Delegation Dilemmas: Coalition Size, Electoral Risk, and Regulatory Design in New Democracies*

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Abstract:

This paper investigates determinants of regulatory agency design in multiparty coalition governments. Current research has mainly focused on US institutions and its findings are therefore context specific. We find electoral uncertainty, government turnover, and coalition size are key to explaining the bureaucratic autonomy with reference to the 31 state regulatory agencies that have been recently created at the subnational level in Brazil. Legislative support enjoyed by chief executives only acquires explanatory power when interacted with government turnover. Because governors have great ability in building oversized majority coalition, coalition strength influences the governor's choice when he/she faces credible threats from rival elite groups.

Introduction

This paper explores the political determinants of the varying degrees of bureaucratic autonomy enjoyed by regulatory institutions in the Brazilian states. We claim that the main motivation to delegate powers to independent regulatory agencies was the need for incumbent governors to tie the hands of the next administration. The perceived electoral risk faced by governors and the strength of its support in the state Legislature are key explanatory factors in our analysis. Ever since McNollGast's (1987 and 1989) and Moe's (1990) seminal works on the subject, a growing industry has developed on the broad issue of delegation and political control of the bureaucracy and more recently on the politics of administrative procedure and agency design. Much theoretical progress has been made on the topic and many studies have advanced our empirical knowledge of the ways the Legislative and Executive branches seek to influence the bureaucracy across issue areas. While there are a number of notable exceptions, most of the theoretical developments and empirical research have focused on US political institutions. At the theoretical core of the new wave of research on these issues is the concept of congressional delegation and forms of indirect control, which have been explored with principal-agency models. What was previously construed as congressional abdication, with the new analytical lenses provided by these models it was viewed as a rational strategy for controlling bureaucracies and minimizing congressmen's time and energy.

A related but separate theme is the incentives for legislators to grant autonomy to bureaucratic agencies, which they in principle would have an incentive to control directly. A body of research on agency design has found that bureaucratic insulation has political origins and is the by-product of rational politicians making choices about their political survival. The extent to which these theoretical models are context-dependent and are

applicable to other political settings remains an important theme in the current research agenda. Many questions of conceptual and empirical interest have thus been left unanswered. These include issues about the logic of delegation in multiparty coalition-based separation of power systems where, unlike the US, executives are the agenda setters, hold legislative powers, and have great ability to build majority coalitions by controlling the congressional agenda and dispensing pork, patronage, and cabinet positions to coalition members. What are the incentives for executive delegation under multiparty coalition governments? While current research on the US case has emphasized the different incentives facing executives under unified and divided governments, in coalition governments the key question refers to the effects of coalition size and political uncertainty on delegation choices (Huber and Shipan 2002).

The new democracies provide conditions for exploring these and related questions because many new institutions and agencies have been created in the wake of the democratization process. The comparative politics literature has not investigated these themes systematically and only a few contributions are available that have addressed the question of delegation incentives to the bureaucracy in presidential democracies at the national level (Eaton 2003; Baum 2007). We understand that a focus on sub-national institutions is appropriate, for reasons discussed below, and we explore this issue with data on state institutions in Brazil.

Conventional wisdom asserts that Brazilian governors are extraordinarily powerful – even more powerful than any national president. In the last few years, each of Brazil's states has set up independent regulatory agencies. The degree of autonomy these agencies possess varies from state to state. This raises a puzzle for theories of Brazilian politics and a good test of principal-agent theories of bureaucratic delegation: if governors' power is truly

constant across Brazil's states, we should not see variation in bureaucratic autonomy. In fact, we should have seen resistance to agency autonomy in each and every state, that is, we expect fairly low and constant degrees of delegation of power to regulatory agencies. What explains this variation? This article explores this issue with reference to 31 newly created independent regulatory agencies. By independence we mean political and financial autonomy from politicians as indicated by features such as tenured and staggered directorships and the ability to control the agency budget. We focus on Brazilian state governments because by doing so we can control for variation in political institutions which are similar across the states and other possible omitted variables that are specific to individual countries. In pursuing a research strategy focusing on the state level we follow Huber and Shipan (2002) and Volden (2002). The agencies we study vary significantly in terms of the degree of autonomy they enjoy vis-à-vis the executive, as well as other analytically relevant institutional features. They therefore provide a great opportunity for discussing the effect of political variables and endogenous preferences of politicians on institutional choice and agency design in a new presidential democracy where executives enjoy great powers.

The paper looks in particular at the incentive-structure the Brazilian state governors face when they have to choose how to regulate and what should be the institutional structure and process for the new regulatory organizations. The state chief executive is the key actor in this process since governors are the true agenda setters; they are responsible for taking the regulatory initiative and have several ways to compel state legislatures to cooperate with them, including pork, patronage, and cabinet positions.

When delegating regulatory tasks, politicians may wish to grant high levels of discretion to the independent regulatory agencies. But due to the information asymmetries

and costs of monitoring inherent in these relationships, politicians run the risk that this discretion might be used to pursue outcomes that may harm their interests (*agency costs*). It may thus seem counterintuitive that they would be willing to delegate so often to independent regulatory agencies, since in principle the same tasks could be accomplished by other non autonomous bureaucratic organizations, which politicians could much more easily control. What can the independent regulatory agencies do for the governors that counterweigh for the potential agency costs generated by them?

Delegation theory contains several hypotheses that attempt to answer this question, ranging form information provision (Gilligan and Krehbiel 1987; Krehbiel 1991; Epstein 1997), blame shifting (Fiorina 1982), credible commitments (Levy and Spiller 1996; Mueller and Pereira 2002), preservation of Congress' intertemporal preferences on the Bureaucracy (McNollGast 1989), political risk and uncertainty (Moe 1990, De Figueiredo 2002), power parity among political elites (Geddes 1991), to transaction-costs politics (Epstein and O'Halloran 1989; Huber and Shipan 2002).

One of the greatest contributions of the supply-side theory of regulation (particularly McNollGast 1989) was to open the regulatory 'black box' by rejecting the assumption that regulators would faithfully respond to the legislators' commands. That is, McNollGast assumed that the principal-agent problem between legislators and regulators would not be solved without monitoring and oversight costs. The analytical focus thus shifted from a conflict between regulators and regulated firms (that would try to capture the regulatory process) to a conflict between legislators (the suppliers of regulation) trying to control independent bureaucratic regulatory bodies. In addition to legislators, Moe (1989) brought another player, the Executive, to the discussion. Subsequently, Lewis (2003) incorporated the effects of divided government (contingent on the size of the majority and

presidential popularity) on agency design. Unlike these previous studies, our study analyzes delegation in coalition-base presidential regimes where the executive, in addition to playing the role of agenda setter, also enjoys several governing tools to keep its majority coalition stable over time.

We draw on the basic insights of earlier contributions – in particular the attention to the intertemporal dimension of delegation and the role of uncertainty, but depart from them in a fundamental way. We incorporate the executive branch as a fundamental player in the delegation game (see Lewis 2002) thereby changing the focus of the discussion from the legislative branch, which is at the centre of discussions of US scholarship. In this particular point, we build on Lewis' basic insight but we expand the theoretical and empirical analyses beyond his contribution.[1] Specifically, we argue that there is distinct logic of delegation in contexts where the Executive is preponderant and where there are multiparty coalition governments. By doing so we contribute to the comparative scholarship on delegation by suggesting that the US case is an example of a broader class of phenomena. Two special points deserve highlighting. First, where the Executive is preponderant there is hardly any cases of divided government, which is a key element of Lewis' analysis. Second, in multiparty coalition governments, we expect coalition size to matter but its importance is contingent on the Executive's powers. Therefore, we argue that the key underlying factor explaining delegation is political uncertainty.

In this paper we particularly explore the hypothesis that political uncertainty plays a key role in the governors' decision to delegate discretionary powers. It is argued that the main motivation to delegate powers to independent regulatory agencies was the need for incumbent governments to tie the hands of the next state government administration. The greater the autonomy delegated to board members of new agencies who arguably share

policy preferences with incumbent governors since they were appointed by them, the smaller the room for political influence of the new governor over the agency. Specifically, we hypothesize that electoral uncertainty and the size of the government majority within the legislature are important for explaining key features of the bureaucratic structure such as autonomy and functional scope.

We test this hypothesis with data from two alternative sources and different measures of political risk. The paper makes three distinct contributions. First, it investigates current hypotheses about the determinants of bureaucratic autonomy beyond the US institutional context, where the executive, at the federal and subnational levels, has to build multiparty coalitions in order to govern. Second, it shows that existing theories of presidential (or governors) needs to be reframed to account for delegation choices under separation of powers democracies where executives are powerful. Third, it shows how the adoption of independent regulatory institutions is important in its own right, as the analysis also speaks to the literature on the institutions of regulation in post privatization contexts. Last but not least, the paper offers an empirical innovation by interacting government turnover and the size of the governing coalition. The results of this interaction reveals that in an institutional environment where the executive is the agenda setter, specially on regulatory matters, the main drive force behind a governor's decision of how much power should be delegated to independent regulators is the risk of losing the upcoming election.

The paper is organized as follows. In the next section we review the literature on the politics of agency design and bureaucratic delegation and show how these themes can be fruitfully explored in other institutional contexts. In the third section provides some background information on the Brazilian institutional context and on the newly created

regulatory agencies. Section four presents the econometric tests and results. A concluding section summarizes our results and suggests avenues for future research.

Explaining Bureaucratic Insulation

While focusing on different aspects of the politicians – bureaucracy nexus the cornerstone of the recent literature is the notion that politicians may deliberately insulate administrative agencies from political control, including their own control over agencies, in order to maximize their interests. Delegation of autonomy, this literature reminds us, does not imply abdication, but constitutes a rational strategy for many political actors to ensure that they exert influence over public policy.[2] This simple intuition was the basis of the congressional dominance literature that asserts that Congress wields a procedural control over the bureaucracy (McNollGast 1989). Other contributors have explored the determinants of delegation in separation of powers systems and have found among other things that delegation is greater under unified governments (Epstein and O'Halloran 1999).

Moe (1989) and Moe and Caldwell (1994) called attention to the fact that political actors make inter-temporal choices when attempting to ensure political control of the bureaucracy. An enacting coalition in Congress tries to guarantee not only their political control over the bureaucracy but also that tomorrow's Congress cannot control it either. Because of political uncertainty, the enacting coalition may have incentives to shut out most opportunities for external control. This is most likely to occur when electorally weak groups will heavily 'insulate' policies in periods in which they momentarily hold power (de Figueiredo 2002; de Figueiredo 2003).

Lewis (2003) and Howell and Lewis (2002) build on these insights but criticize this literature because it looks at agency design only indirectly through a focus on *Congressional* delegation. Presidents, when taken into account, are characterized as part of

an enacting coalition who has preferences similar to those of legislators. By introducing Presidents as key actors, this study has opened up interesting avenues for comparative empirical research about other separation of powers' democracies, where chief executives have substantial powers. More importantly for our purposes in this article, Lewis shows how inter-temporal choice is key to understanding intra-branch delegation and the delegation game more broadly.

Specifically, Lewis (2003) claims that systems characterized by separation of powers have a direct consequence on the design of bureaucratic agencies because the president and members of congress view the administrative state from entirely different vantage points based upon their institutional positions and their policy preferences. Having a national constituency, presidents are held accountable for the functioning of the entire government. In contrast, legislators represent individual districts and their perspective derives from a constitutionally parochial view. He tests a set of hypothesis and propositions to predict the level and probability of public bureaucracy insulation as a function of two variables: presidential durability (*turnover*) and size of the majority (*divided govern*ment).

The hypotheses regarding presidential durability are the following: in divided government, agencies are more likely to be insulated if the president appears durable. If the president is electorally vulnerable, however, members of the majority will forestall insulation in anticipation of a president who shares their preferences. In a unified government, the majority prefers more presidential control so long as the president or someone like him will be in office for while. If the president is weak in electoral terms, the majority is more likely to insulate in anticipation of a new opposition president.

Lewis (2003) also predicts that in divided governments the probability a new agency will be insulated is higher, provided that the opposition majority is large enough. The

opposition majority will have incentives to keep the new agency away from the influence of the minority president. When the opposition majority in divided governments is small, however, it cannot overcome presidential opposition to insulation. In unified government, the probability of insulation is low, provided that the majority is large enough. When a majority in unified government is small, however, it must compromise with a minority that wants insulation in order to protect the agency from presidential control.

Structural features of presidential systems alter the roles of policy proposition and disposition, and consequently the whole political game of delegation. Epstein and Halloran (1999) argue that given these differences in the powers of the president, the roles of the proposer and the administrator may in some cases be reversed. They argue that: "where presidents can propose legislation, they may choose to push unilaterally politically difficult problems onto the legislature to maximize their own political advantage." As discussed by Huber and Shipan (2002) in a comparative study of delegation in the US states and in European countries, delegation incentives differ across separation of powers and parliamentary regimes.

These contributions have in common the fact that they mostly focus on the US case, and suffer from important biases (Huber and Shipan 2002, 39-41). In addition, except for Lewis (2003), most analyses are attempts at modeling the delegation of powers from the legislature to the executive. However, in presidential systems, such as Brazil's, in which executives enjoy legislative as well as agenda powers, the basic parameters underlying the delegation game have to be reframed. In these settings delegation is primarily a decision by the executive branch (Baum 2007; Eaton 2003).[3] In this paper we explore the empirical and conceptual implications from the fact that the chief executive (in our particular case, state

governors) is the key regulatory agenda setter and draw out the implications of studying delegation in comparative perspective more fully.

In Brazil, presidents and governors have the exclusive prerogative of initiating bills proposing the creation or closing of administrative agencies. In addition they have the power of a line item veto; constitutionally reserved decree powers (limited at the sub-national level); budgetary powers, such as exclusive preparation of a budget or the requirement that the legislature can reduce but not increase spending on any one item; exclusive power to introduce legislation in certain policy areas, sometimes coupled with privileged parliamentary procedures for considering this legislation. In addition to these legislative powers, governors can unilaterally appoint and dismiss their cabinets (Shugart and Carey 1998). It should be noted that state Constitutions mirror the federal constitution and there is very little variations across them. Moreover, executives both at the national and subnational level in Brazil can dispense patronage in the form of public sector jobs or the discretionary execution of budgetary amendments as well as allocating cabinet positions to its coalition partners (Alston et al 2008; Pereira and Mueller, 2004; Samuels 2003; Ames 2001).

In the Brazilian states, the chief executives can exert great informal influence on other state branches (Santos 2001). Indeed, in the smallest states some governors enjoy a dominant position in the policymaking.[4] Yet in contexts of high electoral uncertainty they appear to relinquish power by delegating discretion to agencies. This puzzle begs an explanation. Because the state political game is essentially based on the exchange of pork, patronage, and cabinet positions for legislative support, governors are not as dependent on the partisan support as their US counterparts. Thus when facing the delegation dilemma, their incentive structure contrasts markedly with that of US governors (Volden 2002). We

hypothesize that in this set up – namely, where chief executives enjoy great legislative powers and control pork and patronage on a large scale - governors' decision is essentially driven by inter-elite competition for the gubernatorial position. The governor's calculus hinges upon his competitor's strengths and weaknesses in the gubernatorial race.

We argue that the main motivation behind the governor's decision to delegate powers to independent regulatory agencies was the desire of the incumbent government to tie the hands of the next state government administration. We investigate the process of institutional choice for the new independent regulatory agencies by focusing on the role played by electoral risk, governor durability (electoral turnover), and size of the government's coalition. We expect that the greater the executive's turnover and the larger the electoral risk, the higher the insulation of agencies. Governors, on the other hand, are discouraged to delegate autonomy to independent regulators if they enjoy the support of a large majority in the state assembly. However, when governors enjoy a large majority but face great electoral risk, increasing the chances of power alternation, they have incentives to propose legislation that tie the hands of their rivals.

Governors and Regulatory Agencies

Brazil was a reform laggard with respect to privatization. It started privatizing its utilities in the late 1990s, unlike its neighboring countries, where authoritarian rulers jumped on the privatization bandwagon in the early 1980s. The state governments created independent regulatory institutions approximately at the same time that the federal government established their federal counterparts.[5] Between 1997 and 2006, 31 agencies were created in 23 of Brazil's 27 states. Thus there occurred a massive process of institutional change in a short span of time.

Most states set up agencies, which are multisector (i.e. they cover more than one industry), whereas 3 states (São Paulo, Rio de Janeiro, and Paraíba) created more than one sectoral agencies. The government of Sao Paulo created two agencies: one for energy (CSPE) and another one inter-municipal transport (Artesp). In turn, the government of Paraíba set up two different agencies for energy and water and sanitation (Aagisa), respectively. Rio de Janeiro created a multi-sector agency in 1996 (ASEP). However, in 2005 it was extinguished and two other agencies were created: AGETRANSP that becomes responsible to regulate the sector of transport and AGENERSA that regulates energy and water and sanitation.

While all of the federal agencies are single industry regulators, most of the state agencies are multi-sector. The areas covered by these state level regulators include public transportation (all types in the states, i.e. inter-municipal transportation, and waterways transportation) water and sanitation, natural gas, telecommunications and electricity. Except for transportation, none of these sectors are under the exclusive jurisdiction of the states. Therefore the state agencies regulate these sectors only by virtue of agreements with the Federal (in the areas of energy, telecommunication, and food and pharmaceuticals) or municipal government (in the case of water and sanitation).

Due to its importance, the power companies (electricity distributors) were the driving force behind the privatization process. These companies were the largest state-owned enterprises in the states and their privatization followed a stick and carrot strategy by the federal government. They were offered strong incentives for privatization. Indeed, in most cases, the states would qualify for upfront disbursements of future auction revenue. Only the states that did not privatize the power company did not create regulatory agencies (See Table 1).

[Table 1 about here]

The state regulatory agencies vary significantly in their institutional designs. They were essentially established via executive bills proposed to the State Legislature by the governors. The assembly has the power to amend the bill that would thus be subject to the governor's veto, but has not the power to propose the legislation in a particular policy area. In some states, the autonomy of the agency's board members is very high. Directors have tenure, legislative authorization is required for appointment as well as removal of directors from office, and strict requirements for eligibility apply. In other states, however, governors can dismiss board members *ad nutum*. Moreover, there are soft constraints on eligibility and the state assemblies play no role in either nomination or dismissal of directors. The Courts have upheld these rules and therefore political actors have incentives to attempt to shape bureaus' structure.

The case of one of the agencies with the highest score in the autonomy index, AGERGS, in the state of Rio Grande do Sul, provides an illustration of an unsuccessful attempt by the newly elected governor to interfere in the agencies' autonomy. It also shows how the courts play a role in safeguarding this autonomy. A conflict began when the new state administration of Governor Olívio Dutra dismissed the directors of the agency without the vote for approval of a qualified majority of the state assembly. Note that the previous governor introduced this provision in the bill that created the agency. The agency board reacted to this decision and appealed to the higher courts. Not counting on a majority in the State Assembly, the governor filed an Action for the Declaration of Unconstitutionality (ADIN) in the Supreme Court alleging that the articles 7 and 8 of laws 0931 and 11292 that stipulated tenure and staggered terms of office was unconstitutional.[6] In the appeal the government argued that the permanence of directors who could act against the state

government's policies jeopardized the governability of the state *(Petição Inicial da ADIN 1449,* p.8). It also argued that AGERGS was an arm for the materialization of the state government's economic policies. The lower court sustained the appeal and it was sent to the Supreme Court. The governor then backtracked in his attempt and the directors remained in their posts.

Another example of interference by a state governor on agency's autonomy occurred in the state of Rio Grande do Norte; however, with very different results. The newly elected governor Wilma Maia sacked two directors of ARSEP (the Rio Grande do Norte regulatory agency), one of the agencies with the lowest score in the autonomy index. The state assembly agreed to the changes and no contest ensued. The first episode (Agergs) clearly illustrates the role of the courts safeguarding regulatory institutions, and the second shows the ability of state executives to interfere in the agency's autonomy in cases in which no safeguard existed in the legislation.

The varying institutional landscape of the regulatory agencies begs the question: Why do states differ in terms of the degree of autonomy enjoyed by these new regulatory institutions? As mentioned before, the case under analysis allows us to explore analytically the variations in the degree of autonomy regulatory agencies enjoy.

Despite the decline of their importance in national politics, the key actors in the Brazilian state political system are the governor (Samuels 2003). The states vary substantially in terms of a number of analytically relevant political dimensions including the size and nature of state coalitions and the level of electoral uncertainty faced by governing elites. Typically governors rely on coalitions of parties that gravitate around the governor's party. The large number of political parties in the coalitions stem from the country's electoral institutions. Brazil adopts open-list proportional representation, which

leads to a large number of effective political parties. The basic institutional rules are uniformly adopted by all states. For instance, all of the states share the same electoral institutions, including the electoral timetable—that is, elections take place simultaneously all over the country. This allows for great comparability across the states. State coalitions are usually oversized (see Table 3) and consist of ideologically distinct parties, which trade pork, patronage, policies and other benefits for political support. Coalitions, however, are essentially driven by inter-elite rivalries.

Econometric tests and results

To estimate the determinants of the agencies' level of autonomy we have as a dependent variable an index of autonomy of the new regulatory agencies. This index of autonomy was built based on a survey with top-rank officials – usually the president of the agency or one of its directors. The questionnaire consisted of three sections, each of which focused on a specific dimension of autonomy: (a) political autonomy (includes questions on tenure of the directors, appointments, circumstances in which a director can be fired), (b) the clarity of rules (information on instruments available for state governments to exert control over the agency, degree of delegation, duties and responsibilities of the regulator, among others), and (c) the financial autonomy (information on budgets including sources, financial autonomy to execute expenditure decisions, if the agency's resources have been impounded – *contingenciados* – by the chief executive).[7] Table 2 and Figure 1 show the distribution and descriptive statistics of the index of autonomy. They provide a ranking of the agencies according to their overall level of autonomy. It is possible to observe that state regulatory agencies present a great level of variation in their level of autonomy, which ultimately is a governor's choice (it is defined in the original bill the governor send to the legislature).

[Table 2 and Figure 1 about here]

Concerning political autonomy, the survey indicates that one-third of the agencies directors can be dismissed for a vague reason such as "threatening the agency's integrity." Five agencies experienced directors who did not complete their terms. One-fourth of the agencies directors may be appointed without having previous experience in the sector. With the exception of three state agencies (AGERBA, ARCE, and ARPE) directors' terms do not coincide with that of the executive. To mitigate political risk, 47 percent of the state agencies need legislative approval for their appointed executives. In almost half of the agencies, there was no legal restriction against politicians being appointed for agency positions during their term of office.

With regard to financial autonomy, the survey demonstrates that the great majority of state agencies declared that they control their expenses throughout the year. The main source of their budget revenue comes from fees and fines. In only 2 agencies the state government was the single source of revenue. However 61 percent of the agencies reported having their revenues impounded (*contingenciados*) by the executive and these impoundments have undermined agencies' ability to operate and function well. According to the survey, only 3 agencies affirmed that the impact of those impoundments was not significant (medium to very low). However, when asked if the governor has actually directly intervened in the agency, 6 replied positively.

The model contains three key explanatory variables:

1) *Governor's durability* in office (or *Turnover*) estimates the uncertainty generated by elections. This variable was built taking into account the governor's faction stability (or lack thereof) in holding power in that state. It was built taking as reference the last three consecutive elections of state governors in Brazil: 1994, 1998, and 2002. This

index varies from zero (when the same political group was the winner in all three consecutive electoral episodes) to 4 (when no one single political elite was able to win two elections). While in the former we assume that the electoral uncertainty is null, in the latter electoral vulnerability or turnover is at its maximum. The intermediate values of the governors' durability index refer to situations when an electoral coalition won two consecutive elections but lost the third one (index equal to 1); or when the first elite group in power is defeated and a new elected elite win the following election (index equal to 2); and finally a situation in which an elite group has its electoral dominance interrupted by a rival elite group which wins office but for just a single electoral period, after which the original elite returns to power (index equal to 3). In fact, *Turnover* captures what we call electoral uncertainty. Our hypothesis predicts a positive coefficient for turnover. That is, the larger the electoral uncertainty, the greater the probability a state governor will delegate regulatory power by creating an independent regulatory agency.

2) *Risk* is an indicator for electoral risk for the incumbent governor. We used data from elections polls in the 1998 and 2002 gubernatorial elections. The data is for a candidate's chances in the gubernatorial race in the relevant elections. For agencies created in 1997, 1998 and 1999[8] we use the polls' (IBOPE) results in the week of September 12 to 20, 1998. For agencies created between 2000 and 2003, we used the IBOPE's polls for the same week of reference in 2002. The following criteria for constructing the additive index were used: (i.) if the opposition candidate has more than 20% points ahead of incumbent (or its candidates),[9] 5 points; (ii.) if the opposition candidate has more than 10% and less than 20%, 4 points; (iii.) if the incumbent is ahead or behind the opposition by less than 10%, the risk is 3; (iv.), if the incumbent is ahead of the opposition candidate more than 10% and

less than 20%, the risk is 2 points; and (v.) if the incumbent is ahead for more than 20%, the risk is 1 point.[10]

3) *Coalition size*. This is the percent of seats held by the parties that gives political support to the governor's administration within the State Assembly in the particular year in which the regulatory agency was created. In fact, it measures the majority strength of the governor's coalition in the State Assembly. As we can see in the Table 3 and in the Figure 2, although the size of the governor's coalition varies from one state to the next, only two governors (in the states of MG and MT) were not backed by a majority in the State Assembly. On the other hand, the majority of governors (13 states) enjoyed an oversized coalition (greater than 70% of the seats) and in 11 states governors held 'workable' majorities (between 50% and 70%) when the agency was created. Table 3 also shows that regardless of the size of the governors' party they do not face much trouble to build a majority governing coalition in State Assembles. The striking example is the governor of the Espirito Santo whose party had no seats in the State Assembly but his coalition was able to hold 73.3% of the seats in August 1998. As mentioned before, governors are very powerful at the state level and have several governing tools under their discretion, which encourage political parties to gravitate under their political umbrella in order to have access to political and financial benefits.

[Table 3 and Figure 2 about here]

With regard to the first two independent variables, we predict a positive relationship between electoral vulnerability (*Turnover* and *Risk*) and the delegation of autonomy powers to regulatory agencies. That is, the greater the uncertainty faced by the political elite in power, the greater the incentives for them to delegate powers to an agency in order to perpetuate their preferences in the upcoming administration. On the other hand, we predict

a negative correlation between a governor's coalition size and the degree of autonomy delegated to regulatory agencies because the greater the control governors have over state legislatures the weaker the incentives they have to transfer power to a new regulatory institution.

In addition, to estimate the impact of those variables on the governor's choice of how much power they should delegate to regulatory agencies, we also decided to include in the model the state per capita GDP as a controlling variable. This variable might be a good way of measuring the level of autonomy of the states *vis a vis* the national government. Thus, we expect that the greater the GDP per capita, the less inclined and constrained the governor will be to follow the national executive's preferences.[11]

Our key theoretical expectation was confirmed in all model specifications reported on Table 4.[12] We find that the greater the electoral uncertainty faced by the political elite in power (measured both in terms of electoral risk and elite turnover), the greater the incentives for them to delegate powers to an autonomous agency in order to perpetuate their preferences in the upcoming administration. Therefore, even running the risk of facing agency costs, electorally vulnerable governors prefer to delegate authority to independent bodies in order to tie the hands of the opposing challenger.

[Table 4 about here]

As shown in models 1 to 4 of the Table 4, this prediction was confirmed in all model specifications. Particularly, each of the two variables that estimate electoral uncertainty (*Risk* and *Turnover*) is statistically significant and positive as we predicted, even when we control for state GDP per capita. In other words, under higher risks of losing office, governors have greater incentives to delegate powers to independent regulatory institutions in anticipation of a new opposition governor. In substantive terms, an increase

of one standard deviation in the score of electoral risk (which extends from zero to one) entails a rise in the autonomy score of 0.085. Should the electoral risk faced by an incumbent governor rose from very low to very high, an agency would see its autonomy score increase from 0.45 to 0.70 – a very substantial increase. These are the expected values of the dependent variable when risk changes but all other values are set at their means. Similarly, a change in one standard deviation in the value of the variable *turnover* would imply an increase/decrease (taking into account its effect via the interactive term as well) in the autonomy score from 0.49 to 0.72.

Although the variable *Coalition Size* was not statistically significant its coefficient was always negative also endorsing our theoretical prediction. That is, governors backed by majorities in the State Assemblies face fewer incentives to delegate powers to independent regulatory bodies. A possible explanation why the size of governor's coalition was not a significant predictor of the degree of autonomy of regulators has to do with the tools that governors have when he/she seeks to build and sustain majority coalitions. As we demonstrated before, only two governors (in the states of MG and MT) were not backed by a majority. In most states, however, governors have the ability to command the support of oversized coalitions even when the governor's political party is extremely small.

In order to capture the influence of power alternation and coalition size we estimate the impact of the interaction between the variables "size of the majority" and "the turnover of the executive in office" on governors' decisions to delegate power to independent regulatory agencies. The multiplicative interaction term (*turnover*coalition size*) captures the impact of one of the variables on the dependent variable as the other interacted variable changes. That is, with this interaction term we can quantify and draw inferences from the varying marginal effect of *turnover* on the level of autonomy delegated to regulatory

institutions as the *size of coalition* changes. This allows us to determine whether the effect of *turnover* on autonomy gets more or less restrictive as we move from states with lower to higher levels of legislative support for the governor. If we find that the marginal effect of *turnover* gets stronger (that is, larger in absolute terms) in more unified state legislatures with bigger coalition sizes, then we can conclude that political elite *turnover* in power and *size of the majority* are complements. If the marginal effect of *turnover* gets smaller or even becomes statistically equal to zero, then we can conclude that both of these dimensions are substitutes.

We predict that the greater the executive's turnover and the larger the size of the majority under unified government, the higher the insulation of agencies. That is, they are complements. As we can see in the models 5 and 6 in the Table 4, our expectation was confirmed. The coefficient of the interaction term "*turnover*coalition size*" was positive and statistically significant suggesting that those variables are complementary. Figure 3 also helps to demonstrate this complementary effect.[13] We can see that *turnover* has a positive marginal effect on political autonomy when *coalition size* is over 60 percent of seats in the state legislature. When coalition size is smaller, turnover has a negative marginal effect on autonomy. However, because the 90% confidence interval crosses the zero line from about 2 to 60, the effect of turnover on autonomy in this range of coalition is insignificant (at the .10 level).

[Figure 3 about here]

In other words, in a unified government with large support in the legislative branch (as seems to be the case of the majority of Brazilian states), the governor prefers more executive control over the agency design so long as the governor or someone that belongs to his/her elite group will be likely to be in office in the near future. When a governor

shares the same policy preferences of a large legislative majority he/she is tempted to create agencies with a great amount of executive's influence and less political autonomy. On the other hand, if an incumbent governor is backed by a majority in the state assembly but, at the same time, is electorally weak and is not expected to win the upcoming election, the governor and his majority are more likely to insulate the regulatory agency in anticipation of a new opposition governor.

4. Conclusions

This paper aimed at responding to the following question: what factors explain the different degrees of autonomy of independent institutions found in multiparty coalition presidential systems? We investigate this question by examining Brazilian state regulatory agencies. The argument proposed by the paper was that institutional design of new regulatory agencies was an endogenous choice of governors driven by electoral risk, governor's durability in power, and the majority strength that gives support for the governor within the State Assembly. We found support for current theories of delegation that have explored the institutional foundations of bureaucratic autonomy. But an important claim of this paper is that key building blocks of the argument have to be reframed when we test the theories in a new democracy where executives are powerful both in institutional terms and in its ability to build supporting coalitions through pork and patronage.

We tested whether institutional choice is a function of electoral uncertainty and risks. We predicted that the more stable the electoral game, and consequently, the smaller the electoral risk for the elite group holding power, the weaker the incentives governors have to lock in their preferences via administrative and organizational arrangements, since they would prefer to maintain discretionary control. On the other hand, the greater the electoral competition among state elites and, consequently, the more electorally vulnerable

the governor is, the higher the chances of the adoption of an insulated framework for regulatory agencies. Therefore, we argue that the autonomy enjoyed by independent regulatory agencies could be interpreted as an inter-temporal safeguard for the preferences of the governor (or his elite group or faction).

We found empirical support for our hypotheses in a series of econometric exercises. Our tests aimed at estimating the political determinants of the level of discretionary powers delegated by governors to independent regulatory agencies. As dependent variables in these tests we use an index of autonomy, built from a survey with state regulators.

All independent political variables behaved according to our theoretical predictions. Given that governors do not face problems in building large coalitions in nearly all State Assemblies, the size of the governor's coalition in the state assembly was not statistically significant suggesting that governors do not take the legislature into account when making choices about how much autonomy should be delegated to regulators. They are essentially concerned with the rivals for the gubernatorial position. However, when we interacted the governors' durability in office (*turnover*) with the *size of the governor's majority* within the legislature we could observe that *turnover* has a positive marginal effect on political autonomy when *coalition size* is over 60 percent of seats in the state legislature. Because governors have great ability in building oversized majority coalitions, coalition strength influences the governor's choice when he/she faces credible threats from rival elite groups.

We examined a case of separation of powers where the chief executive enjoys great legislative powers. Further research is necessary to explore how variation in legislative powers affects incentives for delegation. In addition, it would be necessary to extend the research to other new democracies that have undergone similar processes of economic reform and agency creation.

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Table 1 – Selected data on State Regulatory Institutions

State	Regulatory institution	Sector	Date of creation	Date of privatization
AC	Ageac	E, G, Tel, S	January/03	not privatized
AL	Arsal	E, G, S, Tr	September/01	not privatized
AM	Arsam	E, G, Tel, S	November/99	June/2000
AP	No			not privatized
BA	Agerba	E, G, R, Tr	May/98	July/1997
CE	Arce	E, G, S, Tr	December/97	April/1998
DF1	Agdf	Generic	June/01	not privatized
DF2	Adasa	S	June/04	not privatized
ES1	Agesp	Generic	August/98	July/1995
ES2	Aspe	E, G	September/04	July/1995
GO	Agr	E, S, Tr, W	December/99	September/1997
MA	Arsep-ma	E, S, Tr	April/02	June/2000
MG	Arsemg	G, GTr	July/98	not privatized
MS	Agepan	E, G, Tr	December/01	November/1997
MT	Ager	E, G, S, Tr	January/99	November/1997
PA	Arcon	E, GTr	December/97	July/1998
PB1	Ageel	E, G	November/01	November/2000
PB2	Aagisa	I, S, W	November/01	Not privatized
PB3	Arpb	Generic	July/05	November/2000
PE	Arpe	E, G, Tr, W	January/00	February/2000
PI	No			not privatized
PR	Infrastructure Agency	GTr	July/02	December/1996
RJ1	Asep	G, R, S, Tr	February/97	November/1996
RJ2	Agetransp	GTr	June/05	November/1996
RJ3	Agenersa	G, W	June/05	November/1996
RN	Arsep	E, G	December/99	December/1997
RO	No			not privatized
RR	No			not privatized
RS	Agergrs	E, R, Tr	January/97	October/1997
SC	Arco	Generic	January/00	not privatized
SE1	Ases	E, G, GTr, W	June/98	December/1997
SE2	Agerse	?	June/02	December/1997
SP1	Cspe	E, G	October/97	November/1997
SP2	Artesp	Tr	January/02	March/1998
TO	Atr	E, G, GTr	December/00	September/1989

Note: E = electricity, G = natural gas, GTr = ground transportation, I = irrigation, P = petroleum, R = railroads, S = sewerage, Tel = telecommunications, Tr = general transportation, W = water, and WTr = water transportation.
Source: Brazilian Association of Regulatory Agencies. Privatization refers to the electricity distributor

Table 2: Indexes of Autonomy of Regulatory Agencies

State	Agency	Index of Autonomy
MG	ARSE-NI	0.7500
DF2	ADASA	0.6944
ES1	AGESP	0.6889
PR	Agency-PR	0.6778
SC	ARCO – NI	0.6722
PB1	AGEEL	0.6507
MS	AGEPAN	0.6326
RS	AGERGRS	0.6217
RJ1	ASEP	0.6078
PA	ARCON	0.6074
PE	ARPE	0.5787
RJ2	AGETRANSP	0.5778
SP1	CSPE	0.5519
AL	ARSAL	0.5374
SP2	ARTESP	0.5275
RJ3	AGENERSA	0.5111
GO	AGR	0.5022
AM	ARSAM	0.4907
CE	ARCE	0.4543
SE1	ASES	0.4333
AC	AGEAC	0.4111
BA	AGERBA	0.4109
ES2	ASPE- ES	0.3833
RN	ARSEP	0.3768
PB2	AAGISA	0.3754
MT	AGERMT	0.3478
MA	ARSEP/MA	0.3196
TO	ARESTO	0.2222
DF1	AGDF	
SE2	AGERSE	
PB3	ARPB	
	Average	0.5040
	Standard Deviation	0.1628
	Max	0.7500
	Min	0.0000

Note: The table was sorted from the largest to the smallest value

Figure 1: Indexes of Autonomy of Regulatory Agencies

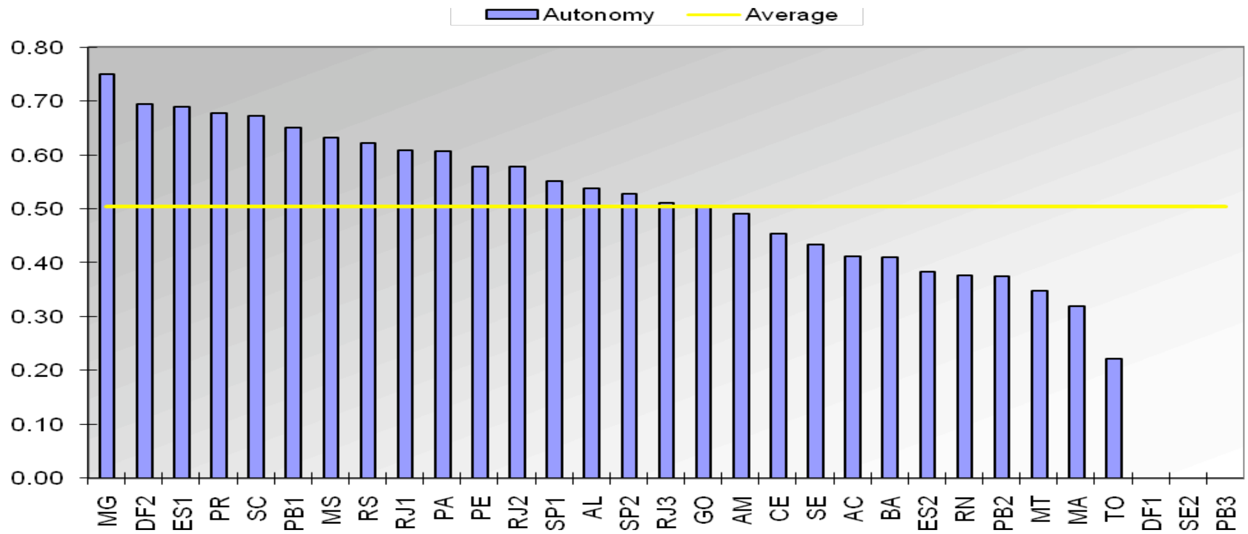
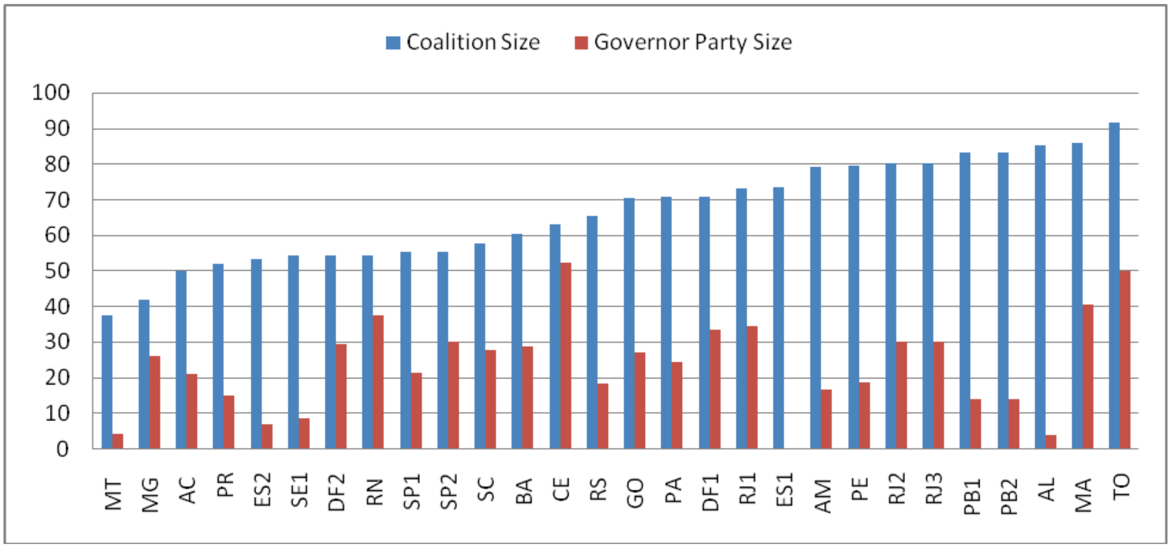


Table 3: Governor's Party Composition, Party Size, and Coalition Size

State	Governor's Party	Coalition's Parties	Governor's Party Size (%)	Governor's Coalition Size (%)
TO	PFL	PFL/PL/PPB/PSB/PSDB/PTB	50	91,7
MA	PFL	PFL/PMDB/PTB/PL/PSD/PSC/PT do B/PSDC	40.5	85,7
AL	PSB	PDT/PL/PMDB/PRTB/PSB/PSDB/PSL/PST	3.7	85,2
PB1-2	PMDB	PDT/PMDB/PSDB/PP/PFL/PPS/PTB/PV	13.9	83,3
RJ2-3	PMDB	PMDB/PSC/PP/PDT/PPS/PC do B/PRONA/PRTB/PSB/PSL/PT do B/PTB/PTN/PV	30	80
PE	PMDB	PMDB/PFL/PP/PL/PSDC/PSDB/PSL/PPS/PSC	18.4	79,6
AM	PFL	PFL/PTB/PMDB/PST/PSC/PL/PSDC/PMN/PRN	16.6	79,2
ES1	PV	PFL/PPB/PSDB/PTB/PMDB/PDT	0	73,3
RJ1	PSDB	PSDB/PFL/PMDB/PPB	34.3	72,9
DF1	PMDB	PMDB/PPB/PFL/PTB/PSDB/PSC/PSD	33.3	70,8
PA	PSDB	PSDB/PFL/PTB/PSD/PDT/PL/PPB	24.4	70,7
GO	PSDB	PSDB/PFL/PPB/PL/PST/PSD/PPS/PC do B/PDT/PSC/PSL/PST	26.8	70,3
SP2	PSDB	PSDB/PFL/PSD/PTB/PL/PRP	29.8	70,2
RS	PMDB	PMDB/PSDB/PPB/PTB/PFL	18.2	65,4
CE	PSDB	PSDB/PDT/PL/PSC/PTB	52.2	63
BA	PFL	PFL/PL/PTB/PPB	28.6	60,3
SC	PPB	PPB/PFL/PSDB/PL/PTB	27.5	57,5
SP1	PSDB	PSDB/PFL/PSD/PTB/PL/PRP	21.3	55,3
AC	PT	PT/PMN/PC do B/PSDC/PSB	20.8	54,2
DF2	PMDB	PFL/PRONA/PL/PMDB/PSDB/PRP	29.2	54,2
RN	PMDB	PMDB/PP/PSDB	37.5	54,2
SE	PSDB	PMN/PPB/PMDB/PSDB	8.3	54,2
ES2	PSB	PFL/PTB/PSB/PL/PSDB/PMDB/PMN/PSC	6.7	53,3
PR	PFL	PFL/PL/PPB/PPS/PSC/PSL/PTB	14.8	51,8
MG	PSDB	PSDB/PTB/PDT	26	41,6
MT	PDT	PSDB/PSB/PDT	4.2	37,5
MS	PT			

Source: Superior Electoral Tribunal (TSE) website and State Assemblies.

Figure 2: Governor's Party and Coalition Size



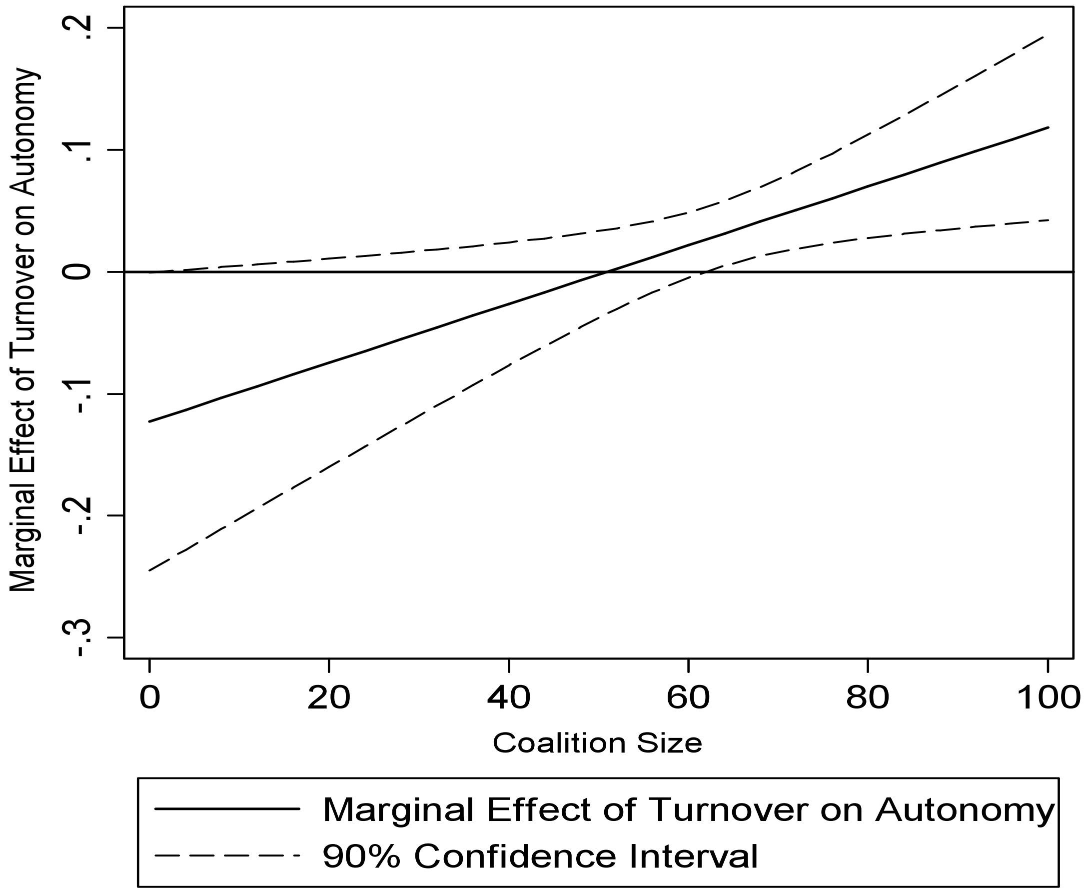
Source: Superior Electoral Tribunal (TSE) website and State Assemblies.

Table 4 – OLS Estimation of the Level of Regulatory Autonomy

	Models					
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	.4037***	.3135***	.4465***	.4828***	.8092***	.8090***
	(.0526)	(.0713)	(.1332)	(.1428)	(.1604)	(.1611)
Electoral Risk	.0411**	.0487***	.0506***	.0472**	.0594***	.0593***
	(.0185)	(.0181)	(.0172)	(.0190)	(.0176)	(.0206)
Turnover		.0355**	.0336**	.0329*	-.1230*	-.1227
		(.0169)	(.0163)	(.0170)	(.0700)	(.0740)
Coalition Size			-.0020	-.0021	-.0078***	-.0078**
			(.0020)	(.0019)	(.0027)	(.0029)
GDP p/capita				-4.0000		-7.000
				(7.0008)		(8.000)
Turnover*Coalition Size					.0024**	.0024**
					(.0010)	(.0011)
N	27	27	26	26	26	26
R^2	0.1157	0.2176	0.2659	0.2761	0.3486	0.3486

Robust standard error in parenthesis; Significance: 1% ***, 5% **, and 10% *

Figure 3: Marginal Effect of Elite Turnover on Regulatory Autonomy



Appendix

Survey for the Regulatory Autonomy Index

Values before squares indicate the points that should be attributed to that item when that has been the answer given by the interviewee. Values close to 1 indicate higher autonomy, whereas those closer to 0 suggest otherwise. The better the attribute is, the higher will be its corresponding value and, therefore, the higher will be the overall autonomy index. We do not discriminate in the weight given to each attribute (that is, all of them have the same weight).[14] Values were, then, rescaled to set each agency's index to a similar distribution, allowing for comparison among agencies. The rescaled score for agency *i* for each component *j* was

$$\tilde{I}_{ij} = \bar{I}_j + \frac{\left(I_{ij} - \bar{I}_j\right)}{SD_j}$$

where $\tilde{I}_{ij}$ = rescaled score of agency *i* in component *j*, $\bar{I}_j$ = mean of component *j*, I_{ij} = original score of agency *i* in component *j*, and SD_j = standard deviation of component *j*.

AUTONOMY

I.1) Does the legislation clearly define the duties and responsibilities of the regulator?

0☐ No 1☐ Yes

I.1.2) If not, how do you evaluate the degree of ambiguity in the definition of the agency's autonomy and objectives?

1. Very High	2. High	3. Medium	4. Low	5. Very Low
0.0☐	0.2☐	0.4☐	0.6☐	0.8☐

I.2) Does the legislation that created the agency define the roles of other institutions in the regulatory process?

0☐ No 1☐ Yes

I.2.1) In case it does, which:

Body or Institution	**Yes**	**No**
1. Judiciary	0.2☐	0.0☐
2. State Legislature	0.2☐	0.0☐
3. State Secretariat	0.2☐	0.0☐
4. Governor	0.2☐	0.0☐
5. Mayor	0.2☐	0.0☐
6. Political Parties	0.2☐	0.0☐
7. Individual federal or state deputies	0.2☐	0.0☐
8. Public Prosecutors' Office	0.2☐	0.0☐
9. State Audit Court	0.2☐	0.0☐

[Maximum total points are 1.0.]

I.3) In comparison to the past, do you identify differences in the relationship between the executive branch (i.e., Governor) and the agency in the last two years?

1☐ No 0☐ Yes

I.4) How do you evaluate the degree of interference by the state Governor in the agency's decisions?

1. Very High	2. High	3. Medium	4. Low	5. Very Low
0.00☐	0.25☐	0.50☐	0.75☐	1.00☐

I.5) Has the governor ever formally or informally interfered in the agency's policy-making process?

1☐ No 0☐ Yes

I.6) Has it ever happened that some directors have not completed their term?

1☐ No 0☐ Yes

I.6.1) If Yes, mark the reason?

Reason	**Yes**	**No**
1. Death 1	☐	☐
2. Retirement 1	☐	☐
3. Voluntary leave 0	☐	☐
4. External pressure 0	☐	☐
5. Dismissal 0	☐	☐
6. Other. Which one?	☐	☐

[Multiply every value if more than one reason appears.]

I.7) Which instruments are available for the state government to exert control over the agency? What is the efficacy of each of them?

Instrument	**Efficiency of Regulatory Instruments**				
	1. Very low	2. Low	3. Medium	4. High	5. Very high
1. Interfering with the agency's budget	1.00☐	0.75☐	0.50☐	0.25☐	0.00☐
2. Changing the agency's directorship	1.00☐	0.75☐	0.50☐	0.25☐	0.00☐
3. Appointing new directors	1.00☐	0.75☐	0.50☐	0.25☐	0.00☐
4. Altering the order decisions are made	1.00☐	0.75☐	0.50☐	0.25☐	0.00☐
5. Other. Which ones?	1.00☐	0.75☐	0.50☐	0.25☐	0.00☐

[Add the most efficient row.]

I.8) What is the source of the agency's budget? Please, identify the percentages of each source.

Component	**Percentage**	**Yes**	**No**
1. Government budget		0☐	0☐
2. Fines		1☐	0☐
3. Donations		1☐	0☐
4. Transfers from the federal agency (agreements)		1☐	0☐
5. Regulation tax		1☐	0☐
4. others		☐	☐

[If *yes* only in item 1 = 0.0, if *yes* in both item 1 and either item 2, item 3 or item 4 = 0.5, if *yes* in item 2 to 4 = 1.0.]

I.9) Does the agency have financial autonomy to determine its own expenses?

☐ No ☐ Yes

I.10) Have the agency's resources been impounded (*contingenciados*) by the executive in the last three years?

1☐ No 0☐ Yes

I.11) How do evaluate the problems that impoundments might cause for the functioning of the agency?

1. Very High	2. High	3. Medium	4. Low	5. Very Low
0.00☐	0.25☐	0.50☐	0.75☐	1.00☐

I.12) Does the agency have its own legal department?

0☐ No 1☐ Yes

I.13) Do directors' terms coincide with the executive's (Governor)?

0☐ No 1☐ Yes

I.14) Does state legislature need to approve the nomination of the director by the executive?
0.0☐ Governor acts unilaterally
0.5☐ If the executive nomination is not approved in three rounds of vote the Governor's choice prevail
1.0☐ Legislative approval is required

I.15) Does the state legislature have a seat in the agency's board (or other similar entity)?

0☐ No 1☐ Yes

I.16) Is there a possibility that a representative of the regulated industry, of the agency's employees, or of consumers is appointed as president, director or a board member?

0☐ No 1☐ Yes

I.17) Is legislative authorization necessary for the dismissal of an agency's director or its president?

0☐ No 1☐ Yes

I.18) It is forbidden for directors to:
1.0☐ An elected position before the term at the agency
0.5☐ An elected position during the term at the agency
0.0☐ There is no prohibition

I.19) Is experience a prerequisite for an individual to be appointed as a director?

0.0☐ No 0.5☐ Yes (length of time not specified) 1.0☐ Yes (more than 5 years of experience)

I.20) How can the directors be fired?
0.0☐ *Ad nutum*
0.5☐ In cases in which "they jeopardize the integrity or independence of the agency"
1.0☐ Only in cases of crimes as defined by administrative law

I.21) Agency's directors came from:

Origin	**Dir. 1**	**Dir. 2**	**Dir. 3**	**Dir. 4**	**Dir. 5**
1. Old public companies in the same sector	0.2☐	0.2☐	0.2☐	0.2☐	0.2☐
2. Corresponding line ministry	0.0☐	0.0☐	0.0☐	0.0☐	0.0☐
3. Secretariat (state/municipal)	0.0☐	0.0☐	0.0☐	0.0☐	0.0☐
4. Legislative Assembly	0.2☐	0.2☐	0.2☐	0.2☐	0.2☐
5. Political parties	0.2☐	0.2☐	0.2☐	0.2☐	0.2☐
6. Private companies in the same sector	0.6☐	0.6☐	0.6☐	0.6☐	0.6☐
7. Private sector (consultant, etc.)	1.0☐	1.0☐	1.0☐	1.0☐	1.0☐
8. University or academia	1.0☐	1.0☐	1.0☐	1.0☐	1.0☐
9. Other. Which?	1.0☐	1.0☐	1.0☐	1.0☐	1.0☐

[If a director has more than one origin, then use the lowest score. Make the average for all directors.]

I.22) Agency's directors are selected through:

Selection Process	**Yes**	**No**
1. Indication of the Executive	0.5☐	0.0☐

2. Indication of the Legislature	0.5☐	0.0☐
3. Both 1 and 2	1.0 ☐	0.0☐
4. Headhunters	1.0☐	0.0☐

[Use the average of the checked items.]

I.23) The formal process of director selection:

Selection Process	**Yes**	**No**
1. Has clear rules	0.5☐	0.0☐
2. Has clear rules and is merit-based	1.0☐	0.0☐
3. Does not have clear rules	0.0☐	1.0☐
4. Is not based on merit	0.0☐	1.0☐

[If each row was differently answered, take the average. Maximum total points are 1.0.]

I.24) Agency's directors, after their terms in office, were employed:

Employment	**Dir. 1**	**Dir. 2**	**Dir. 3**	**Dir. 4**	**Dir. 5**
1. By the largest private regulated firm	0.0☐	0.0☐	0.0☐	0.0☐	0.0☐
2. By another regulated firm	0.2☐	0.2☐	0.2☐	0.2☐	0.2☐
3. By the private sector in general (consultant, etc.)	1.0☐	1.0☐	1.0☐	1.0☐	1.0☐
4. By the old public enterprises in the same sector	0.8☐	0.8☐	0.8☐	0.8☐	0.8☐
5. By the corresponding line Ministry	0.4☐	0.4☐	0.4☐	0.4☐	0.4☐
6. By the corresponding secretariat (state/municipal)	0.4☐	0.4☐	0.4☐	0.4☐	0.4☐
7. By university	1.0☐	1.0☐	1.0☐	1.0☐	1.0☐
8. Other, which?	0.0☐	0.0☐	0.0☐	0.0☐	0.0☐

[If a director has more than one job after leaving the agency, use the lowest value. Use the average of the checked items.]

I.25) Does the agency have a quarantine rule for its directors?

0☐ No 1☐ Yes

I.25.1) If so, how long is it?

Time (Months):

I.26) [G] Is the quarantine paid? 0☐ No 1☐ Yes

Endnotes:

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[1] The way we operationalize political uncertainty is also new. Instead of using government's popularity as a proxy of its durability we use polls regarding the decision to vote in the gubernatorial race. The use of popularity data is not suitable in countries where there are term limits, as in Brazil.

[2] A related argument builds on the notion of credibility. Independent institutions that result from great delegation reflect the degree to which the executive and or the legislative seek to bind their hands in other to acquire credibility (Levy e Spiller, 1996; Spiller and Tiller 1997, Mueller and Pereira 2002). Thus by delegating powers to independent regulatory agencies or to central banks, the executive (or both) gains because by doing so it assures third parties (e.g. investors, market operators) that it will not be able to intervene in the market (lowering interest rates or administratively expropriating investors after privatization through lower tariffs). In this argument, delegation typically involves an inter-temporal choice: by relinquishing short-term interests, political actors can benefit in the long run. Different degrees of credibility or reputational problems are expected to lead to different levels of delegation.

[3] As Cheibub (2007) argues, chief executives are the formateur of coalitions and where they enjoy extensive powers the equilibrium outcomes in the coalition formation game is primarily dependent on the ability of the President to offer pork and portfolio participation to coalition partners. Other relevant factors affecting their equilibrium include the distribution of preferences in the policy space, the reversion outcome, and the expected future electoral chances of the other parties.

[4] Although governors are the dominant players at the subnational level, the same picture seems no longer accurate at the national level as used to be claimed by the "hyperpresidentialism" interpretation of Brazilian politics (Abrucio 2002). In fact, the national executive throughout most of the last decade has been able to have its agenda implemented by recentralizing the political game. There is no evidence that state loyalties by

legislators undermine party lines or creates trouble for the executive (Cheibub, Figueiredo and Limongi 2002).

[5] Most of the federal regulatory agencies exhibit very similar institutional design.

[6] *Gazeta Mercantil*, 19/11/1999.

[7] The questionnaire used in the survey was made up of 26 questions (See the Appendix). The authors applied the questionnaires during visits to 31 agencies from April to June 2005 or during the Conference of Brazilian Regulatory Agencies in Manaus. Similar indexes aimed at measuring agency autonomy have been widely used in the literature on regulatory agencies (Gutierrez 2003; Holder and Stern 1999; Stern and Cubbin 2003; Andres, Guasch, Makhtar, and Azumendi (2008).

[8] In this latter case, the risk would change because it is calculated for the incumbent. Thus while the risk for a newly elected opposition governor in January 1999 in landslide victory, would be 1, the risk for the incumbent in 1998, in the same state, would be 5.

[9] Because 19 governors sought reelection in 1998, an incumbent's candidate appeared in a small number of cases.

[10] For all cases, the vote for the two candidates reached at least 80% of the total. In the rare cases in which the vote was split between three candidates (as occurred in Sao Paulo, Rio Grande do Sul, Mato Grosso), we added the votes for the candidates according to ideological criteria (e.g. PSDB and PT against Paulo Maluf (PPB). Thus, this variable Risk, in fact, captures the ex ante electoral risks.

[11] The descriptive statistics of all variables used in the models are available upon request.

[12] Given that the econometric exercises are based on 26-27 observations only, their results should be interpreted as suggestive, but far from definitive. However, the fact that we found significant results with so few observations is noteworthy and encouraging. The results are robust to the use of a Censored regression model (Tobit) to correct for estimation errors resulting from the fact that the data for autonomy is an index normalized between 0 and 1 (Greene 2008, 869-881).

[13] This figure was created with the help of code provided as an accompaniment to work by Brambor et al. (2006), available at http://homepages.nyu.edu/~mrg217/interaction.html.

[14] In each component, an average with equal weights was taken of all the questions asked (the number varies for each component). Because each question has a minimum value of 0 and maximum of 1, the component

index ranged between 0 and 1. The weights were set equally because no theoretical basis exists for determining differentiated weights. Nevertheless, sensitivity analysis can easily be performed by altering the weights in the spreadsheets containing the data.