Political institutions matter for incipient but not for consolidated democracies: a political economy analysis of economic growth

Carlos Pereira (Michigan State University and FGV-EESP)

Vladimir Kühl Teles (FGV-EESP)

Área 5 – Crescimento, Desenvolvimento Econômico e Instituições

Abstract

This paper studies empirically the effects of political institutions in economic growth. Using dynamic panel estimation, we studied how political institutions affect the economic growth in different stages of democratization and economic development. It presents new empirical results showing that the political institutions work as a substitute of democracy in promotion of economic growth. In other words, political institutions are important to increase economic growth only when democracy is not consolidated, and, at the other hand, it cannot affect growth in the countries with consolidated democracies. We found also that poor countries with high ethnical fractionalization have a different rule of political institutions on growth.

Key-Words: Economic Growth, Political Institutions.

JEL: O43, O57

Resumo

Este artigo investiga empiricamente os efeitos das instituições políticas no crescimento economic. Utilizando métodos de painel dinâmico, nós estudamos como as intituições políticas afetam o crescimento em diferentes estágios da democracia e do desenvolvimento econômico. Novos resultados empíricos são apresentados mostrando que as intituições políticas trabalham como um substituto para a democracia na promoção do crescimento econômcio. Em outras palavras, instituições plolíticas são importantes para aumentar o crescimento apenas em democracias não consolidadas, e, por outro lado, não afetam o crescimento em países com democracias consolidadas. Nós obtivemos ainda que países pobres com alta fracionalização étnica apresentam uma combinação diferente de instituições políticas para a promoção do crescimento.

Palavras-Chave: Crescimento Econômico, Instituições Políticas.

1. Introduction

To access the role of political institutions on economic performance is not a trivial task. The huge variation of institutional features and economic outcomes in the world today is the result of long-run historical and social processes in each particular society. Different institutions can do the same and, at the same time, similar institutional settings can economically perform very differently. What can account for this variation? Why are some democracies prosperous but not others? What is the effect of political institutions on economic performance?

Economists have already demonstrated that economic institutions are the major source of economic growth across countries. Among other things, economic institutions have a decisive influence on investments in physical and human capital, technology, and the organization of the production. It is also well recognized that in addition to have a decisive role on economic growth, economic institutions are also important for the distribution of resources available in a society. As a consequence, some groups or individuals will be able to extract more benefits than others given the set of the preexisting economic conditions and resource allocation. In other words, economic institutions are endogenous (Acemoglu and Robinson 2006) and they reflect a continuous conflict of interests among various groups and individuals over the choice of economic institutions and the distribution of resources.

The institutional design of economic institutions that prevails depends thus mostly on the allocation of political power among elite groups. Whatever political group concentrates more political power, the set of economic institutions will tend to exhibit the preferences that please powerful players and not necessarily the aggregated welfare in a society. Although economic institutions determine economic performance, the way political power is allocated determines economic institutions. In other words, economic institutions are chosen because they serve the interests of politicians or social groups that hold political power at the expense of the rest. Put even more strongly: this is why powerful groups do not predate efficiently (Acemoglu, 2002).

Powerful political players do not behave favoring economic welfare because they face commitment problems intrinsic to the use of political power. In addition, powerful political players usually cannot credibly commit that they will adequately compensate potential losses as a consequence of a particular set of economic institutions chosen by them (Weingast 1995). That is why economic policy tends to be inefficient and sometimes generate poverty and inequality. Acemoglu and Johnson (2000) argue that “the more fundamental barriers to the adoption of better technologies, and more generally to economic development, are not groups whose economic rents are threatened by progress, but groups whose political power is on the line.” In that perspective, the distribution of political power is also endogenous and will be a direct consequence of political institutions.

Political institutions, formal and informal rules, determine thus the constraints and incentives faced by key players in a society. Given the endogenous feature of political institutions and strategic allocation of powers they engender, appropriately chosen institutions can help the development of credible mechanisms capable of decreasing risks of opportunistic behavior of political and economic players. North and Weingast (1989), for instance, analyzing the institutional conditions for the economic development of England in the seventeenth century, claim that "the ability of a government to commit to private rights and exchange is thus an essential condition for growth." In addition to credibly commit a state to market against opportunistic behaviors, political institutions have also to be self-enforcing. In other words, political institutions have to provide incentives for politicians to abide them in sustainable way overtime.

As good economic performance as a function of credible inter-temporal and self-enforcing commitments can be established in a great variety of combination of political institutional, the task of making causal relation among them is not easy. Thus, the key research questions this research note tries to address are the following: what form or combination of political institutions is required to enhance economic growth? Do political institutions affect economic performance regardless any precondition or stage of economic development? In other words, does a consolidated or incipient democracy tend to perform similarly if they have the parallel or different political institutions?

To assess the importance of political institutions on economic growth we developed an econometric model which takes into account several political institutions such as electoral rules (plurality rule vs. proportional representation - open and closed-lists - and district magnitude); form of government (parliamentary vs. presidential systems); political regime (dictatorship vs. democracy measured in terms of years under democracy); government fractionalization; size of the executive's political party or coalition in Congress (number of seats held by executive's party or coalition); federalism and robustness of federal structure (degree to which states/provinces have authority over taxing, spending or regulating); and years that the same elite group is in office or government durability. Our key dependent variable was the Growth Domestic Product – GDP per capita. Controlling for other economic variables, our findings indicate that political institutions fundamentally matter for the incipient democracies only, but not for consolidated democracies.

This research note is organized as follows: in the next session we will develop a critical dialogue with the literature about the effect of political institutions on economic performance. Next we discuss our variables and present our econometric model followed by our main results. Finally we present a brief conclusion highlighting the implications of our findings to the pertinent literature.

2. Political Institutions and Economic Growth

Before approaching those questions empirically, it is necessary to discuss the political institutions we are talking about here and their connections with economic growth. A substantial body of research has established a link between economic outcomes and the institutional configuration of a nation. Regardless if a country has or not a written document, constitution usually defines the set of institutional endowments that governs its policymaking process, especially among alternatives of political and economic systems. Constitutions, for instance, define if a country is governed by a system of separation of powers between governing branches or if it shares power between the parliament and the cabinet; it specifies the electoral system which is calibrated to produce a proliferation of minority parties or a smaller set of parties with disciplined authority over legislators; the amount of legislative powers held by legislators and the amount delegated to the executive; the extent to which the judiciary is independent; if the country is organized with a number of federal autonomous sub-unities or if it is nationally unitary; if it has two legislative houses elected by two different voting rules; etc.

Electoral Systems

All electoral system entails a trade-off between governability and representation. Compared to proportional representation, plurality rule in single-member districts provide incentives for majority single-party government and, as a consequence, more governability power. At the same time, it makes politicians to be more responsive to narrow constituencies which expect to receive in return target benefits. Usually these targeting benefits come at the expense of broad national policies that usually benefit broader population.

To determine whether electoral institutions influence economic performance, scholars have analyzed the extent to which electoral rules provide incentives to favor special interests or if electoral rules benefit large segments of the population. It is generally assumed that this decision is mostly a function on whether electoral institutions give candidates incentives to develop personal constituencies or base their career on collective party's records.

Cox (1997), for instance, shows that poor countries (those with GDP per capita income less than $6900) tend to use plurality systems. Person and Tabellini (2000 and 2006), predict that political rents (corruption) will be higher under electoral systems that rely on list voting than in systems where voters directly select individual candidates. They also claim that open list systems (voters can modify the party's order of candidates) should be more conducive to good behavior than closed lists (pre-determined list by party leaders which is non-amendable by voters), as should preferential voting (voters are asked to rank candidates of the same party). These authors also found that the ballot structure is strongly correlated with corruption: "a switch from a system with all legislators elected on party lists, to plurality rule with all legislators individually elected, would reduce perceptions of corruption by as much as 20 per cent (…) The decline in corruption is stronger when individual voting is implemented by plurality rule, rather than by using preferential voting or open list in proportional electoral systems."

By making a distinction between inter-party and intra-party competition, Carey and Shugart (1995) and Golden and Chang (2001) claim that the former type of competition is desirable, but the latter form of competition leads politicians to please local constituencies through patronage and other illegal side-payments. Kurnicova and Ackerman (2002) claim that closed-list proportional with representation is more conducive to corruption. Golden and Chang (2001), on the other hand, show that open-list leads to more corruption than closed-list. Thus, while individual accountability under plurality rule seems to strength good behavior, the effect of closed versus open rules is still controversial. However, Person and Tabeline (2000) show that when the electoral race have likely winners incentives for good behavior may instead be weaker under plurality than proportional representation. The winner-take-all rules in majoritarian systems forces competing parties to focus exclusively on the swing voting constituencies leading them to promise fewer public goods and more targeting goods. Although Milesi-Ferretti et al. (2001) share the same finding they predict an ambiguous relationship between electoral rules and government spending. As we can see, the findings so far are not conclusive with very opposing interpretations about the effect of electoral institutions. In fact, the literature has not directly addressed the relationship between electoral institutions and economic performance, but just indirectly via accountability mechanisms, corruption, and rent-seeking.

Single Party versus Coalition Government/Unified versus Divided Government

In general terms, the “electoral institutionalists,” as they are called by Hallerberg and Von Hagen (1997), argue that coalition governments are associated with larger costs than single-party governments (Poterba, 1994) and that power dispersion increases the chances of fiscal profligacy. In this respect, Roubini and Sachs (1989: 905), for instance, argue that “when power is dispersed, either across branches of the government (as in the US), or across many political parties through the alteration of political control over time, the likelihood of inefficient budgetary policy is heightened. Thus they find that the size and persistence of budget deficits in industrial countries in the past decade is greatest where there have been divided government (e.g. multi-party coalitions rather than majority-party government).”

Other scholars argue that expenditures grow as the number of legislators and political parties increase, and that the budget approved by a coalition is larger than the expected budget supported by a single-party majority (Weingast 1979; Shepsle, Weingast, and Johnsen 1981). In multiparty legislatures, as the effective number of parties increases, coalitions become unstable and, because the norm of universalism, the size of the budget grows (Scartascine and Crain, 2001). Electoral systems with proportional representation combined with large districts are more likely to produce weaker governments than plurality rule systems (Stein, Talvi, and Grisanti, 1998). This position is shared by Hallerberg and Marier (2004) who point out that “the level of the Common Pool Resource problem in the legislature depends upon the type of electoral system. If states have open-list proportional representation systems, then increases in district magnitude increase the problem, while under closed lists increases in district magnitude decrease the problem." Alesina and Rosenthal (1995) also claim that coalition governments face greater difficulties on implementing fiscal adjustments as well as on responding to budget unbalance than unitary governments. Acosta and Coppedge (2001), in a more extensive study on Latin American countries, claim that the presidents' partisan powers have a direct and powerful effect on spending and only an indirect effect on deficits per se. That is, "Latin American Presidents who wished to restrain spending in the 1980s and 1990s achieved this goal to the extent that they could depend on extensive, disciplined support in Congress. However, these same institutions also helped other presidents accelerate spending if that was their goal."

Elections and Accountability

Under single-party government voters can better identify who should be blamed or rewarded for the observable economic performance. Under coalition government, however, voters may face difficulties identifying who to blame amongst coalition partners for the bad performance. Benhabib and Przeworski (2006) claim that institutions that matter for development are those that make rulers accountable. Such institutions should induce governments to limit rent extraction and to promote growth. Indeed, in the light of our analysis, these institutions are fundamental for development. They suggest that accountability can be enforced through two distinct mechanisms. Governments are politically accountable when they are subject to sanctions by citizens, that is, if voters can remove incumbents from office when they extract rents in excess of the amount voters see as justified. Whenever they are both present, the two accountability mechanisms operate in combination.

Parliamentary versus Presidential system

Presidential and parliamentary systems incorporate different classes of institutional arrangements. These arrangements govern the assignment of veto and agenda-setting power and the control of the executive and legislature over each other's electoral destinies and survival. There used to be a lively debate about whether presidential systems are less stable or more susceptible to gridlock, which is not the focus of the argument here. For contributions to this debate, see Linz and Valenzuela (1994), who argue against presidentialism, and Mainwaring and Shugart (1997), who suggest that the vast differences in the electoral rules and level of party discipline among presidential systems make sharp conclusions about the effects of presidentialism on stability, gridlock, and capricious decision making more difficult. Cheibub and Limongi (2000) argue as well that political instability need not be correlated with political system. They find that a core assumption—that majority control of both executive and legislature makes parliamentary systems more stable—frequently fails to hold; 22% of parliamentary regimes they examine have minority governments. Mainwaring (1993) argues that the problem with presidential system occurs when it is combined with multiparty systems. He claims that "in presidential systems, multipartism increases the likelihood of executive/legislative deadlocks and immobilism. It also increases the likelihood of ideological polarization. Finally, with multipartism, presidents need to build interplay coalition to get measures through the legislature, but interplay coalition building in presidential system is more difficult and less stable than in parliamentary systems" (pp. 202).

Federalism

Other research, notably which associated with Weingast, (see for example, 1995) links economic outcomes to federalism. Weingast links the economic rises of England and the United States, as well as the recent boom in China, to federalism. Federalism provides a way of limiting a government that is strong enough to protect private markets, but also powerful enough to "confiscate the wealth of its citizens" (1995, 24). This is because competition among sub-national governments provides incentives to create economic prosperity, rather than intervene in markets, pander to interest groups, or act corruptly; because of federalism, sub-national governments are unlikely to abuse the authority vested in them by the citizenry. Sub-national governments are also better-suited for creating policies well-adjusted to local conditions (Weingast 2006).

Weingast is particularly interested in a specific form of federal systems what he calls "market-preserving federalism." In addition to have hierarchy and autonomy (minimal or necessary conditions for federalism), a system to be a market-preserving requires three other features which makes federalism self-sustainable: sub-national unites have regulatory powers over the economy; no trade barriers against other political unities of the federation; and federal unities nave neither the ability to print money nor unlimited credit (Weingast 2006: 4). Empowered with these institutional features, sub-national unities limit the central government's authority to make economic policies. In addition, market-preserving federalism has the effect of inducing competition among lower unities of the federal structure, diversity of public goods and, as a consequence, limits the success of rent-seeking.

However, in a more recent paper, Weingast (2006) analysis why economic performance differ across federalisms? Some of them are reach (Switzerland and United States) while some are poor (Argentina and Brazil); yet others exhibit fast-paced growth (modern China) which others little growth (Mexico). In other to deal with this puzzle he relies on what he calls "second generation of fiscal federalism" which has a positive approach to this decentralized system rather than the normative view of the first generation. This second generation emphasizes the importance of incentives generated by local tax and for the design of transfer systems so that equalization goals can be achieved without diminishing the incentives of public officials to foster local economies. Weingast (2006: 9) claims that "market-preserving federalism limits the exercise of corruption, predation, and rent-seeking by all levels of government."

3. Methodology and Data

A significant number of papers have recently studied how economic policies, or their resulting performances, have been affected by the structure of political institutions. Specifically, those articles make use of post-war data to evaluate how growth or other measurements of economic performance are affected using dynamic panel methods such as the difference-in-difference methodology (e.g. Acemoglu et al (2008), Persson and Tabellini (2006), Giavazzi and Tabellini (2005), Persson (2005), Papaioannou and Siourounis (2004), Rodrik and Wacziarg (2004).

There is no question as to the dynamic panel methodology, given that this is indeed the most suitable method for the study in question. However, Bond et al (2001) have shown that, in studies of economic growth, first-differenced GMM estimator can be poorly behaved, since lagged levels of the series provide only weak instruments for subsequent first differences and showed that this problem may be substantial in practice. To solve this problem they suggest using a system-GMM estimator that exploits stationarity restrictions. It has been proved that this approach generates more reasonable results than first-differenced GMM in empirical growth models.

The used specification follows the inclusion of regulators necessary for the study of economic growth (see Durlauf et. al., 2005), given by

$$g_{it} = \alpha\, g_{it-1} + \gamma\, p_{it-1} + x_{it-1}^{'}\beta + u_{it} \qquad (1)$$

where g_{it} is the per capita economic growth rate (GROWTH) of country i in period t. The lagged value of this variable on the right-hand side is included to capture persistence in economic growth and also potentially mean-reverting dynamics (i.e., the tendency of the economic growth to return to some equilibrium value for the country). The main variable of interest is p_{it-1}, the lagged value of the political variables defined in the section before. The parameter γ therefore measures the causal effect of political variables on economic growth. All other potential covariates are included in the vector x_{it-1}. In this vector we included the first difference of human capital stock (average years of schooling - HUMAN), lagged levels of per capita GNP and investment (INV). All data of economic variables were obtained from Barro and Lee (2004)[1] and Penn World Table 6.2. u_{it} is an error term, capturing all other omitted factors, with $E(u_{it}) = 0$ for all i and t. Finally, the Database of Political Institutions (DPI) of the World Bank, compiled by Beck et al (2001) and updated in 2004, contains all the political variables employed in the analysis. Appendix Table A.1 summarizes definitions and sources of the

[1] The Barro-Lee database supplies a five-year based database. We used a linear interpolation to adjust these data.

political variables we use in the paper.[2] We use yearly data on a large sample of 109 countries[3] covering a maximum time span from 1975 to 2004.

4. Full Sample Results

Political institutions place constraints and incentives on key societal players within nations. The government's ability to commit to private rights and exchange is an essential condition for economic growth. Thus, to generate positive economic outcomes, political institutions must provide incentives for politicians to create favorable economic policies, in the short-run and into the future; good economic performance is a function of credible inter-temporal commitments of policy makers generated by political institutions.

Table 1: Effects of Political Variables on Economic Growth – ALL COUNTRIES

Variables	p_i										
	SYSTEM	YRSOFFC	GOVFRAC	ENPG	GOVUNI	MDMH	PLURALITY	CL	POLARIZ	AUTHOR	STATE
GROWTH(-1)	0.1190*	0.1349*	0.1263*	0.1253*	0.1239*	0.1033*	0.1238*	0.1302*	0.1178*	0.1223*	0.1087*
	(73.51)	(61.74)	(28.54)	(161.67)	(86.68)	(101.38)	(60.80)	(58.45)	(34.84)	(51.17)	(62.56)
INV	0.0702*	0.0779*	0.0832*	0.0567*	0.0574*	0.0899*	0.1329*	0.1973*	0.1265*	0.1319*	0.2706*
	(6.34)	(8.29)	(4.93)	(7.23)	(4.70)	(17.88)	(18.85)	(29.66)	(6.69)	(9.09)	(29.63)
HUMAN	5.1426*	3.6668*	0.7125	-0.4901	1.3669*	1.0529*	2.7336*	0.9029	3.327**	0.0118	-1.1442
	(10.83)	(4.30)	(0.60)	(0.70)	(4.03)	(2.36)	(6.51)	(1.24)	(1.76)	(0.85)	(-1.59)
GNP(-1)	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*
	(-7.15)	(-14.42)	(-7.47)	(-5.42)	(-3.29)	(-10.09)	(-12.18)	(-9.52)	(18.59)	(-11.97)	(-24.10)
p_i	8.7098*	0.2966*	13.672*	0.0940*	7.7079*	-0.121*	10.005*	3.8238*	6.0356*	15.566*	14.925*
	(40.94)	(29.80)	(24.91)	(10.01)	(27.78)	(-10.38)	(94.68)	(17.50)	(18.59)	(18.54)	(36.22)

OBS: t-statistics in parentheses. * P < 0.05, ** P < 0.10

Table 1 shows the results for the entire sample of countries. Each column represents the result of the estimation taking into consideration the effect of one aspect of the political institutions. The economic growth is the dependent variable and line p_i shows the marginal effects of each political variable on the economic growth. The results of the control variables with the correct sign are significant in all the cases for the explanation of economic growth.

The initial results show that a parliamentary (SYSTEM) and stable (YRSOFFC) regime, with the chief executive remaining for a long time in power results in good economic performance. Persson, Roland, and Tabellini (2000) note that, as compared to presidential systems, cohesion is higher both across branches of government and across actors in the legislature in parliamentary systems. Unlike presidential governments, majorities in parliamentary systems are subject to no-confidence motions, which bring about a loss of power

[2] We also refer the reader to the original source book of the DPI database for more information on the variables. It can be found at http://siteresources.worldbank.org/INTRES/Resources/DPI2004_variable-definitions.pdf

[3] The list of countries is in Appendix Table A.2

for the ruling parties. Therefore, because ruling parties are weary of no-confidence motions, stable and cohesive majorities are more likely to form in parliamentary systems. This cohesion of parliamentary systems is found to be associated with growth-promoting economic policies (Persson 2005).

The results concerning the variables that measure the degree of government fragmentation with regard to the number of parties (GOVFRAC, ENPG, POLARIZ, and GOVUNI) present contradictory results though. Following from the above theory, it is expected that any given nation should experience higher economic growth when its legislature is cohesive, whether it be parliamentary or presidential. If coordination problems within and across government branches can be overcome, the quality of economic policies is likely to increase. Moreover, if governments are instable, economic growth is likely to be reduced, though the cause of this instability may arise from opportunistic behavior on the part of the government. Therefore, we should expect that the greater the government fractionalization, polarization, and the greater the number of partisan veto players within the government's coalition the smaller the economic growth. However, the positive and statistically significant coefficients of these variables suggest exactly the opposite. This odd result can be better understood when we differentiate the sample between democratic and autocratic governments as we did in the next econometric exercise. With regard to the variable GOVUNI, that measures the percentage of government seats in Congress, it behaved according to the theoretical expectation. That is, minority governments are likely to be associated with less economic growth than coalition and single-party majority governments.

The results related to the variables that represent electoral rules (MDMH, PLURALITY and CL) are consistent with the literature expectation. That is, the greater the district magnitude, the less proportional the electoral system is, and the more control party bosses have on party members' nomination the higher the economic growth. Thus, if the electoral system creates incentives for politician's personal reputation instead of partisan and collective reputation, economic performance suffers.

With regard to our two variables that measure federalism both of them behaved according to the literature's prediction on market-preserving federalism. That is, countries that are hierarchically autonomous and decentralize authority regulatory to sub-national unities lead to better economic performance.

5. Democracy and Economic Growth

Table 2 shows the results of the effects of the political variables and democracy on the economic growth. Given that the dummy variable DEM assumes value 1 for democracies and zero for authoritarian regimes, the interaction between the political variables and DEM inform us if the marginal effect of the political institutions is significantly different when democracies and autocracies are compared. The results show that the effects of the political variables are different for all the cases, except for the ENPG, MDMH and CL.

Table 2: Effects of Political Variables and Democracy on Economic Growth

Variables	p_i										
	SYSTEM	YRSOFFC	GOVFRAC	ENPG	GOVUNI	MDMH	PLURALITY	CL	POLARIZ	AUTHOR	STATE
GROWTH(-1)	0.1137*	0.1218*	0.1205*	0.1270*	0.1269*	0.0982*	0.1184*	0.1356*	0.1248*	0.1252*	0.1246*
	(42.65)	(55.50)	(104.43)	(65.23)	(94.78)	(24.92)	(28.42)	(19.42)	(59.02)	(106.8)	(61.85)
INV	0.0619*	0.1015*	0.0941*	0.0520*	0.0604*	0.0965*	0.1166*	0.1841*	0.0993*	0.0865*	0.1779*
	(4.29)	(18.91)	(10.85)	(4.38)	(5.06)	(4.60)	(6.21)	(8.65)	(14.09)	(7.69)	(13.36)
HUMAN	5.9023*	2.4155*	0.9687*	-0.5582	0.9084	0.9926	2.2551*	0.5036	2.8958*	2.1716*	2.3430*
	(6.21)	(6.12)	(1.29)	(-0.57)	(1.33)	(1.16)	(2.08)	(0.46)	(4.94)	(3.54)	(2.42)
GNP(-1)	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*
	(-3.84)	(-7.03)	(-5.30)	(-4.83)	(-5.95)	(-9.85)	(-7.87)	(-4.36)	(-8.01)	(-12.38)	(-11.07)
p_i	9.6668*	-0.0775*	10.216*	0.0939*	7.5240*	0.0815*	12.146*	1.1350*	-12.43*	20.901*	11.034*
	(25.71)	(-8.02)	(15.87)	(8.98)	(13.22)	(4.07)	(93.80)	(2.06)	(-18.22)	(13.05)	(18.94)
DEM	2.4002*	-0.6191*	1.1091*	0.8862*	5.2286*	0.4870	2.9069*	-0.5133	-1.178*	1.4318*	1.5096*
	(7.23)	(-2.53)	(5.01)	(2.96)	(10.72)	(0.83)	(4.51)	(-1.01)	(-5.47)	(9.85)	(6.74)
DEM* p_i	-6.874*	0.1726*	-8.9559*	0.2341	-7.441*	-0.0654	-6.2756*	1.0160	12.897*	-16.19*	-6.312*
	(-14.94)	(4.69)	(-12.24)	(1.10)	(-14.38)	(-1.16)	(-5.66)	(1.57)	(20.54)	(-9.45)	(-19.41)
Wald Test	42.23*	5.40*	4.11*	2.27	0.01	0.16	31.86*	11.68*	8.71*	59.10*	85.98*

OBS: t-statistics in parentheses. * P < 0.05, ** P < 0.10

In all the significant cases the interaction had opposite sign in relation to the political variable without interaction. That is, in a democratic regime the magnitude of the marginal effect of such variables on economic growth is smaller or changes the sign. Given that political variables often suggest a certain degree of political rights, the results suggest that even autocratic regimes can have a satisfactory economic performance, as long as some political rights are granted to society. In other words, autocracies can differentiate from one another in terms of political institutions. That is why several studies have not found considerable differences between the economic growth of democracies and/or autocracies (Przeworski at all 2000). Therefore, instead of considering the different types of regimes as a single "package," it is imperative to determine which type of democracy and/or autocracy are considered within the analysis.

The line p_i represents the effect of the political variables in authoritarian regimes and the sum of the coefficients p_i and DEM* p_i tells us which is the marginal effect of the political variables in democratic regimes. The last line of Table 2 tells us if the sum of the coefficients p_i and DEM* p_i is significantly different from zero.

The results show that the effects of the political variables are different for autocracies and democracies. In addition, the change of sign of the YRSOFFC and POLARIZ variables has called our attention. The YRSOFFC variable reveals that, in democratic regimes, the longer the political power is held by a particular political leader the greater the economic growth. That can be explained by the long-term political gains. That is, the chief executive only appropriate from political gains if there is a real expectation as to the control of power in the long-run. Therefore, it is fair to expect that countries with high YRSOFFC have better long-run policies. However, when dealing with autocracies such effect is perverse. That is, in an autocratic regime the YRSOFFC variable can signify less political freedom, property rights, and freedom of expression – in sum, it implies less effective policies and fewer investments.

Political polarization (POLARIZ) also has opposing effect under democracy and authoritarian regimes. While this variable does not help authoritarian governments to achieve good economic performance it does provide a positive impact on democratic governments. That is, authoritarian regimes require political cohesion and internal coordination in order to afford economic growth. However, democracy deals much better with ideological diversity between the governing and other political parties.

Other interesting findings that deserve to be highlighted is that the variables "effective number of parties in the government coalition," "District Magnitude," and the "closed list" electoral system lose statistical significance under democracy. We do not have a clear-cut explanation why those political variables are statistically significant under authoritarian regime but not under democracy.

6. Results for Selected Samples

In addition to the different effects on the democratic and autocratic regimes, it might be possible to see differences among the political variables when poor countries with high levels of ethnic fractionalization are taken into consideration. This is a contradictory issue in the current literature. Kaplan (2000) argues that democratic transitions are risky for low-income countries with poor institutions and ethnic divisions, while Rodrik and Waczirag (2005) reach the opposite result. If democratization may have different effects on those countries, the structure of the political institutions probably have different effects on the economic growth of such countries too.

Furthermore, another relevant question is the age of democracy. Given that in non-democratic countries political institutions work as substitutes for democracy in order to generate growth, it is worth questioning what happens when democracy is firmly established. Does democracy also replace political institutions minimizing their effects on the economy?

To explore such issue the model was estimated for the following sub-samples: i-) Sub-Saharan African countries; ii-) Rich countries; iii-) Poor countries; and iv-) Old democracies. The group of "Rich countries" includes countries with average GDP per capita greater than the total average; and "Poor countries" are those with an average GDP per capita lower than the average. The sub-sample "old democracies" includes countries which have been under a democratic government during the entire period and have had at least 25 years of a democratic system at the begging of the sample.

Table 3 shows the results of the effects of political institutions only. The control variables used are the same as before, but the results are omitted for ease of reading. The full models are available upon request though.

Table 3: Effects of Political Variables on Economic Growth – Selected Samples

Samples	p_i										
	SYSTEM	YRSOFFC	GOVFRAC	ENPG	GOVUNI	MDMH	PLURALITY	CL	POLARIZ	AUTHOR	STATE
High-Income Countries	-0.2117 (-0.69)	0.1065* (2.94)	0.5102 (1.21)	0.1034 (0.88)	-0.4268 (-0.58)	-0.0018 (-1.10)	-0.1134 (-0.43)	-0.0399 (-0.08)	0.4098* (3.16)	0.2654 (1.05)	-0.0132 (-0.07)
Low-Income Countries	0.5903 (1.06)	-0.105* (-3.45)	-5.101* (-20.2)	-0.035* (-4.07)	-4.829* (-7.29)	0.047** (1.84)	2.5925* (23.05)	-3.986* (-5.50)	3.2478* (5.03)	3.366** (1.75)	1.1030 (1.13)
Sub-Saharan Africa	5.9805* (1.95)	0.2322 (0.71)	-8.777* (-2.46)	-3.57** (-1.65)	0.8075 (0.14)	0.1776* (1.65)	1.3821* (3.57)	-2.6433 (-1.68)	-34.95 (-0.61)	-9.89** (-1.86)	7.6273 (1.19)
Old Democracies	2.0077 (0.64)	0.432** (1.75)	2.3942 (1.09)	0.9701 (1.03)	8.6107 (1.03)	0.2313* (2.17)	18.769 (1.14)	0.0254 (0.10)	0.1163 (1.01)	0.2122 (0.95)	0.1006 (0.60)

OBS: t-statistics in parentheses. * $P < 0.05$, ** $P < 0.10$

The results show that in countries with a consolidated democracy the political institutions (with the exception of the variable “number of years the chief executive has been in power”) do not significantly affect the economic growth. Therefore, the hypothesis that democracy and political institutions are substitutes for determining economic growth is accurate. Political institutions matter mostly in incipient democracies than consolidated ones. New democracies need the effective and ostensive presence of political institutions. Old and consolidated democracies, on the other hand, have already internalized the effect of those institutions. As a consequence their impact on economic performance is less visible and not as much of necessary.

As expected, in rich countries the effects of the political institutions on the growth are small or insignificant as oppose to poor countries. This finding support the results for “Old democracies” since there are a strong correlation between income and democracy. The result also makes clear that political institutions have a different effect on countries with significant ethnic fractionalization. Moreover, it is clear that a regime with fragmented control of power - which generate higher values of GOVFRAC and ENPG - or with power distribution among districts or states acts in opposition to growth. In those countries, such fact can be explained by the high costs involved in the making process of political alliances for the implementation of economic and institutional policies related to economic growth.

Table 4: Effects of Political Variables on Economic Growth after Democratizations

Variables	p_i										
	SYSTEM	YRSOFFC	GOVFRAC	ENPG	GOVUNI	MDMH	PLURALITY	CL	POLARIZ	AUTHOR	STATE
GROWTH(-1)	0.1129*	0.1228	0.1194*	0.1256*	0.1256*	0.1027*	0.1170*	0.1350*	0.1250*	0.1258*	0.1250*
	(45.09)	(49.48)	(67.49)	(56.58)	(59.14)	(17.85)	(28.49)	(13.78)	(56.42)	(83.86)	(56.81)
INV	0.0672*	0.1018*	0.0925*	0.0420*	0.0605*	0.0872*	0.1194*	0.1870*	0.0993*	0.1001*	0.1689*
	(4.36)	(8.62)	(8.02)	(2.84)	(3.02)	(3.08)	(6.18)	(5.52)	(12.93)	(8.48)	(13.38)
HUMAN	6.0392*	2.9254*	0.9410	-0.2084	1.4893	0.5971	2.2666*	0.8688	3.0862*	2.6971*	2.4248*
	(5.66)	(4.08)	(1.04)	(-0.18)	(1.63)	(0.48)	(2.02)	(0.79)	(4.07)	(4.13)	(2.28)
GNP(-1)	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*	-0.001*
	(-4.58)	(-4.72)	(-5.16)	(-2.77)	(-3.45)	(-6.96)	(-6.44)	(-3.48)	(-7.29)	(-7.47)	(-9.80)
(A) p_i	9.6480*	-0.1304*	10.874*	0.1007*	7.0814*	0.0726*	11.970*	1.3628*	-12.21*	8.2544*	9.6698*
	(21.14)	(-11.20)	(16.62)	(7.53)	(11.26)	(2.98)	(92.49)	(2.10)	(-16.24)	(9.14)	(19.46)
DEM	2.4252*	-0.2185	1.4259*	1.4264*	5.3237*	0.7943	2.7643*	-0.88**	-0.956*	0.7512*	1.9425*
	(6.14)	(-0.48)	(3.37)	(2.05)	(7.29)	(1.10)	(4.51)	(-1.65)	(-2.48)	(2.93)	(6.88)
(B) DEM* p_i	-7.343*	0.1626*	-9.8701*	0.0186	-7.722*	-0.0283	-5.7754*	1.4654*	12.621*	-5.950*	-5.756*
	(-9.24)	(4.20)	(-13.52)	(0.07)	(-11.13)	(-0.33)	(-5.42)	(2.15)	(19.01)	(-6.21)	(-11.26)
ND	-0.1481	-2.0961*	-0.8299*	-3.089*	-3.452*	-0.3495	0.1210	-0.005	-0.2674	-0.463*	-1.544*
	(-0.47)	(-5.47)	(-2.28)	(-4.089)	(-2.44)	(-0.63)	(0.30)	(-0.008)	(-0.64)	(-2.14)	(-3.26)
(C) ND* p_i	0.8583*	0.4659*	1.4028	1.8012*	4.9878*	-0.0392	-1.121**	-0.4504	-0.0945	1.5983*	0.962**
	(2.09)	(8.76)	(1.32)	(3.60)	(2.13)	(-0.71)	(-1.74)	(-0.54)	(-0.28)	(2.20)	(1.85)
Wald Tests											
(A)+(B)	16.36*	0.56	2.06	0.24	0.74	0.42	36.41*	26.61*	3.13**	8.10*	34.20*
(A)+(B)+(C)	45.82*	70.88*	3.39**	16.46*	2.89**	0.007	21.67*	5.82*	1.29	22.09*	110.93*

OBS: t-statistics in parentheses. * P < 0.05, ** P < 0.10

7. The Rule of Political Institutions on Economic Growth around Democratizations

A relevant result of this work is the change in magnitude and sign when there is a transition from an authoritarian regime to a democratic system. The main question we should analyze is if political institutions modify the economic performance during the period of democratization. For such analysis we follow Rodrik and Waczirag´s approach (2005). We first defined a dummy variable: New Democracy – ND. This variable takes the value of 1 in the year(s) and subsequent five years of any major democratization (as defined by Polity IV, 2002). Using the ND variable we can determine if the country's economic growth during the democratization period were depended on political institutions.

Table 4 shows the respective results. The interaction between ND and the political variables (outlined in the line ND* p_i) tell us if during the democratization period the economic growth was different in relation to the political institutions. The last two lines of Table 4 shows the results of Wald's tests - they reveal the significance of the marginal effect of the political variables during periods of democratization. This significance is given by the sum of the coefficients p_i, DEM* p_i, and ND* p_i (in line A+B+C).

The results indicate that political institutions affect the economic outcome during the process of democratization. Such relationship may explain the great heterogeneity among the economic performances of the countries during the post-democratization period as addressed by Rodrik and Waczirag (2005) and Persson and Tabellini (2007). Such result sustains similar conclusions obtained by Inman and Rubinfeld (2005) and Persson and Tabellini (2006) and it presents a mechanism capable of diminishing the waiting time for the economic gains resultant from democracy. Papaioannou and Siourounis (2005) argue that a democratic system will only have economic gains in the long-run. This work has concluded that economic gains can be favorable even in the short-run as long as the political institutions provide for conditions that can diminish the momentary instability.

Additionally, the results related to the political institutions after the democratization process are less relevant than during the period of democratization. Such fact sustains the idea that the consolidation of democracy diminishes the importance of the political institutions in relation to the economic performance due an existing substitutability among them. Once democracy is consolidated, and favorable institutional conditions for investments are provided, the importance of the political variable loses intensity.

8. Concluding Remarks

In sum, the relationship between political institutions and economic growth is quite significant. The importance of such relationship varies drastically in relation to the level of democratization and the stage of the economic development of each country. This work sought to shed light on the issue contributing with the following conclusions:

a. The political institutions are important when determining economic growth if, and only if, the country does not have a consolidated democracy. This result clearly implies that political institutions work as substitute for democracy when under an authoritarian regime or when countries are experiencing new democracies;

b. The democratization process will have an economically favorable transition if political institutions are adequate. Such conclusion helps to explain the great heterogeneity of economic performance during post-democratization periods. It also shows that economic gains derived from democratization can be good even in the short-run, as long as the political institutions provide conditions that are able to reduce the momentary instability during the period of democratization;

c. Countries with high ethnic fractionalization, like some of the African countries, develop more in accordance with their political institutions. However, they develop differently from other countries, a fragmented control of power and the distribution of authority among states and districts are not beneficial for the national economic growth – such result is different from those obtained for the rest of the countries.

References

Acemoglu, D. and Robinson, J. (2006) “Overview” in Weingast, Barry R. and Wittman, Donald (Ed.) *The Oxford Handbook of Political Economy*, Oxford: Oxford University Press.

Acemoglu, D. (2003) “Why Not A Political Coase Theorem? Social Conflict, Commitment, And Politics” *Journal of Comparative Economics* 31 (4): 620-652.

Acemoglu D.; Johnson, S.; Robinson, J. (2001) “The Colonial Origins of Comparative Development: An Empirical Investigation” *The American Economic Review*, 91 (5): 1369-1401

Alesina, A. and Rosenthal, H. (1995) *Partisan Politics, Divided Government, and the Economy*. Cambridge: Cambridge University Press.

Beck, T.; Clarke, G.; Groff, A.; Keefer, P.; and Walsh, P. (2001) “New Tools in Comparative Political Economy: The Database of Political Institutions,” *World Bank Economic Review*, Vol. 15, No. 1, pp. 165–76.

Bond, S.; Hoeffler, A.; and Temple, J. (2001) “GMM Estimation of Empirical Growth Models” *Economics Papers* 2001-W21, Economics Group, Nuffield College, University of Oxford.

Benhabib, J. and Przeworski, A. (2006) “The Political Economy of Redistribution under Democracy” *Economic Theory 29:* 271-290*.*

Carey, J. and Shugart M. (1995) “Incentives to Cultivate a Personal Vote: a Rank Ordering of Electoral Formulas.” *Electoral Studies* 14: 417-39.

Cheibub, J. A. and Limongi, F. (2000) “Where is the Difference? Parliamentary and Presidential Democracy Reconsidered.” Paper presented at the IPSA, Quebec City, Canada.

Cox, G. (1997) *Making Votes Count* Cambridge: Cambridge University Press.

Durlauf, S.; Johnson, P.; and Temple, R. (2005) “Growth econometrics” in Aghion P., Durlauf S. (eds) *Handbook of Economic Growth*. North-Holland Elsevier Science, Amsterdam.

Giavazzi, F., Tabellini, G. (2005) “Economic and Political Liberalizations” *Journal of Monetary Economics* 52, 1297-1330.

Colden, M and Chang, E. (2001) “Competitive Corruption: Factional Conflict and Political Malfeasance in Postwar Italian Christian Democracy.” *World Politics*, 53: 558-622.

Hallerbergh, M. and Hagen, J. (1998) “Electoral Institutions and the Budget Process” in *Democracy, Decentralization and Deficits in Latin America*, ed. K. Fukasaka and R. Hausmann, pp. 65-94, Paris: OECD Development Center.

Hallergergh, M. and Marier, P. (2004) “Executive Authority, The Personal Vote, and Budget Discipline in Latin American and Caribbean Countries.” *American Journal of Political Science*, 48 (3): 571-587.

Kaplan, R. D. (2000) *The coming anarchy: Shattering the dreams of the post cold war*. New York: Random House.

Keefer, P. (2004) “What does political economy tell us about economic development – and vice-versa?” *Annual Review of Political Science* 7: 247-272

Kurnicova, J. and Rose Ackerman, S. (2002) “Electoral Rules as Constraints on Corruption: The Risks of Closed-List Proportional Representation.” Mimeo

Linz, J. and Valenzuela (1994) *Presidential or Parliamentary Democracy: Does it Make a Difference?* Baltimore: Johns Hopkins University Press.

Mainwaring, S. and Shugart, M. (1997) “Juan Linz, Presidentialism, and Democracy: A Critical Appraisal.” In Valenzuela (Ed.) *Politics, Society and Democracy: Latin America*, New York: Praeger.

Mainwaring, S. (1993) “Presidentialism, Multipartism, and Democracy: The Difficult Combination.” *Comparative Political Studies* 26 (2): 198-228.

Mejia-Acosta, A. and Coppedge, M. (2001) “Political Determinants of Political Discipline in Latin America: 1979-1998” Paper LASA 2001.

Milesi-Ferretti, G. M.; Perroti, R.; and Rostagno, M. (2002) “Electoral Systems and the Composition of Public Spending” *Quarterly Journal of Economics* 117: 609-657.

North, D. and Weingast, B. (1989) “Constitutions and Commitment: the evolution of institutions governing public choice on seventeenth-century England” *Journal of Economic History* 49: 803-32.

Papaioannou, E. and Siourounis, G. (2004) “Democratization and Growth”, Mimeo, LBS.

Persson, T. (2005), “Forms of Democracy, Policy and Economic Development”, *NBER Working Paper*, No. 11171

Persson, T. and Tabellini, G. (2000) *Political Economics: Explaining Economics Policy* Cambridge: Cambridge: MIT Press.

Persson, T. and Tabellini, G. (2006) “Democracy and Development: The Devil in the Details” *American Economic Review* 96, 319-324.

Persson, T. and Tabellini, G. (2006) “Electoral Systems and Economic Policy” in Weingast, B. R. and Wittman D. (Ed.) *The Oxford Handbook of Political Economy*, Oxford: Oxford University Press.

Persson, T. and Tabellini, G. (2007). “The growth effect of democracy: Is it heterogeneous and how can it be estimated?” *NBER Working Paper* No. 13150.

Polity IV (2002). *Political regime characteristics and transitions, 1800–2002* [Data Project]. College Park: University of Maryland, 2002 http://www.cidcm.umd.edu/inscr/polity/.

Poterba, J. (1994). State Response to Fiscal Crises: The Effects of Budgetary Institutions and Politics. *Journal of Political Economy*, 102(4): 799-821.

Przeworski, Adam; Alvarez, Michael; Cheibub, Joje Antonio; and Limongi, Fernando (2000) *Democracy and Development: Political Institutions and Well-Being in the World, 1950-1990*. New York: Cambridge University Press.

Rodrik, D. and Wacziarg, R. (2005) "Do Democratic Transitions Produce Bad Economic Outcomes?" *American Economic Review*. 95, 50-56.

Roubini, N. and Sachs, J. (1989) "Political and Economic Determinants of Budget Deficits in the Industrial Countries" *European Economic Review*, 33: 9.3-938.

Scartascini, C. and Crain, W. (2001) "The Size and Composition of Government Spending in Multi-Party Systems" Paper presented at the Public Choice Society Conference, March, San Antonio – Texas.

Stein, E., Talvi, E. and Grisanti, A. (1998) "Institutional Arrangements and Fiscal Performance: The Latin America Experience" *NBER Working Papers Series*, Nº 6358.

Weingast, B. (1979). "A Rational Choice Perspective on Congressional Norms" *American Journal of Political Science*, 23 (2): 245-262.

Weingast, B.; Shepsle, K; and Johnsen C. (1981) "The Political Economy of Benefits and Costs: A Neoclassical Approach to Distributive Politics" *Journal of Political Economy*, 89 (4): 642-664.

Weingast, Barry (1995) "The Economic Role of Political Institutions: Market-Preserving Federalism and Economic Development" *Journal of Law Economic and Organization*, Vol. 11 (1): 1-31.

----------- (2006) "Second Generation Fiscal Federalism: Implications for Decentralized Democratic Governance and Economic Development" (*Discussion Draft*)

Appendix

Table A.1: Description of Political variables

Variable	Description	Symbol
Chief Executive Variables:		
Political System	Parliamentary (2), Assembly-elected President (1), Presidential (0)	SYSTEM
Years of the Chief Executive in the Office	Number of years of the chief executive has been in office	YRSOFFC
Party Variables in the Legislature:		
Government Fractionalization	The probability that two deputies picked at random from among the government parties will be of different parties.	GOVFRAC
Government Coalition	Effective number of parties in the government coalition	ENPG
Government Power	% of government seats in the congress source: NUMGOV / (NUMGOV+NUMOPP) in DPI-2004	GOVUNI
Electoral Rules:		
Mean District Magnitude House	The weighted average of the number of representatives elected by each constituency size	MDMH
Plurality System	In "plurality" systems, legislators are elected using a winner-take-all / first past the post rule. "1" if this system is used, 0 if it isn't.	PLURALITY
Closed Lists	Are closed lists used? (1 if yes, 0 if no)	CL
Stability and Checks and Balances:		
Polarization	Maximum polarization between the executive party and the four principle parties of the legislature	POLARIZ
Federalism:		
Fiscal Federalism	Do the state/provinces have authority over taxing, spending, or legislating? 1 if yes, 0 if no.	AUTHOR
Political Federalism	Are there state/province governments locally elected? 1 if yes, 0 if no.	STATE