM + THRESH + CLOSED + BICAMER + FEDERAL + LogGDP + DEMOCR$$

According to the literature, government spending in semi-presidential and presidential regimes should be smaller than in parliamentary systems. This hypothesis holds for post-communist countries as well, but only when we look at semi-presidentialism in comparison to parliamentarism. The coefficient for SEMIPRES is indeed negative, but the one for presidentialism is positive, which suggests that while moving from parliamentarism to semi-presidentialism reduces government spending, moving to presidentialism actually increases government spending as percent of GDP. Both results are statistically significant. District magnitude is also positively associated with spending, and surprisingly, contrary to the theory, so is the threshold value. We would expect higher thresholds to be limiting the number of parties in the parliament and thus force the government to take into consideration and try to satisfy various interests, which would translate into more general spending.

Democracy and the GDP per capita are positively associated with a bigger share of government spending out of total GDP. Surprisingly, government spending decreases when the lists are closed, which contradicts the theory that increased individual accountability is associated with lower overall spending.

Another intriguing finding is related to the electoral system variables. While moving from PR to both a mixed and a majoritarian system seems to decrease government spending (both relations are statistically significant), a change from PR to a majority/plurality system is associated with a smaller decrease in government spending, than one from PR to a mixed system.

The analysis with Amelia and Zelig confirm some of these findings while at the same time suggesting that others might be due to a bias in the distribution of missing data. The interesting thing that we observe is that the relation between semi-presidentialism and government spending stays the same (semi-presidentialism reduces government spending when compared to parliamentarism), the relation between presidentialism and government expenditure changes dramatically. We no longer see a positive relation between the two, but a strong negative relation which suggests that a move from parliamentarism to presidentialism would decrease government spending. The reason for observing such a dramatic change will be detailed in the section that tries to solve all these new puzzles discovered in the area. Most of the other relations do not change much with multiple imputations as compared to the list wise deletion case, but some of them lose statistical significance (the electoral threshold and democracy).

	GOVSPEN Government expenditure as percent of GDP		NARSPEN Transfers and subsidies	
	Classical OLS	Amelia / Zelig	Classical OLS	Amelia / Zelig
SEMIPRES Dummy semi-presidentialism	-3.90 (.01)	-5.42 (.01)	-6.020 (.00)	-8.99 (.01)
PRESID Dummy presidentialism	16.48 (.00)	-11.00 (.08)	15.94 (.00)	4.14 (.68)
MIXED Dummy mixed electoral system	-11.15 (.00)	-12.00 (.05)	-16.24 (.00)	-6.29 (.46)
MAJORIT Dummy majority/plurality electoral system	-3.77 (.18)	-6.15 (.17)	-15.00 (.00)	1.86 (.84)
LogMDM Mean district magnitude	1.11 (.02)	1.23 (.00)	.014 (.73)	-.423 (.71)
THRESH Electoral threshold	109.1 (.02)	42.16 (.56)	56.89 (.12)	72.62 (.54)
CLOSED Dummy closed lists	-13.23 (.00)	-4.07 (.06)	-4.70 (.01)	-1.11 (.70)
BICAMER Dummy bicameralism	1.82 (.31)	1.16 (.63)	1.87 (.23)	-1.93 (.58)
FEDERAL Dummy federalism	.410 (.91)	4.10 (.41)	17.89 (.00)	19.92 (0.11)

Control variables				
LogGDP	6.24	5.25	-.130	.340
Log of per capita GDP	(.00)	(.03)	(.92)	(.96)
DEMOCR	.800	-.128	1.783	-1.82
Index of democracy	(.06)	(.81)	(.00)	(.14)

Table 6 Economic effects of constitutional rules. Regression results.

For the second model of this section, which looks at the type of government spending, the adjusted R squared is .95, $F(185) = 103.0$, $p < .01$. Dummies for countries were introduced, and also for the years, since we are expecting government spending to be influenced by time. Tajikistan and Turkmenistan are not introduced in this analysis due to missing data problems.

$$NARSPEN = GOVSPEN = SEMIPRES + PRESID + MIXED + MAJORIT + LogMDM + CLOSED + BICAMER + FEDERAL + LogGDP + DEMOCR$$

The logic of accountability should be functioning in this model the same way as it was supposed to in the previous one, and we should be expecting the same direction of the relations, with increased accountability reducing the propensity to spend on narrow goods. We would also expect the variables that help concentrating the political power to be positively correlated with narrow spending (semi-presidentialism and presidentialism, mixed and majoritarian systems as opposed to PR systems, the existence of a single chamber and unitary states).

The factors that are positively correlated with a bigger share of subsidies and transfers in the government spending are presidentialism, a federal state structure and democracy. Again, the sign of the CLOSED variable is negative: closed electoral lists mean less individual accountability, which means that legislators can decide to vote for narrow transfers without being afraid of being held accountable, but in this case, closed lists lead to less spending on narrow goods. The puzzles from the previous model appear here as well: we have less narrow

spending in semi-presidential systems when compared to parliamentary ones, but more in presidential systems. We also see slightly more targeted spending in mixed electoral systems than in majoritarian systems, as compared to the baseline situation when there are elections based on proportional representation, though both are negative, which would suggest that we have narrower spending under PR than under any other system. This result is surprising because there is no theoretical explanation for it, and according to the literature, it should be the other way around.

On the other hand, the second analysis, which is using multiple imputations, sends a warning sign that the results might look like this because of a bias in the distribution of the missing data. The only variable which maintains statistical significance when the empty cells have been filled through this method is semi-presidentialism. As in the analysis with list wise deletion, a move from PR to semi-presidentialism reduces the propensity of the governments to spend more on narrow transfers and subsidies. The only other variable that comes close to reaching statistical significance here is the dummy for federalism, which would suggest that federal governments target more.

3. Economic effects through the political system

The two models in this section look at the relations between the economic variables and the characteristics of the political system. According to the literature and previous empirical studies, we are expecting to have more government spending where the legislative system is more fractionalized, where there are more parties in the government coalition, and the government is leftist. On the other hand, where we have more checks we would expect government spending to be lower. With respect to government majority, theoretical

arguments can be brought for both sides of the relation: government spending can increase when the government has a relaxed majority in the legislative since it has more discretionary power and is being less controlled, but it could also decrease since the pressures from other groups than the one represented by the government party or coalition are not being felt this way.

The adjusted R squared for the first model, which has government spending as independent variable is .82, $F(228) = 38.1$, $p < .01$. Without multiple imputations Bosnia is being taken out of the analysis.

$$GOVSPEN = LEGFRAC + GOVFRAC + GOVMAJ + IDEOGOV + CHECKS + LogGDP + DEMOCR$$

Government spending is positively associated with the share of seats controlled by the government and democracy. These relations are statistically significant and the signs for the coefficients are as expected. The variable for the number of veto players on the other hand is also associated with increased spending, and this finding has no theoretical foundation, since the existence of more veto players should favor the status quo. Government fractionalization and the GDP per capita, on the other hand, both reduce government spending. The sign of the IDEOGOV coefficient could indicate that left governments tend to spend more, but statistical significance is far from being reached for this variable.

Given the fact that missing data is more of a problem for the variables that define the political system, it is not surprising that the results change when multiple imputations are employed. The coefficients for government fractionalization and government majority maintain their

sign but the statistical significance is being lost, and the only variables that still have a significant impact on the size of government spending in these circumstances are the GDP per capita and the number of veto players. Both of them have the same signs as when list wise deletion was used for missing data, so the question about their meaning in the context remains.

	GOVSPEN Government expenditure as percent of GDP		NARSPEN Transfers and subsidies	
LEGFRAC Legislative fractionalization	.291 (.91)	-4.68 (.23)	-7.48 (.00)	-9.55 (.10)
GOVFRAC Government fractionalization	-8.57 (.02)	-3.07 (.24)	-1.14 (.56)	-2.61 (.59)
GOVMAJ Government majority	5.57 (.02)	6.97 (.19)	-1.93 (.59)	11.77 (.04)
IDEOGOV Government ideology	-.125 (.80)	-.390 (.54)	-.913 (.02)	-1.91 (.06)
CHECKS Number of veto players	1.09 (.02)	1.86 (.01)	.038 (.37)	2.59 (.02)
Control variables				
LogGDP Log of per capita GDP	-3.52 (.00)	-5.19 (.00)	-1.87 (.02)	1.10 (.82)
DEMOCR Index of democracy	1.36 (.00)	.633 (.18)	3.21 (.00)	-.383 (.67)

Table 7 Economic effects of the political environment. Regression results.

The last model's adjusted R squared is .91, $F(190) = 76.8$, $p < .01$, and as in the previous model, dummies for the countries were introduced. The missing countries are Bosnia and Moldova.

$$NARSPEN = LEGFRAC + GOVFRAC + GOVMAJ + IDEOGOV + CHECKS + LogGDP + DEMOCR$$

As expected, the more parties in the parliament, the less inclined is the government to spend on targeted transfers and subsidies. Again, surprisingly, the existence of more veto players seems to lead to more targeted spending, but the coefficient is not significant at an acceptable level. The richer the country, the less the government spending is directed towards narrow interests, but targeted spending increases with the score for democracy, which is somehow surprising. Again, the sign for ideological orientation of the government is negative, suggesting that parties on the right practice less targeted spending than those on the left, and here we also have statistical significance.

Some of these results change when the missing data is treated through multiple imputations. Stronger governments seem to be associated with more narrow spending, which would suggest that when governments have more freedom to take decisions they decide to target more. On the other hand, this explanation does not go along well with the finding about the number of veto players: the more veto players, the more increases the share of transfers and subsidies in overall government spending. The only result that is maintained with or without Amelia is the one about the ideological orientation of governments: right governments target less.

V. Collecting the new puzzle pieces

Several questions have emerged from the empirical analysis, and the real task would be trying to account for the findings that run contrary to the ones that were expected.

1. The relation between the electoral system and the degree of legislative fractionalization.

The first puzzle that needs to be addressed is the fact that in this area, the number of legislative parties does not decrease in mixed and majoritarian systems as compared to PR systems.

One explanation for this might be the theory according to which majoritarian systems favor territorially concentrated minorities, and can thus lead to an increase in the number of represented parties. A minority which is enough concentrated to actually represent the majority in some of the districts can this way gain more seats than it would have under strict proportional representation. This could lead to an increase in the overall number of parties represented in the legislature.

Another explanation might be the propensity towards the creation of parties that serve the ambitions of individual elites, which has been observed in post-communist countries during the transition period. This phenomenon in turn has historical roots: since the new parties had to be created from scratch, there was no clear ideological or even social division around

which these parties could form, and the existing elite had the same background, in the old communist structures. With no real distinction in the position adopted on political and economic issues, by candidates, voters had to use another instrument that would help them make decisions, and that instrument was the personality of the political leaders. With this pattern perpetuating, there were no real incentives for parties to coalesce and form strong political bodies.

2. Closed lists and bigger districts increase the number of parties in the government coalition.

This is surprising because we would expect closed lists to increase the power of parties and reduce the incentives to split or to form new political organizations, which in turn would lead to fewer parties in the system and less members needed to form a government coalition. However, since the relation does not hold when using Amelia, it means that the results were biased. This might be due to the fact that the missing data problem is bigger for countries that use open lists, such as Bosnia and Herzegovina during the past years. In the same category we have included all the countries in which elections take place in single member districts under majority/plurality rule and the parties have no say as to who can run the elections and who can not (the personal vote in Kyrgyzstan and Turkmenistan).

A similar explanation can also work for the negative relation between the number of governmental parties and district magnitude. We would have expected to see more parties in the government coalition where district size allows for broad representation of interests. Since the relation loses its strength when Amelia is used, this points to the fact that missing data countries such as Tajikistan where we have single member districts and a low number of

government parties (partly related to the degree of democracy) were occupying a large share of the total missing case, and were biasing the results.

3. The relation between the regime type and the type of government.

As we have seen, a change from a parliamentary regime to a presidential regime would increase the share of legislative seats controlled by the government party or coalition, but a change towards a semi-presidential system would reduce the seats share controlled by the government, and this is happening with or without multiple imputations. The first explanation for this that comes in mind is related to the level of democracy, which tends to be lower for presidential system (so the chances to have a one party government are higher). But given that in our model we have controlled for democracy, there has to be a different explanation.

Another explanation could be that semi-presidentialism is creating two poles of executive power and thus overall, it is lowering the power of the executive branch, because tensions between a president and a prime-minister are more likely to appear. Especially when there is a coalition of parties in power, it is a common practice to have the president from one party and the prime-minister from another party. When conflicts between the two appear, this can lead to the coalition braking and thus to the existence of minority government that nevertheless survive, mainly because semi-presidentialism is also usually known for the difficulty to solve crisis such as these (the classical example could be that of Romania, which has been experiencing increased government instability and minority governments between 1996-2000 and 2005-2008, the problems originating in the conflict between the president and the prime-minister).

If the impact of semi-presidentialism can be explained this way, it is still surprising to see a reduction in the size of legislative seats controlled by the government in a presidential system as compared to a parliamentary system. If the executive has powers that are fairly independent from those of the legislative, why would we not see smaller government coalitions under presidentialism? Probably the transition context in these countries for this time period can be an explanation. Faced with the possibility of political unrest, which is usually higher during transition, it could be assumed that presidents have been searching for large popular approval, and have thus enlarged the government coalition.

4. When moving from PR to majoritarian systems, governments tend to be placed more often on the left of the political spectrum.

This contradicts is in contradiction to our theoretical framework. Again, the weight of less advanced democratic systems that use majority/plurality systems (most of them in Central Asia) seems to be very big, but the effects are not given by their democracy scores, since we have controlled for these scores. Probably the best type of explanations for this phenomenon would be the cultural one, since there should be a relation between the inclination to choose a majoritarian electoral system and the preference for left wing governments, which is manifesting in post-communist countries. Still, further research into this subject is needed in order to decide if this is indeed a long term characteristic of the area or it is specific to the transition phase.

5. Government spending increases with thresholds.

We would expect higher thresholds to be limiting the number of parties in the parliament and thus force the government to take into consideration and try to satisfy various interests, which

would translate into more general spending, but exactly the opposite is happening in the analysis with list wise deletion. On the other hand, the fact that this is no longer a significant finding for the multiple imputations analysis suggests that some low threshold countries that have high government spending were excluded in the first case. Most of these are countries such as Belarus and Uzbekistan that have a threshold of zero (since they are using plurality systems) but at the same time have high sizes of government. When data for these missing cases is imputed, the relation between thresholds and government spending is blurred.

6. Government spending decreases when the lists are closed.

This finding contradicts the theory that increased individual accountability is associated with lower overall spending. Also, closed lists are associated with less narrow spending, and both findings contradict the results of other studies that have been looking at advanced democracies (for instance Persson and Tabellini, 2003), and are also incompatible with the other discovered effect of closed lists: that of increasing the number of parties in the government coalition. In this situation, we have to ask whether this is happening because there is another variable that has not been identified and that has a strong effect on government spending in this area, while at the same time being correlated with closed party lists. This would seem like a reasonable explanation, but more in depth research has to be performed in order to see if this is indeed the case. Another logical answer to this challenge would be to say that in fact, the logic of accountability does not function for these countries in transition, or is functioning in a different manner. Again, in this situation a new theoretical model would have to be built and testes, and this goes beyond the scope of this study.

7. The sign of the PRESID coefficient in the government spending model changes with multiple imputations.

Moving from PR to semi-presidentialism reduces government spending, but the results change for presidentialism before and after using Amelia. This is explainable when looking at the data that was missing: we have presidential systems associated with low government spending in countries such as Tajikistan and Turkmenistan, which are exactly the ones that had the missing data problems. So in the end we could conclude that the relation between regime type and government spending follows the same laws as those observed in other studies.

8. Semi-presidentialism spends less on narrow goods, presidentialism more.

It does not seem surprising that presidentialism is associated with more targeting, if we think that in presidentialism we can have a smaller government coalition deciding to distribute to well defined, narrow interests, but this is in conflict with the relation between the government coalition size and the regime type which we have previously discussed. This means that even if governments are large in presidential systems, the redistribution is still narrow. Some cultural theories would suggest that this is actually happening because of the socio-economic structure in these countries, where clan relations are found both at the political and economic level. Narrow redistribution would then be directed not to economic interests outside the political sphere, but within the political-economic sphere itself. But such a theory would need to be rigorously tested in order to see if it is especially true with respect to post-communist countries (Herbert Kitschelt's book on clientelism - 2007 - would be a good starting point in this endeavor).

Another interesting issue that needs to be addressed here is the fact that semi-presidential systems spend less on targeted goods. This would suggest that the theories according to which this compromise solution between presidentialism and parliamentarism could prove to be the best solution for the area are to some extent confirmed. We have also checked if the relation holds when the baseline category is presidentialism, and it does. In this situation, a model that would explain how exactly does semi-presidentialism deal with the ills of the area would need to be built. Maybe the government instability that is usually associated with semi-presidentialism proves to be a good thing in the end. The relation might go from instability to increased competitiveness and to more responsible governments that feel the pressure to restrict their targeted spending. Such a hypothesis needs to be tested.

9. Narrower spending under PR than under any other system.

This result is surprising because there is no theoretical explanation for it, and according to the literature, it should be the other way around, and proportional representation should ensure a broad representation of interests. On the other hand, the particular circumstances that existed in these countries during this period should be taken into consideration. A transition towards market economy always entails the need for increased social protection for some categories, and this would mean that countries that have moved to free economies fast and have given a large amount of freedom to the markets are the ones that had to spend more on targeted benefits. Since these are generally the countries in Central Europe who also use PR to a larger extent, the finding is not surprising. Still, it would be interesting for future studies to see if indeed the speed and intensity of liberalization when introduced in the model would change the results.

10. Increased government spending and narrow spending are favored by the existence of more veto players.

This finding again contradicts all our theoretical points of departure and also the results of other empirical studies. Where it is harder for political actors to take decisions unilaterally, it should also be harder to reach an agreement that would change the status quo. But in post-communist countries we seem to be seeing the exact opposite of this phenomenon. This could be related to the level of economic and political development, but both of them have been controlled for in the model, and there still exists a strong independent effect of the checks variable that is hard to explain. Until more detailed analysis are performed to see the relation between the number of veto players and the political and economic environment, this part of the puzzle will remain unsolved.

Conclusions

As we have seen, the fact that we have an institutional structure that differs significantly for post-communist countries than for other countries in the world also translates in a different functioning of the mechanisms that are usually thought to link constitutional, political and economic variables. The empirical analysis has revealed a few unexpected relations, and the previous section has attempted to provide possible explanations for these findings. Some of these findings, nevertheless, are completely out of our existing theoretical framework, and would require closer attention. We would also need to check if these findings are generally associated with simultaneous political and economic transitions, and we should expect to see them for other countries as well, but for a short period, until the transition is over, or whether they are truly characteristic to post-communist countries and they will be here in the next decades as well, when transition would have been over and these countries will already be stable and mature democracies.

Another issue that time would probably solve is the availability of data for the countries under analysis. While using Amelia in order to fill the empty spaces has provided some deeper insights into what might actually be happening in the area, the reliability of these procedures is sometimes contested, and the results would have been much more trustworthy if we would have actually had all the data that was now missing.

Probably one of the most important findings of this study is related to the impact of two categories that have previously been largely excluded from empirical studies, but are very

important in this area: mixed electoral systems and semi-presidential regimes. Both of these categories reduce overall government spending and also the amount that is being spent on targeted transfers and subsidies. This might suggest that the middle way solution that has been chosen by many post-communist states can prove to be a good solution in the end. The mechanisms through this is functioning on the other hand still need to be established, and solid theoretical grounds need to be found for these empirical findings.

Finally, our initial hypothesis that in post-communist countries constitutional variables have an impact on economic outcomes only when intermediated through the political environment proved to be wrong. The relations between these three categories are much more complicated than expected, and we have seen that sometimes constitutional rules have other effects on the political system and economic outcomes than the ones predicted, and in turn, the characteristics of the political system shape economic policies in an unexpected manner. This means that the study can be expanded into various directions and in the end the findings could prove to be very informative.

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