

**An Archipelago of Excellence?
Autonomous Capacity among Brazilian State Agencies**

Katherine Schlosser Bersch, Sérgio Praça, and Matthew M. Taylor¹
Contact email: mtaylor@american.edu

Abstract:

Drawing on the Brazilian case, this paper develops a new measure of state capacity for evaluating the performance of specific bureaucratic agencies within national states. The measure, which is made possible by the rising availability of online information about government personnel, permits a nuanced evaluation of influential theoretical questions regarding developmental capacity, state autonomy, and the politicization of state bureaucracies.

We first set out a basic definition of state capacity, distinguishing it from other related concepts and definitions in the social science literature. We then present an objective new measure, the State Capacity Index (SCI), which evaluates state agencies on three axes: career strength, agency career specialization, and politicization. We conclude with some preliminary tests of the measure's utility in analyzing agency level capacity in Brazil, with specific reference to the literature on corruption and accountability.

**Paper presented at the Princeton University – Universidade de São Paulo Conference on
“State Capacity in the Developing World”, São Paulo, Brazil, February 2012.**

DRAFT – COMMENTS AND SUGGESTIONS ARE HEARTILY WELCOMED

¹ Katherine Schlosser Bersch is Ph.D. Candidate, University of Texas – Austin; Sérgio Praça is a post-doctoral fellow at the Fundação Getulio Vargas, in São Paulo, Brazil; and Matthew M. Taylor is assistant professor at the School of International Service, American University.

(I) Introduction

The notion that government agencies function better in developed countries than in developing countries is well-accepted by journalists, pundits, and social scientists. A quick perusal of the so-called BRICs reveals excessive informality in Russia (Ledeneva 2006), enormous partisan influence in China (McGregor 2010) and inefficiency and particularism in India (Gould 2010). While Brazil fares somewhat better, there is clear variation in the bureaucratic capacity of different federal agencies. Laurence Whitehead (2006, 96) summarizes the extant literature on the Brazilian case thus: “Certain federal agencies are known to be the instruments of unfettered patronage, whereas others pride themselves on their technical competence and professionalism.”

Indeed, the existence of bureaucratic “pockets” or “islands of excellence” has been a major argument used to explain how under-developed Brazil achieved economic growth and developed during a large period of the twentieth century.² Little attention has been given, however, to empirical measures of state capacity, much less to the effects of state capacity in terms of concrete policy outcomes. This essay begins to address these questions with a State Capacity Index (SCI) based on three core attributes of bureaucratic agencies: i) career strength; ii) agency career specialization and iii) politicization.

(II) State capacity: conceptual muddle and measurement trouble

Hendrix (2010, 273) notes that “[s]tate capacity is a quality conspicuous both in its absence and presence, but difficult to define.” A plethora of definitions have been used in various branches of the social sciences, which frequently overlap or bleed over into other concepts such as “state autonomy.” Together, they are used to explain why certain states are comparatively unable to achieve a variety of objectives, ranging from peace and growth to literacy and health.

To complicate matters, a wide range of analysts have tackled state capacity, including scholars of international relations (e.g., Kocher 2010, Hendrix 2010; Thies 2004, 2005, 2007, 2010), economics and economic history (e.g., Acemoglu et al 2011; Cárdenas 2010; Besley and Persson 2009), political science and sociology (e.g., Skocpol 1979, Geddes 1990, Evans and Rauch 1999, 2000), and of course, public administration (e.g., Weber 1919). Alongside these come a series of measures of various aspects of state capacity by the private sector (e.g., ICRG, EIU and Bertelsmann management performance indices) and multilateral agencies (e.g., World Bank Governance Indicators). The definitions adopted are seldom consistent, and yet they frequently cross-reference each other in such a manner as to generate a considerable conceptual muddle.

This conceptual muddle is intertwined with measurement trouble. Social scientists have typically proxied state capacity either by evaluating the state’s ability to extract revenue (Levi 1988; Cheibub 1998), or by conducting expert surveys of state bureaucracies’ recruitment processes and effectiveness (e.g., Evans and Rauch 1999). Both of these proxies provide an approximation of some elements of state capacity, conceptual ambiguities notwithstanding, yet they suffer from

² It is also a factor taken into account when bureaucrats search for positions within the government, with different personal ambitions leading to important differences in the choice of agency. Interview with Fernando Chagas at the Ministério do Desenvolvimento Social e Combate à Fome, Brasília, December 7, 2011.

various shortcomings which limit their ability to say much about the administration of the state except in very broad terms.

Revenue extraction is useful at explaining broad structural questions of state formation and comparing states in historical perspective, but it tells us very little about the effectiveness of state bureaucracies in implementing specific policies. After all, it is possible that some states are quite good at extracting revenues, and simultaneously quite bad at effectively implementing welfare-enhancing policies, either because of excessive bureaucratic politicization or corruption, for example. More confounding still will be those states that are excellent at implementing some policies, but terrible at others. Expert assessments are also useful in benchmarking states against each other, but they are of course subjective, and thus do not provide a good longitudinal measure across time, since one year's survey may well do nothing more than reflect a previous year's influence. Further, because of their expense, expert surveys usually fail to differentiate among bureaucratic agencies, and thus paint only the broadest of pictures about actual national state capacity.

In this paper, we adopt a narrow definition of state capacity, which we hope can address some of these confounding problems and permit agency level analysis. The ideal we adopt is the Weberian legal-rational state: a professionalized bureaucracy capable of implementing policy in a neutral fashion. Briefly put, our definition of state capacity refers to the legal-rational capacity of the state, that is, the "ability of a professional bureaucracy to implement policy without undue external influence." This definition says nothing about the ends of policy, and offers no subjective evaluation about the desirability of these ends, but rather addresses the ability of the state bureaucracy to effectively implement the policies that are selected by the political leadership.

This minimal definition has only three core components: 1) a professional bureaucracy, 2) with the ability to implement policy, 3) free of external influences. By professional, we mean the degree to which public servants specialize in a specific field, distinct from other careers and marked by clear standards for training, remuneration, and advancement. The ability to implement policy refers to the degree to which capital and human resources are available, and the hierarchy by which policy decisions are passed down through the bureaucratic pyramid. Freedom from external influence refers to freedom from particularistic pressures, whether interest-based (e.g., business interest groups) or politically-motivated (e.g., congressional interests), that might jeopardize the impersonal or universalistic implementation of policy.

Even this simple definition is not free from confusion. Bendix (1969), for example, famously pointed to the distinct forms that political neutrality takes in US and German bureaucracy.³ And there is a long litany of critiques of the Wilsonian notion of a neutral bureaucracy that only implements decisions taken by political authorities (e.g., Loureiro et al. 2010).

³ In the US, the 1939 Hatch Act seeks to actively limit federal employees from participating in partisan activities, limiting their independence ex ante. By contrast, in Germany the view is that ex ante extraordinary protections for civil servants will enable them to maintain their independence from external interests: German civil servants are able to participate actively in politics, with the assumption that such participation will allow them to maintain a studied neutrality in their application of bureaucratic procedure.

Nonetheless, using this minimal definition does not require us to believe that bureaucracies are entirely neutral instruments of implementation, without goals or influence of their own.⁴ Rather, it permits us to better specify what we mean by state capacity, so as to better measure how closely its core attributes in a given agency approximate the ideal. At the very least, this will provide an objective benchmark for cross-case analysis, and permit inter-agency comparisons. Later in the paper, we will test how these agency-level measures of state capacity can be employed as an independent variable to help explain accountability outcomes. But first we turn to a brief overview of our case, Brazil.

(III) State capacity in Brazil

A prestigious and highly influential literature addresses state capacity in the Brazilian case, coming to somewhat contradictory conclusions. Some draw attention to the Brazilian state's difficulty in advancing industrial or trade policies (Evans 1995; Cason and White 1998), especially as compared with Asian nations, while yet others point to its policy success as a developmental state, relative to its Latin neighbors (Sikkink 1991). Despite a relatively low academic opinion of Brazilian bureaucracy (e.g., Schneider 1987, 1991, 1999), the state bureaucracy at the federal level does quite well in regional rankings, outscoring all other Latin American nations in a variety of studies (Stein et al. 2006, 71, 134, 152; Stein and Tommasi 2005; Zuvanic, Iacoviello and Rodríguez Gusta 2010). These contradictory results arise in large degree from the standard of comparison and, particularly, depend on what policies or country cases are being compared with Brazil. Indeed, on most contemporary cross-national measures of state capacity, Brazil is middle-range, with neither superlative nor abysmal performance (Figure 1).

[Insert Figure 1 about here]

Whatever the true nature of its state capacity, Brazil has a prominent role in the comparative politics literature. As a prominent case study, it has contributed to the development of at least two core arguments about state capacity which motivate our research.

First, the country has served as a crucial test case for scholars attempting to relate state capacity to state autonomy. A broad literature posits that the state must be sufficiently strong to resist pressures from organized interests seeking special treatment (Haggard and Kaufman 1992, 23). But alongside this insulation from external pressures must come some interaction with society: "insulation...does not imply a lack of responsiveness either to popular demands or to interest groups. On the contrary...bureaucrats need protection from politicians' efforts to transform state resources into particularistic benefits for supporters in order to respond effectively to popular demands" (Geddes 1994, 49). The "semipermeable membrane" surrounding insulated bureaucracies should preserve the organizational integrity and goals of the bureaucracy, but also permit the bureaucracy to receive information and resources from society (Geddes 1994, 50).

This is a fine balance: in such a porous bureaucracy, there will always be the risk of privileging some interests over others, but the benefits of representation should offset that risk by ensuring

⁴ Indeed, as Geddes (1994, 6) notes, the literature on state autonomy has performed a useful service by "establishing that officials do at times act on the basis of their own ideologies and preferences".

that policies are more effectively designed and implemented (Pio 1997, 184). This so-called “embedded autonomy” (Evans 1992, 1995) is complex and unstable, but ultimately the interaction with society may provide solutions that insulation alone would not. Much research on autonomy addressed either the military regime (which privileged technocratic solutions) or its legacy, pointing both to the simultaneous autonomy of the state and its permeability to particularistic influences (as in Cardoso’s 1975 notion of *anéis burocráticos*). But little is objectively known about how this situation has evolved under democracy.

Second, the Brazilian case calls attention to the possibility of a dual track, with the simultaneous existence of low state capacity alongside a handful of high capacity bureaucratic agencies, marked by strong performance and clear insulation from the clientelistic practices of the broader political system. Such “islands of excellence” or “pockets of efficiency” coexist alongside informal, patrimonial and clientelistic practices in less-regarded bureaucratic agencies.⁵

Reformist governments have frequently sought to increase policy effectiveness in core functions, yet seemingly have been unable or unwilling to completely overhaul clientelistic practices that have vitiated the Brazilian state since the early 19th century (Andrews and Bariani 2009; Abrucio et al. 2010, Nunes 1997). Despite nearly a century of reform – beginning with the creation of a professional military officer corps under War Minister Hermes da Fonseca in the early 1900s, followed by the creation of the Department of Public Service Administration (DASP) under Getulio Vargas, and culminating in Minister Bresser Pereira’s civil service reforms in the 1990s⁶ – modern and quite capable bureaucratic agencies have long coexisted with patronage and clientelistic practices, forming what the title of this paper labels an “archipelago of excellence” among a sea of sub-Weberian organization.

These tendencies have not been uprooted by democracy; indeed, they may even have been further exacerbated by the prevailing system of “*presidencialismo de coalizão*” (Abranches 1988), with its tacit bargain of legislative support from political allies in exchange for a free hand in government ministries. To keep ministries broadly aligned with government priorities and avoid the worst excesses, presidents have customarily appointed the “number-twos” of the ministries controlled by political parties different from the president’s (Loureiro et al 2010b; Praça, Freitas and Hoepers 2011).

But the fact of the matter is that despite these efforts to establish minimal controls, many agencies, along with their budgets and contracts, are turned over to allied parties with a tacit blind eye to potential malfeasance. This Faustian bargain has been at the heart of President Dilma Rousseff’s recent ministerial troubles, but it is a longstanding practice that can be traced to the early days of the current democratic regime, with roots that carry back even further. It is a recurring and particularly well-established manifestation of the “politicians’ dilemma” described

⁵ The islands of excellence mentioned in the literature are: the BNDE national development bank (now BNDES); the now defunct trade authority CACEX; the monetary authority (SUMOC), now the Central Bank; the now shuttered Departamento Administrativo do Serviço Público (DASP); the Foreign Ministry, Itamaraty; Kubitschek’s Executive Groups and Work Groups; and the now defunct Foreign Exchange Department of the Bank of Brazil (Evans 1995, 257; Schneider 1987; Willis 1986; Geddes 1994; Martins 1985).

⁶ For concise histories of the evolution of state bureaucracies and efforts at modernizing the civil service, see Abrucio et al. 2010, Fausto and Devoto 2004, and Bresser Pereira 1998.

by Geddes (1994), according to which politicians face a conflict between the need to consolidate political support in the short term and the objective of developing state capacity in the long-term.

Neither of the arguments above can be clearly addressed with cross-national measures of state capacity. The extant literature on autonomy, while increasingly dated, points to a broad range of politically insulated, high performing islands of excellence, whose existence is not clearly discernible in cross-national, average measures. Second, the previously discussed subjectivity of extant measures of agency capacity suggests that they may not be identifying all of the relevant agencies, nor can tell us much about the relative evolution of state capacity across agencies over time. With these concerns in mind, the next section presents a new measure of state capacity, with the hope that the usefulness of this data for testing hypotheses in Brazil, along with advances in online data availability, might soon permit the construction of comparable measures in other countries, as well as at the subnational level.

(IV) The State Capacity Index (SCI)

Extant measures of state capacity can be critiqued on measurement grounds due to their incompleteness, subjectivity, and conflation of past performance with current capacity. Extant measures are frequently incomplete, as with measures of budget that do not analyze career tracks, for example. They are also frequently subjective, due in large part to their reliance on surveys or expert interviews. This can lead to tautological arguments that confuse high performance with high capacity. Worse yet, it may lead researchers to erroneously classify high capacity agencies as low capacity on the basis of poor performance, when in fact capacity is high but performance is weak because of problems elsewhere in the policy process, such as during implementation or budgeting. Finally, because many measures assume that past performance correlates with current capacity, they cannot be usefully employed for inter-temporal comparison.

This section describes an original dataset we have compiled on the Brazilian federal civil service that circumvents these problems. The State Capacity Index (henceforth, SCI) provides an *objective measure* of state capacity that is independent of, and can be compiled prior to, hypothesis testing about the *effects* of state capacity. Furthermore, drawing on advances in data transparency and availability, it is developed from public data on *individual* civil servants, rather than aggregate institutional characteristics, which permits fine-grained analysis of the evolution of agencies' capacity over time.⁷

Our index is thus highly exportable, subject only to variance in the rules governing career tracks, civil servant politicization and, of course, data availability in other countries. It is also broader than many contemporary studies, going beyond the study of economic agencies alone (e.g., Loureiro et al. 2010), and, in the long run, it may allow for the teasing out (or specification) of clearer causal mechanisms between organizational characteristics and policymaking outcomes.⁸

⁷ One convenient side-effect of studying individuals, rather than ministries, is that it permits aggregation at the agency level. Given the frequent tendency of Brazilian presidents to reshuffle agencies into new cabinet ministries, the agency-level measure allows the tracking of bureaucratic agencies as they migrate from ministry to ministry.

⁸ On this last topic, see Heimann 1993.

What does the SCI cover? There are currently more than 10 million civil servants in Brazil, of whom roughly 1.1 million are federal employees. Of these federal employees, around 156 thousand work for other branches of government, such as the Prosecutor’s Office, Congress and the Judiciary. Another 350 thousand are members of the armed services and 40 thousand are employees of state companies. Of the remaining 595 thousand who are federal “estatutários”, formally contracted by civil service exam, our dataset analyzes 314 thousand. This difference is due to the fact that we have excluded federal universities and research centers⁹, as well as other agencies that do not pass muster in our definition of what is a federal agency. Further, data is missing for some employees, meaning that the SCI captures 260 thousand employees, or just over four of every five civil servants in the 90 federal agencies (Table 1).¹⁰

[Insert Table 1 about here]

A federal agency in Brazil is an agency that is responsible for the implementation of a certain policy or set of policies, not only oversight, and it necessarily has a national jurisdiction. These criteria exclude regulatory agencies and federal universities. There are 327 agencies identified in our core dataset obtained from the federal government’s official public transparency website, the *Portal da Transparência do Governo Federal*. We have divided them into five types, as Table 2 shows. After removing agencies that have only a peripheral role in national policy implementation, 90 agencies remain (Type E in Table 2).

[Insert Table 2 about here]

There are three core components to the SCI, listed in Table 3. Below we briefly describe each of them and the theoretical justification for their inclusion. Appendix 1 offers a more detailed explanation of index construction.

[Insert Table 3 about here]

Career strength is the proportion of civil servants within the agency who are essential to that agency’s function, divided into two categories:

- a. “core career” measures the percentage of employees who belong to a career that is specific to the agency’s mandate, such as federal attorney in the attorney general’s office or tax analyst in the Federal Revenue Service;

⁹ There are 104 thousand professors and 114 thousand administrative personnel in these institutions.

¹⁰ A caveat must be made about the data pertaining to this specific set of variables. Roughly 65 thousand employees hold some sort of managerial or advisory function besides the one that pertains to their main occupation. For example, a “*delegado da polícia federal*” who manages a certain piece of the agency is identified in our dataset as a “manager”, and not as a “*delegado da polícia federal*.” This makes it impossible to assert exactly how many employees belong to each career in each agency, though the quality of this data varies enormously from agency to agency. (It is possible, however, to know how many employees belong to each civil service career globally – that is, not specified by agency, which makes this less interesting for our analysis. See table 2.22 of the Boletim Estatístico de Pessoal n. 184, August 2011). This leaves us with data on 260 thousand employees, representing an average of 80% of the total permanent civil service workforce within the 90 federal agencies.

- b. “specialist career” measures the percentage who belong to a career which is not specific to the agency’s mandate, though they are trained as experts in cross-government policy administration, such as *Especialistas em Políticas Públicas e Gestão Governamental* (EPPGG), *Analistas de Finanças e Controle*, or *Analistas de Planejamento e Orçamento*.¹¹ These career paths are transversal, meaning that their members can be transferred across agencies throughout their careers, but they are also an elite group.

There are also “non-essential career” employees, those who belong to a career that is not specific to the agency’s mandate. This might include generic jobs that could be conducted in any number of agencies, such as a doorman or receptionist, but it might also include specialized personnel, such as a Revenue Service analyst housed in the Attorney General’s Office.

We assume that the greater the proportion of core career and specialist careers, the stronger the *esprit de corps* and more importantly, the more likely it is that procedures and rules are settled, established and implemented effectively, at least from the perspective of that agency’s core attributions. The more “core” employees an agency has, the better equipped it is to formulate its policies and perform its tasks.

Agency career specialization adapts the essential notions of the Evans and Rauch (1999) “Weberianness Scale” to the Brazilian case.¹² The Evans and Rauch scale used survey measures of four variables: competitive salaries, internal promotion, meritocratic recruitment, and career stability. They justify these variables as a measure of bureaucratic performance thus:

Making entry to the bureaucracy conditional on passing a civil service exam...and paying salaries comparable to those for private positions...should produce a capable pool of officials. The stability provided by internal promotion allows formation of stronger ties among them. This improves communication, and therefore effectiveness. It also increases each official’s concern with what his colleagues think of him, leading to greater adherence to norms of behavior. Since the officials entered the bureaucracy on the basis of merit, effective performance is likely to be a valued attribute...The long-term career rewards generated by a system of internal promotion should reinforce adherence to codified rules of behavior. Ideally, a sense of

¹¹ Specialist careers were created during the Sarney government in the hopes of modernizing the civil service. Career specializations were created in Foreign Trade; Finance and Control (AFC); Planning and Budget (APO); and Public Policy and Government Administration (EPPGG). The idea was to create an elite core of specialists, with each career specialization under the responsibility of a particular ministry: APO and EPPGG belonged to the Planning Ministry and EPPGG to the Finance Ministry. Each ministry would have control over hiring, employment and professional development for its program. There have been problems with the programs, including: the incorporation of old civil servants without specific training; hiatuses in hiring (Guerzoni Filho 1996, 48-49); a relatively small number of members, totaling less than 3,000 within the civil service (Cruz 2008, 105); and inter-ministerial jealousies. However, the programs have nonetheless created an elite force that has been essential in creating new capacity, as in the CGU. Simultaneously, the transition to democracy brought new attention to core careers, such as the core careers within the DPF, which were created in 1987 and have been deepened since.

¹² Evans (1992, 1995) develops a “Weberian state hypothesis,” that “replacement of a patronage system for state officials by a professional state bureaucracy is a necessary (though not sufficient) for a state to be ‘developmental’” (Evans and Rauch 2000, 50).

commitment to corporate goals and ‘esprit de corps’ develop (Evans and Rauch 2000, 52).

Application of these variables at the agency-level presents some challenges. Because the Brazilian civil service is governed by the same rules nationally, there is no inter-agency variance in the final two variables, meritocratic recruitment and career stability, both of which are protected by law. Meanwhile, the complexity of collecting data using objective rather than subjective measures poses a problem in relation to the first two components, competitive salaries and internal promotion.

Available data shows that average federal civil service salaries are nearly twice as large (+98.6%) as those of comparable private sector workers, controlling for gender, race, age, education, experience levels, union membership, and geographic location (Marconi 2010, 251-254). But objectively comparing specific individual civil servants’ wages and career trajectories to those of their private sector counterparts would require an unviable investment of time and data analysis.¹³

In light of these problems, we attempt to address the core question posed by Evans and Rauch – “the degree to which core state agencies are characterized by meritocratic recruitment and offer predictable, rewarding long-term careers”— by looking at three variables.

- a. Average longevity: what is the average public service tenure of civil servants in the agency? Here, we are interested in judging turnover within the agency, which might reflect instability and dissatisfaction, or alternately, might reflect a relatively new agency.
- b. Existence of core career: is there a career path within the agency, related to the agency’s core responsibilities, which might offer a rewarding career?
- c. Civil servants requisitioned from other agencies: as a measure of the extent to which the agency bureaucracy is autonomous or instead dependent on skilled staff from other agencies to function adequately.

Politicization: It is virtually impossible to develop an objective empirical measure of “embedded autonomy.” The previous variable, agency career specialization, gets at some elements of insulation, such as career protections. But it is difficult to measure interactions between bureaucrats and society, especially when some of these interactions are being purposefully obfuscated.¹⁴ In light of this measurement problem, we resort to a second-best operationalization, measuring the number of political appointments within the bureaucracy, which we assume

¹³ For example, to objectively evaluate how competitive salaries are, it would be necessary to analyze each job holder’s position against a comparable private sector position at a given stage in each person’s career. As for internal promotion, an objective measure would need to look at three possible promotion paths for each individual civil servant: rising educational levels, participation in a “*função gratificada*” of higher responsibility, or appointment to a political appointment slot. Again, this would not be impossible, but it is a task that is simply beyond our means here.

¹⁴ One possibility is network analysis. For example, Marques (2004) maps out relationships between business and government in São Paulo state to illustrate how networks of state relations influence public bidding. However, this is an enormously time-consuming process, and thus impractical as a component in an index of this breadth and scale.

illustrates political (and not necessarily presidential) influence over bureaucratic tasks.¹⁵ Brazil has an elaborate system called DAS (an acronym for *Direção e Assessoramento Superior*, or High Level Execution and Advisory) appointments. They were first implemented during the military dictatorship in 1970 and kept alive in the 1988 Constitution. DAS appointees are responsible, along with the minister, for the most important decisions taken in each ministry. One can divide the DAS appointees in two groups: DAS-1 to 3 and DAS-4 to 6.

The first group is made up of low-level positions, with little policy formulation competence. They are paid from R\$ 2,115 to 4,042 (US\$ 1,200 - 2,200). Higher-level DAS appointees – DAS-4 to 6 – are paid from R\$ 6,843 to 11,179 (US\$ 3,880 – 6,351) and control, influence and implement policies according to directives put forth by the minister and/or political parties. If the appointee is a career bureaucrat, he can opt to receive the full salary given to the position he gained by merit plus up to 60% of the DAS wage, a comfortable choice that some analysts consider excessively generous (De Bonis and Pacheco 2010, p. 359-360). Since July 2005, DAS appointees have been formally nominated by the Planning Minister (D’Araújo 2009, p. 20), benefiting from informal consultation with the minister of the *Casa Civil*. Also in 2005, a decree established that 75% of the lower-level DAS appointees and half of the DAS-4 appointees had to be occupied by civil service career bureaucrats.

We consider: i) the proportion of DAS appointments filled by party members. That is, the number of partisan political appointees divided by the total of potential political appointment offices in the agency; and ii) the proportion of regular civil servants who are party members.

(V) Illustrative tests of the SCI

In this section we undertake a preliminary foray into the data to test the SCI’s potential use as an empirical tool. The first case addresses the objective empirical question of which agencies have greatest or least capacity. The next three cases experiment with the effectiveness of using the SCI as an independent variable to explain distinct accountability outcomes from a variety of comparative perspectives.

(A) Islands of excellence

As noted earlier in the paper, the “islands of excellence” argument has been prominent in discussions of Brazilian state capacity. But many of the islands discussed in the literature (see complete list in supra footnote 5) are no longer in existence, such as the DASP, while others have changed so significantly as to call into question whether they still excel, such as the SUMOC, now the Central Bank. Furthermore, we have no idea whether this list is complete, or whether it misses other agencies that deserve to be included.

The SCI provides a concrete and objective measure to identify high capacity agencies. Confirming one frequent argument, the average SCI scores by agency communities illustrates

¹⁵ 17 of the 90 agencies we study do not have political appointment slots. See D’Araújo (2007), Câmara (2009) and Pacheco (2010) for a review bonuses and gratifications offered to career civil servants in the Brazilian federal bureaucracy.

that the economic policy agencies are already a step ahead of their counterparts (Figure 2). A latent hypothesis in both the literature and the popular media suggests that the great influence of technical expertise in the economic policy community, combined with strong presidential insulation from political pressures, might contribute to better performance by these agencies. The SCI results in Figure 2 indeed corroborate this perspective, with economic policy agencies showing above average capacity.

What is intriguing, however, is that agencies in the legal policy community, which are not to our knowledge ever mentioned in the literature on islands of excellence -- such as the Federal Police and Justice Ministry-- have equally strong SCI scores. Another finding, which confirms an argument frequently alluded to but seldom explicitly addressed in the literature, is the relatively weak state capacity of infrastructure agencies, on average.

[Insert Figure 2 about here]

The argument for an archipelago of excellence is substantiated by Figure 3, below, which shows not only some of the typically hypothesized islands of excellence – such as the Fazenda, Central Bank and Itamaraty – but also some surprising new ones, such as the Polícia Federal and Ibama. At the lagging end of the scale, too, there are interesting findings. Perhaps not surprisingly, the relatively new Fishing Ministry is at the tail end. The Vice-Presidency, once unfavorably compared to a bucket of warm spit by a US occupant of the office, is also a laggard. More intriguing, perhaps, is the fact that the Ministry of Defense (including only civilian personnel) is so far down the list.

[Insert Figure 3 about here]

In sum, the SCI provides us with a template for evaluating the claims of an influential literature, confirming the high capacity of some frequently cited agencies, complementing the list with less well-known islands of excellence and identifying laggards.

(B) The evolution of accountability agencies over time: CGU and DPF

The literature on Brazil has posited – without much more than anecdotal evidence – that there has been a huge increase in state capacity among accountability institutions over the past two decades (Speck 2002; Power and Taylor 2011; Praça and Taylor, under review). Two accountability institutions in particular are seen as having made enormous gains since the 1980s, and especially since 2002: the *Controladoria Geral da União* (CGU) and the *Polícia Federal* (DPF).

The former, a Comptroller General’s Office with ministerial rank, is tasked with “defending the public patrimony and increasing management transparency.” It was created in 2001, absorbed important offices such as the *Secretaria Federal de Controle Interno* (SFC) and the *Comissão de Coordenação de Controle Interno* (CCCI) in 2002, and became a full-fledged ministry in 2003.

The Federal Police has roots that date back to Getulio Vargas’ first presidency, although it only gained its federal role under the military regime, in 1964 (Arantes 2011). Its role under

authoritarian rule was largely secondary to that of the military and state police forces, but it was nonetheless closely linked to the repressive apparatus: as recently as 1993, there were still 176 federal censors serving in the Federal Police (Santos 1996). Under democracy, the role of the DPF began to change: its inclusion in the 1988 Constitution altered its role, as did conscientious policy choices under the Cardoso administration and then the Lula administration, aimed at better staffing, training, and equipping the Police so as to make it a more effective force against organized crime (Arantes 2011, 193).

The rise of these two bodies is without question one of the major changes in the web of accountability institutions in Brazil over the past decade. But what can we say empirically about whether state capacity was created? Is there any way to map this change over time?

Unfortunately, it is not (yet) possible to obtain complete historical data that would permit accurate longitudinal measures of the SCI. However, we have data on specific components of the SCI, which permit us to draw a brief history of the agencies' evolution.¹⁶ This is not as satisfying as it would be if we were able to compile the full SCI for each year, but it will hopefully illustrate the gains that should be possible from the accumulation of the longitudinal data over time.

What does the data show? Are we able to observe changes in the capacity of these agencies over time, in ways that corroborate the conventional wisdom regarding their recent rise? Can we say anything about the possible staying power of the rise of these agencies? Are they likely to fade from view as the political leadership changes?

[Insert Figure 4 about here]

Figures 4 and 5 demonstrate the rapid increase in the staff of the two agencies. Further, as the number of specialists and core career employees suggest, these are highly trained staff. From no employees less than a decade ago, the CGU today has by far the largest percentage of specialist career employees in the federal government (64%¹⁷), which is in itself an intriguing story. More than 76% of civil servants hired under the federal government's elite *Analista de Finanças e Controle* program are housed in the CGU. This elite program was not created with the CGU in mind, and in fact, it appears to have been rejiggered by the CGU to take advantage of talented staff in the Finance Ministry that could be quickly incorporated into the new agency.

In other words, the specialist career path was a rapid way to transfer state capacity from one agency to another. It permitted the CGU to rapidly build up a core of highly trained analysts who could conduct the agency's oversight functions, with an accumulated expertise and knowledge of how the federal bureaucracy functions.

[Insert Figure 5 about here]

¹⁶ For the DPF, we were able to obtain variables A1 (Proportion of civil servants in core career) for 1993, 2002, 2007 and 2008, and variable B2 (Existence of core career) from 1988-2011. For the CGU, we have variable A2 (proportion of civil servants in specialist careers) for a number of years.

¹⁷ By contrast, the next five agencies behind it have 54%, 32%, 19%, 12%, and 11%.

The DPF has seen similarly rapid growth, on an even larger scale, with the number of civil servants rising by more than half over the past decade. The number of civil servants in core careers focused on agency-specific tasks is quite high (81%) and places the DPF in the top ten most specialized agencies in the federal government. Furthermore, the DPF has salaries that are among the highest in the executive branch, with core careers such as detectives and forensics analysts receiving roughly US\$6,500 monthly at the outset of their career, better than public defenders or professors at federal universities (Arantes 2011, 194). As a result of its increasing prominence, the DPF has also managed to obtain strong wage increases during the past decade. Oftentimes these increases have spilled over into non-core careers, boosting morale and esprit de corps within the DPF as a whole.

The data used in this case primarily relates to Variable A (“Career Strength”), rather than the other two components of the SCI. Nonetheless, it illustrates a marked improvement in state capacity within these two agencies, corroborating an important hypothesis in the literature on the evolution of accountability institutions in Brazil. It further suggests that these gains may not be as heavily reliant on the political will of future presidents, as the changes to these agencies have been well embedded within a highly specialized core career in both agencies.

(C) Comparative use of the SCI at the agency level: the case of transportation agencies

President Dilma Rousseff gained international attention during her first year in office after firing seven of her ministers, six of whom were alleged to have participated in or had knowledge of corrupt acts. The second of those fired was the Transportation Minister, Alfredo Nascimento, of the allied PR party. In the wake of his dismissal, Dilma ordered the CGU and other accountability agencies to conduct a full-scale audit of the various agencies within the transportation ministry that had been implicated in the scandal. This extraordinarily comprehensive audit produced a final report comparing two sub-ministerial agencies,¹⁸ which permits us to test the use of the SCI as an independent variable.

The two agencies, DNIT and VALEC, oversee similar infrastructure projects. DNIT oversees federal highway construction, while VALEC oversees federal railways.¹⁹ Both agencies’ directors were fired in the wake of the scandal, and their new websites prominently display their codes of ethics, as well as news of their new, “technically qualified” directorates.

Table 5: Comparative indicators, DNIT and VALEC

| | DNIT | VALEC |
|-------------------------------------|---------------------------------------|---------------------------------------|
| SCI | 0.49 (70 th percentile) | 0.19 (20 th percentile) |
| Core career? | Yes | No |
| Partisan occupation – DAS | 13.56% | 0% |
| Partisan occupation - Civil service | 14.18% | 16.48% |
| Actual budget expenditures | 0.45 | 0.02 |
| Number of employees | 2,849 | 358 |

¹⁸ Secretaria Federal de Controle Interno, Controladoria-Geral da União, “Relatório de Auditoria No. 201112110”, 2011.

¹⁹ For an assessment of Valec’s policy implementation, see Campos Neto et al 2010.

Is it possible to say anything *ex ante* about the likelihood of corruption in these two agencies, using the SCI as an independent variable? There is an initial problem of how to measure corruption: any measure of corruption is of course very tenuous, since we are never certain how much is in fact uncovered and what remains beneath the surface.²⁰ Furthermore, corruption in infrastructure agencies may be very different than corruption in social welfare agencies, and one auditor’s approach may be very different from another’s, so there is an issue of variable comparability. But in this particular case, the CGU team conducted an exhaustive audit of both agencies at the same time, and did so in an explicitly comparative way, focused solely on these two agencies and their infrastructure contracts. So we expect similar measurement techniques, as well as similar measurement errors.

A logical hypothesis is that higher state capacity should – other things equal – be associated with less corruption. Looking at the indicators in Table 1, DNIT is the stronger agency, leading us to believe that it is less likely to succumb to corrupt practices. With regard to the SCI, DNIT is not in the elite “islands of excellence” category, but it is above average, in the 70th percentile of all agencies. VALEC, on the other hand, is in the lowest 20th percentile. DNIT is a larger and more professionalized bureaucracy, with a core career, nearly eight times as many employees, and a budget more than 22 times larger.

Our hypothesis is sustained by the audit results (Table 6). Both agencies showed massive misuse of public funds. But there is a significant difference in the scale of this misuse: DNIT abuses were a third as large in terms of total expenditure, even though their overall expenditures were more than twice as large, and less than 9% those of VALEC on a per capita basis.

Table 6: Comparative outcomes, DNIT and VALEC

| | DNIT | VALEC |
|---------------------------|-----------------|-----------------|
| Amounts allegedly misused | R\$280 million | R\$400 million |
| Total expenditure | R\$3.48 billion | R\$1.65 billion |
| Misused funds/expenditure | 8% | 24% |
| Misused funds/employee | R\$98,000 | R\$1,117,000 |

Higher state capacity, in this case, seems to correlate with slightly better outcomes, even though it is by no means a bulwark against all corruption, nor is there anyway to ascertain whether the pattern seen in this case is typical of all such irregularities.

Many of the issues raised by the auditors, however, are directly tied to the issue of state capacity, such as irregular and inadequate bidding procedures, or an inability to properly oversee service providers. It seems reasonable to assume that state capacity may play an important role in curbing abuse. When agency capacity is weak, not all agency employees need be in cahoots for corrupt administrators or civil servants to take advantage of their inability to adequately oversee how contracts are awarded and carried out. In the case of a small agency like VALEC, this appears to have gone hand in hand with poor public outcomes. Another striking aspect is the fact that VALEC has *no* political appointments, which are widely blamed by pundits and academics

²⁰ For interesting attempts to measure corruption, see Golden and Picci 2005 and McMillan and Zoido 2004.

as one of the most important drivers of corruption (Abrucio et al 2010, p. 68). In the presence of a highly politicized civil service, in other words, political appointments may not be a necessary condition for systemic integrity failures.

(D) Multivariate approaches to the relationship between corruption and state capacity

In an effort to further test the relationship between accountability and state capacity, we created two models that test the relationship between instrumental variables aimed at measuring corruption and the SCI. In the first (Models 1a and 1b), we test the relationship between the SCI and a measure of media stories about corruption in any given ministry and its associated agencies. The idea is that this count will tell us something about perceptions of corruption in that agency, an especially important instrumentalization in light of the slow pace of Brazil's judiciary, which does not permit us to analyze prosecutions or convictions (similar instrumentalization is used by Butto, Pereira and Taylor 2010 and Pereira, Rennó and Samuels 2011).

However, a count that simply measured media mentions of corruption at the ministerial level would be unsatisfactory, as it would blend agencies that fight corruption with those that are alleged to have engaged in corruption. To avoid this problem, our measure is an average of the number of stories published in the largest circulating newspaper in Brazil, the *Folha de S. Paulo*, mentioning corruption and the name of any ministers who headed that ministry between 2003 and 2011. The idea is that by taking an average of media stories of all ministers serving over eight years, we will eliminate any personal effects, and instead measure the overall propensity of that ministry to be used as a source of rents.

There may be reason to believe, however, that ministers are too far above the bureaucratic game to be representative of actual corruption within an agency. A second measure (Models 2a and 2b) is the number of civil servants fired between 2003 and 2011.²¹ Two hypotheses are possible here. The first is that civil servant dismissals indicate a stronger ministry; i.e., a ministry that is able to effectively police itself and remove rotten apples. The second is that civil servant dismissals indicate a weak ministry; i.e., one with more opportunities for administrative malfeasance of the sort likely to lead to dismissal. We are agnostic about the direction of this effect, seeking only to test whether a relationship is observed.

Our central independent variable is the State Capacity Index. As controls, we include the budget rate (the percentage each ministry actually was able to spend of its programmed budget); political appointee turnover; actual budget expenditures (as a percentage of total federal expenditures, *Ddespex*); the number of employees in that agency; and the existence of an auditor in that agency.²² For models 1b and 2b, we include dummies for the dominant party within that agency, defined as the party with the most DAS appointments.

²¹ Data obtained from "Relatório de acompanhamento das punições expulsivas aplicadas a estatutários no âmbito da administração pública federal". Presidência da República, Controladoria-Geral da União, November 2011.

²² Agency budget and the number of employees as a percentage of the corresponding federal government totals are included as a means of evaluating the agency's relative heft within the federal bureaucracy, which might influence its ability to carry out its functions in an autonomous and effective manner. The budget variable measures the percentage of the federal budget controlled by the agency,²² while the number of employees is the agency's proportion of total employees (e.g., $E_a/350,000$).

The results are shown in Table 7. A quick glance at the F-statistic suggests that only Model 1b and Model 2a are able to adequately explain shifts in the dependent variable. Model 1b, however, is driven largely by the political party dummies, suggesting that individual scandals – or more correctly, a prevalence of scandals by ministers from the PCdoB – are driving the results. In other words, the model results suggest that the dependent variable is not capturing the phenomenon of corruption in a way that varies systematically with state capacity. This is a somewhat underwhelming, but nonetheless important result: it suggests that there is little relationship between state capacity and scandal. That is, it may be possible to have scandals even in high capacity agencies (e.g., Ministério da Fazenda), as well as to avoid it in low capacity agencies (e.g., Agência Espacial Brasileira).

[Insert Table 7 about here]

Model 2a produces weak evidence of a statistically significant relationship (at the 10% level) between the dismissal of civil servants and state capacity. Other things equal, an increase in the SCI leads to a .006 increase in the proportion of employees fired over the period. For example, if the Ministry of Cities were to move from its current position on the SCI to the 90th percentile (closer to the CVM or Justice Ministry), the expected proportion of civil servants fired would increase from .00085 to 0.0054, a gain of .0046. In other words, the ministry would more than sextuple its dismissals, from 8.5 per ten thousand civil servants to more than 54.²³ Figure 4 illustrates the relationship between firings and state capacity graphically.

[Insert Figure 6 about here]

While these results are weaker than we might prefer – perhaps due to the complexities of measuring purposefully hidden corruption and administrative malfeasance – they nonetheless point to one potential benefit of increased state capacity: curbing the worst abuses of civil servants, if not their political masters. They also suggest useful ways of using the SCI as an independent variable to explain policy outcomes.

²³ Calculated as the agency's BSCI times the BSCI coefficient (.006), times 10,000. Cidades, for example has a BSCI of 0.1415, which multiplied by .006 yields 0.00085.

(V) Conclusions

After tentatively spelling out some potential contributions of our State Capacity Index when applied to Brazil, it is time to address its possible shortcomings. They are threefold.

First, the index is not very good at distinguishing agency autonomy (politicization), capacity and expertise. It may be the case that an agency is much less politicized than others, but is “captured” or highly influenced by economic actors. This seems especially relevant for agencies that have mandates of a regulatory nature, such as the *Conselho Administrativo de Defesa Econômica*. As for the level of expertise, five variables touch on this aspect: i) average longevity in civil service; ii) existence of core careers; iii) civil servants requisitioned from other agencies; iv) proportion of civil servants in core career and v) proportion of civil servants in specialist career. Though this gives a decent idea of how one agency fares in this aspect compared to others, it does not fully consider how many experts each agency has. A policy expert is defined by Callander (2008, p. 126) as someone who “possesses superior knowledge than a non-expert as to how policies are mapped into outcomes”. While the “average longevity in civil service” variable says something about the extent of aggregate policy learning in each agency, this aspect is clearly in need of theoretical and empirical improvement.

Second, some aspects of the index may not be as exportable as initially thought. Not only does the index depend on a wide array of government data about *individual* civil servants, but variables such as the proportion of civil servants in specialist careers and the percentage of civil servants requisitioned from other agencies depend on country legislation allowing bureaucrats to move from one agency to another and on the actual existence of specialist careers.

Finally, the fact that agencies have similar scores on the SCI does not say much about their importance within the government, their relationship with social and economic actors, and where they are in their historical development. The *Superintendência do Desenvolvimento do Nordeste* (Sudene) and the *Ministério do Desenvolvimento Social e Combate à Fome* (MDS), for example, have respective scores of 0.185 and 0.186 on the SCI. They could not be more different. The Sudene was created in 1959 with a mandate to tackle the enormous regional inequality between southern and northeastern states in Brazil. Headed at first by famous Brazilian economist Celso Furtado, by the 1980s it was widely considered to be a failure and is now a part of the largely irrelevant Ministry of National Integration. The MDS, however, was created in 2004 and is responsible for the implementation of a huge conditional cash transfer program, the *Bolsa Família*, arguably the most important policy initiative of the last decade. Furthermore, the government has proposed a bill for the creation of a career linked to the MDS (Moraes et al, under review).

This example highlights the importance of mixed methods in the analysis of government capacity and state formation. As Migdal (2009, p. 192) states, “the experience of researching the state (...) demands a full toolkit - an amalgamation of culturalist, structuralist, and rationalist tools and of historical, case, and quantitative methods.” It is our hope that the State Capacity Index can be one of the many possible approaches scholars utilize, alongside historical narratives and process tracing, in order to understand how states work.

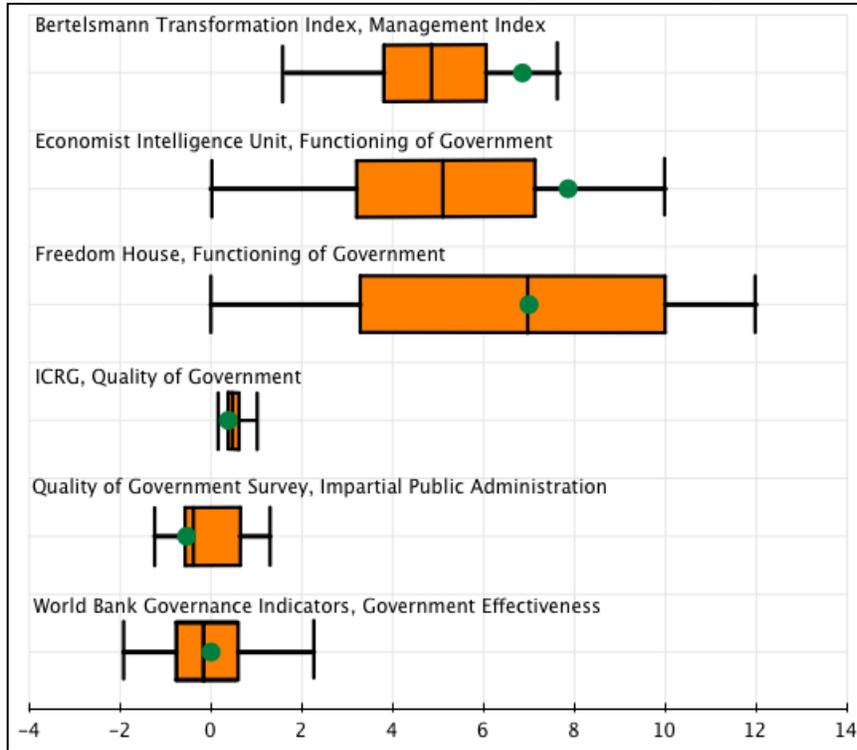
References

- Abranches, Sérgio Henrique de. "Presidencialismo de Coalizão: O Dilema Institucional Brasileiro." *Dados*, v. 31, no. 1 (1988): 5-38.
- Abrucio, Fernando L.; Pedroti, Paula & Pó, Marcos Vinicius. "A formação da burocracia brasileira: a trajetória e o significado das reformas administrativas", in Loureiro, Maria Rita; Abrucio, Fernando & Pacheco, Regina. (eds.) *Burocracia e política no Brasil: desafios para o Estado democrático no século XXI*. Rio de Janeiro, Ed. FGV, 2010, p. 27-71.
- Acemoglu, Daron; Ticchi, Davide & Vindigni, Andrea. "Emergence and persistence of inefficient states", *Journal of the European Economic Association*, v. 9, n. 2, 2011, p. 177-208.
- Andrews, Christina W. & Bariani, Edison. "As marcas da nasçença: a administração pública da Colônia à República Velha", in Andrews, Christina W. & Bariani, Edison. (eds) in *Administração pública no Brasil: breve histórica política*. São Paulo, Ed. Unifesp, 2009, p. 13-38
- Arantes, Rogério B. "The Federal Police and the Ministério Público." In *Corruption and Democracy in Brazil: The Struggle for Accountability*, edited by Timothy J. Power and Matthew M. Taylor, 184-217. Notre Dame, IN: University of Notre Dame Press, 2011.
- Bendix, Reinhard. *Nation-Building and Citizenship: Studies of Our Changing Social Order*. New York: Anchor Books, 1969.
- Besley, Timothy & Persson, Torsten. "The origins of state capacity: property rights, taxation, and politics", *American Economic Review*, v. 99, n. 4, 2009, p. 1218-1244.
- Bresser Pereira, Luiz Carlos. "Gestão do setor público: estratégia e estrutura para um novo Estado", in Bresser Pereira, Luiz Carlos & Spink, Peter. (eds.) *Reforma do Estado e administração pública gerencial*. São Paulo, Ed. FGV, 1998, p. 21-38.
- Butto, Michele, Carlos Pereira and Matthew M. Taylor. "'Accountability Behind Closed Doors? Legislator Power and Voting Procedures", Paper presented at the 14th Annual Conference of The International Society for New Institutional Economics, University of Stirling, Scotland, UK, June 17 – 19, 2010.
- Callander, Steven. "A theory of policy expertise", *Quarterly Journal of Political Science*, v. 3, n. 2, 2008, p. 123-140.
- Cárdenas, Mauricio. "State capacity in Latin America", *Economía*, v. 10, n. 2, 2010, p. 1-45.
- Câmara, Moreira Leonor. "O cargo público de livre provimento na organização da administração pública federal brasileira: uma introdução ao estudo da organização da direção pública na perspectiva de estudos organizacionais", in: *Revista de Administração Pública*, v. 43, n. 3, 2009, p. 635-659.
- Campos Neto, Carlos Alvares da Silva; Filho, Bolivar P.; Romminger, Alfredo E.; Ferreira, Iansã M. & Vasconcelos, Leonardo F. Soares. "Gargalos e demandas da infraestrutura ferroviária e os investimentos do PAC: mapeamento IPEA de obras ferroviárias". Presidência da República, Ipea, Textos para Discussão n. 1465, 2010.
- Cardoso, Fernando Henrique. *Autoritarismo e Democratização*. Rio de Janeiro: Paz e Terra, 1975.
- Cason, Jeffrey and Gregory White. "The State as Naive Entrepreneur: The Political Economy of Export Promotion in Brazil and Tunisia." *Policy Studies Journal* 26, no. 1 (1998): 46-64.
- Cheibub, Jose Antonio. "Political Regimes and the Extractive Capacity of Governments: Taxation in Democracies and Dictatorships." *World Politics* 50, no. 3 (1998): 349-76.
- Cruz, Rachel Pellizzoni da. *Carreiras de estado e cargos em comissão no Brasil pós-1994 pela perspectiva teórica de Silberman: a consolidação de uma burocracia do tipo profissional*. Unpublished master's thesis in Public Administration. São Paulo, FGV-SP, 2008.
- D'Araujo, Maria Celina. *A elite dirigente do governo Lula*. Rio de Janeiro, CPDOC/FGV, 2009.
- _____. *Governo Lula: contornos sociais e políticos da elite do poder*. Rio de Janeiro, CPDOC-FGV, 2007.
- De Bonis, Daniel & Pacheco, Regina Silvia. "Nem político nem burocrata: o debate sobre o dirigente público", in Loureiro, Maria Rita; Abrucio, Fernando & Pacheco, Regina. (eds.) *Burocracia e política no Brasil: desafios para o Estado democrático no século XXI*. Rio de Janeiro, Ed. FGV, 2010, p. 329-362.
- Evans, Peter B. "The State as Problem and Solution: Predation, Embedded Autonomy, and Adjustment." In *The Politics of Economic Adjustment*, edited by Stephan Haggard and Robert R. Kaufman, 139-91. Princeton: Princeton University Press, 1992.
- Evans, Peter B. *Embedded Autonomy: States and Industrial Transformation*. Princeton: Princeton University Press, 1995.

- Evans, Peter B., and James E. Rauch. "Bureaucracy and Growth: A Cross-National Analysis of the Effects of 'Weberian' State Structures on Economic Growth." *American Sociological Review* 64, no. 5 (1999): 748-65.
- Evans, Peter B., and James E. Rauch. "Bureaucratic Structures and Growth: A Cross-National Analysis of the Effects of 'Weberian' State Structures on Economic Growth." *American Sociological Review* 75, no. 1 (2000): 49-62.
- Fausto, Boris and Fernando J. Devoto. *Brasil e Argentina: Um Ensaio ee História Comparada*. São Paulo: Editora 34, 2004.
- Geddes, Barbara. "Building State Autonomy in Brazil, 1930-1964." *Comparative Politics* 22, no. 2 (1990).
- Geddes, Barbara. *Politician's Dilemma: Building State Capacity in Latin America*. Berkeley: University of California Press, 1994.
- Golden, Miriam & Picci, Lucio. "Proposal for a New Measure of Corruption, Illustrated with Italian Data", *Economics & Politics*, v. 17, n. 1, p. 37-75, 2005.
- Gould, William. *Bureaucracy, Community and Influence in India: Society and the State, 1930s - 1960s*. London, Routledge, 2010.
- Guerzoni Filho, Gilberto. "Tentativas e perspectiva de formação de uma burocracia pública no Brasil", *Revista do Serviço Público*, v. 47, n. 1, 1996, p. 41-66.
- Haggard, Stephan, and Robert R. Kaufman. *The Politics of Economic Adjustment*. Princeton: Princeton University Press, 1992.
- Heimann, C. F. Larry. "Understanding the Challenger disaster: organizational structure and the design of reliable systems", *American Political Science Review*, v. 87, n. 2, 1993, p. 421-435.
- Hendrix, Cullen S. "Measuring State Capacity: Theoretical and Empirical Implications for the Study of Civil Conflict." *Journal of Peace Research* 47, no. 3 (2010): 273-85.
- Kaufmann, Daniel, Aart Kraay, and Massimo Mastruzzi. "Governance Matters VI: Aggregate and Individual Governance Indicators 1996-2006." *World Bank Policy Research Working Paper no. 4280* (2007).
- Kocher, Matthew A. "State capacity as a conceptual variable", *Yale Journal of International Affairs*, v. 5, n. 2, 2010, p. 137-145.
- Ledeneva, Aleva. *How Russia Really Works: The Informal Practices That Shaped Post-Soviet Politics and Business*. Ithaca, Cornell University Press, 2006.
- Levi, Margaret. *Of rule and revenue*. Berkeley, University of California Press, 1988.
- Loureiro, Maria Rita, Cecília Olivieri, and Ana Cristina Braga Martes. "Burocratas, Partidos e Grupos de Interesse: O Debate Sobre Política e Burocracia no Brasil." In *Burocracia e Política no Brasil: Desafios para o Estado Democrático no Século XXI*, edited by Maria Rita Loureiro, Fernando Luiz Abrucio and Regina Silvia Pacheco, 73-109. Rio de Janeiro: Editora FGV, 2010.
- Marconi, Nelson. "Uma Radiografia do Emprego Público no Brasil: Análise e Sugestões de Políticas." In *Burocracia e Política no Brasil: Desafios para o Estado Democrático no Século XXI*, edited by Maria Rita Loureiro, Fernando Luiz Abrucio and Regina Silvia Pacheco, 219-76. Rio de Janeiro: Editora FGV, 2010.
- Marques, Eduardo. "A rede social da engenharia urbana em São Paulo." *Novos Estudos Cebrap*, 2004: 119-144.
- Martins, Luciano. *Estado Capitalista e Burocracia No Brasil Pós-64*. Rio de Janeiro: Paz e Terra, 1985.
- McGregor, Richard. *The party: the secret world of China's communist rulers*. New York, Harper, 2010.
- McMillan, John & Zoido, Pablo. "How to subvert democracy: Montesinos in Peru", *Journal of Economic Perspectives*, v. 18, n. 4, 2004, p. 69-92.
- Migdal, Joel S. "Researching the state", in Lichbach, Mark I. & Zuckerman, Alan S. (eds.) *Comparative politics: rationality, culture, and structure* (2nd edition). New York, Cambridge University Press, 2009, p. 162-192.
- Moraes, Marcelo Viana Estevão de; Silva, Tiago Falcão & Costa, Patricia Vieira da. "O mito do inchaço da força de trabalho do Executivo Federal", *Res Pvblica*, under review.
- Nunes, Edson. *A Gramática Política no Brasil: Clientelismo e Insulamento Burocrático*. 2003 ed. Rio de Janeiro: Jorge Zahar Editor, 1997.
- Pacheco, Regina Silvia. "Profissionalização, mérito e proteção da burocracia no Brasil, in: Loureiro, Maria Rita; Abrucio, Fernando & Pacheco, Regina. (eds.) *Burocracia e política no Brasil: desafios para o Estado democrático no século XXI*. Rio de Janeiro: Ed. FGV, 2010, p. 277-305.
- Pereira, Carlos, Lucio R. Rennó and David J. Samuels. "Corruption, Campaign Finance, and Reelection." In *Corruption and Democracy in Brazil: The Struggle for Accountability*, edited by Timothy J. Power and Matthew M. Taylor, 80-99. Notre Dame, IN: University of Notre Dame Press, 2011.

- Pio, Carlos. "Liberalização do Comércio: Padrões de Interação entre Elites Burocráticas e Atores Sociais." In *Reforma do Estado e Democracia no Brasil: Dilemas e Perspectivas*, edited by Eli Diniz and Sérgio de Azevedo, 176-211. Brasília: Editora UNB, 1997.
- Power, Timothy J. and Matthew M. Taylor. *Corruption and Democracy in Brazil: The Struggle for Accountability*. Notre Dame, IN: University of Notre Dame Press, 2011.
- Praça, Sérgio; Freitas, Andréa & Hoepers, Bruno. "Political appointments and coalition management in Brazil, 2007-2010", *Journal of Politics in Latin America*, v. 3, n. 2, 2011, p. 141-172.
- Praça, Sérgio and Matthew M. Taylor, "State Capacity and Institutional Development in the Brazilian Web of Accountability." (Under review).
- Santos, Luiz Alberto dos. *A organização de planos de carreira no serviço público federal: evolução, conceitos, limites e possibilidades*. Unpublished master's thesis in Administration. Brasília, UnB, 1996.
- Schneider, Ben Ross. "Politics within the State: Elite Bureaucrats and Industrial Policy in Authoritarian Brazil." Ph.D. Dissertation, University of California, Berkeley, 1987.
- Schneider, Ben Ross. "The Desarrollista State in Brazil and Mexico." In *The Developmental State*, edited by Meredith Woo-Cumings, 276-305. Ithaca: Cornell University Press, 1999.
- Schneider, Ben Ross. *Politics within the State: Elite Bureaucrats and Industrial Policy in Authoritarian Brazil*. Pittsburgh: University of Pittsburgh Press, 1991.
- Sikkink, Kathryn. *Ideas and Institutions: Developmentalism in Brazil and Argentina*. Ithaca: Cornell University Press, 1991.
- Skocpol, Theda. *States and Social Revolutions: A Comparative Analysis of France, Russia and China*. Cambridge: Cambridge University Press, 1979.
- Speck, Bruno Wilhelm. *Caminhos Da Transparência*. São Paulo: Editora da Universidade Estadual de Campinas, 2002.
- Stein, Ernesto, Mariano Tommasi, Koldo Echebarría, Eduardo Lora, and Mark Payne. *The Politics of Policies: Economic and Social Progress in Latin America. 2006 Report*. Washington, D.C.: Inter-American Development Bank, 2006.
- Stein, Ernesto, Mariano Tommasi, Koldo Echebarría, Eduardo Lora, and Mark Payne. *The Politics of Policies: Economic and Social Progress in Latin America. 2006 Report*. Washington, D.C.: Inter-American Development Bank, 2006.
- Teorell, Jan, Marcus Samanni, Sören Holmberg and Bo Rothstein. 2011. The Quality of Government Dataset, version 6Apr11. University of Gothenburg: The Quality of Government Institute, <http://www.qog.pol.gu.se>.
- Thies, Cameron G. "Of Rulers, Rebels and Revenue: State Capacity, Civil War Onset and Primary Commodities." *Journal of Peace Research* 47, no. 3 (2010): 321-32.
- Thies, Cameron G. "State Building, Interstate and Intrastate Rivalry: A Study of Post-Colonial Developing Country Extractive Efforts, 1975-2000." *International Studies Quarterly* 48, no. 1 (2004): 53-72.
- Thies, Cameron G. "The Political Economy of State Building in Sub-Saharan Africa." *Journal of Politics* 69, no. 3 (2007): 716-31.
- Thies, Cameron G. "War, Rivalry and State Building in Latin America." *American Journal of Political Science* 49, no. 3 (2005): 451-65.
- Weber, Max. 1919. "Science as a Vocation."
- Willis, Eliza J. "The State as Banker: The Expansion of the Public Sector in Brazil." Ph.D. dissertation, University of Texas at Austin, 1986.
- Whitehead, Laurence. *Latin America: A New Interpretation*. New York: Palgrave MacMillan, 2006.
- Zuñiga, Laura, Mercedes Iacoviello, and Ana Laura Rodríguez Gusta. "The Weakest Link: The Bureaucracy and Civil Service Systems in Latin America." In *How Democracy Works: Political Institutions, Actors, and Arenas in Latin American Policymaking*, edited by Carlos Scartascini, Ernesto Stein and Mariano Tommasi, 147-76. Washington, DC: Inter-American Development Bank and David Rockefeller Center for Latin American Studies, 2010.

Figure 1: Brazil's Bureaucracy in Comparative Perspective



Note: Brazil's position on each index is marked as a green dot.

Source: Graph by authors. Data from Teorell, Samanni, Holmberg and Rothstein (2011).

Table 1: Agencies and proportion of civil servants in career strength variables of the SCI

| Agency | Number of employees | Proportion of employees in the SCI |
|--|---------------------|------------------------------------|
| ADVOCACIA-GERAL DA UNIAO | 7477 | 80,15 |
| AGENCIA ESPACIAL BRASILEIRA | 77 | 11,69 |
| BANCO CENTRAL DO BRASIL | 4531 | 68,40 |
| CAIXA DE FINANCIAMENTO IMOB.AERONAUTICA | 27 | 40,74 |
| CENTRO NAC.TECNO.ELETRONICA AVANCADA S.A | 138 | 0,00 |
| COMANDO DA AERONAUTICA | 6767 | 90,13 |
| COMANDO DA MARINHA | 7400 | 86,43 |
| COMANDO DO EXERCITO | 7244 | 90,05 |
| COMISSAO DE VALORES MOBILIARIOS | 481 | 73,80 |
| COMISSAO NACIONAL DE ENERGIA NUCLEAR | 2540 | 90,91 |
| COMPANHIA BRASILEIRA DE TRENS URBANOS | 3205 | 84,49 |
| COMPANHIA DESENV. DO VALE SAO FRANCISCO | 1696 | 54,66 |
| COMPANHIA NACIONAL DE ABASTECIMENTO | 3588 | 94,98 |
| CONSELHO ADMINIST.DE DEFESA ECONOMICA | 68 | 51,47 |
| CONSELHO NAC.DE DESEN.CIEN.E TECNOLOGICO | 503 | 80,32 |
| CONTROLADORIA-GERAL DA UNIAO | 2347 | 79,25 |
| DEFENSORIA PUBLICA DA UNIAO | 1443 | 91,34 |
| DEPARTAMENTO DE POLICIA FEDERAL | 13995 | 94,78 |
| DEPARTAMENTO NAC. DE PRODUCAO MINERAL | 1415 | 73,36 |
| DEPARTAMENTO NAC.DE INFRAEST. DE TRANSP. | 2849 | 83,19 |
| DEPTO. DE POLICIA RODOVIARIA FEDERAL | 9755 | 93,72 |
| DEPTO. NACIONAL DE OBRAS CONTRA AS SECAS | 1857 | 93,11 |
| EMPRESA BRASIL DE COMUNICACAO | 1402 | 59,06 |
| EMPRESA BRASILEIRA DE PESQ. AGROPECUARIA | 9476 | 99,58 |
| EMPRESA DE PESQUISA ENERGETICA | 299 | 72,91 |
| EMPRESA DE TRENS URBANOS DE PORTO ALEGRE | 1172 | 94,28 |
| FUND COORD APERF PESSOAL NIVEL SUPERIOR | 378 | 71,16 |
| FUND. INST. BRASIL. GEOG. E ESTATISTICA | 10607 | 82,49 |
| FUND.JORGE DUPRAT FIG. SEG. MED.TRABALHO | 286 | 64,34 |
| FUNDACAO ALEXANDRE DE GUSMAO | 77 | 45,45 |

| | | |
|--|---------|--------|
| FUNDACAO BIBLIOTECA NACIONAL | 408 | 82,84 |
| FUNDACAO CASA DE RUI BARBOSA | 103 | 74,76 |
| FUNDACAO CULTURAL PALMARES | 66 | 24,24 |
| FUNDACAO ESCOLA NACIONAL DE ADM. PUBLICA | 210 | 59,05 |
| FUNDACAO JOAQUIM NABUCO | 399 | 66,42 |
| FUNDACAO NACIONAL DE ARTES | 285 | 71,23 |
| FUNDACAO NACIONAL DE SAUDE | 9205 | 89,74 |
| FUNDACAO NACIONAL DO INDIO | 2924 | 64,84 |
| FUNDACAO OSORIO | 92 | 81,52 |
| FUNDACAO OSWALDO CRUZ | 4442 | 86,02 |
| FUNDO NACIONAL DE DESENVOLV. DA EDUCACAO | 639 | 58,22 |
| INDUSTRIAS NUCLEARES DO BRASIL | 1211 | 88,27 |
| INST. BR. MEIO AMB. REC. NAT. RENOVAVEIS | 5860 | 67,73 |
| INST.NAC.METROLOGIA,NORM.E QUAL.INDL. | 936 | 82,05 |
| INST.NACIONAL DE EST.E PESQ.EDUCACIONAIS | 340 | 59,71 |
| INSTITUTO BRASILEIRO DE MUSEUS | 729 | 76,54 |
| INSTITUTO BRASILEIRO DE TURISMO | 110 | 23,64 |
| INSTITUTO CHICO MENDES CONSERV.BIODIVER. | 3279 | 47,67 |
| INSTITUTO DE PESQ. JARDIM BOTANICO DO RJ | 230 | 75,22 |
| INSTITUTO DE PESQUISA ECONOMICA APLICADA | 488 | 76,43 |
| INSTITUTO DO PATR.HIST.E ART. NACIONAL | 1015 | 61,08 |
| INSTITUTO NAC. DA PROPRIEDADE INDUSTRIAL | 950 | 77,68 |
| INSTITUTO NAC. DE COLONIZ E REF AGRARIA | 5850 | 87,73 |
| INSTITUTO NACIONAL DE EDUCACAO DE SURDOS | 315 | 85,40 |
| INSTITUTO NACIONAL DE SEGURO SOCIAL | 37010 | 87,50 |
| MINIST.DA AGRICULTURA,PECUARIA E ABAST. | 11694 | 82,13 |
| MINIST.DA CIENCIA, TECNOLOGIA E INOVACAO | 3884 | 80,59 |
| MINIST.DO DESENV.INDUST.E COMER.EXTERIOR | 825 | 58,06 |
| MINISTERIO DA CULTURA | 863 | 51,56 |
| MINISTERIO DA DEFESA | 3350 | 60,78 |
| MINISTERIO DA EDUCACAO | 1473 | 40,67 |
| MINISTERIO DA FAZENDA | 33871 | 82,05 |
| MINISTERIO DA INTEGRACAO NACIONAL | 810 | 56,67 |
| MINISTERIO DA JUSTICA | 3070 | 57,04 |
| MINISTERIO DA PREVIDENCIA SOCIAL | 1372 | 55,98 |
| MINISTERIO DA SAUDE | 34386 | 76,22 |
| MINISTERIO DAS CIDADES | 563 | 55,77 |
| MINISTERIO DAS COMUNICACOES | 832 | 57,33 |
| MINISTERIO DAS RELACOES EXTERIORES | 3601 | 81,56 |
| MINISTERIO DE MINAS E ENERGIA | 689 | 47,31 |
| MINISTERIO DE PESCA E AQUICULTURA | 591 | 23,18 |
| MINISTERIO DO DESENV SOCIAL E COMB FOME | 817 | 15,42 |
| MINISTERIO DO DESENVOLVIMENTO AGRARIO | 516 | 36,24 |
| MINISTERIO DO ESPORTE | 333 | 41,14 |
| MINISTERIO DO MEIO AMBIENTE | 994 | 57,85 |
| MINISTERIO DO PLANEJ.,ORCAMENTO E GESTAO | 3626 | 46,88 |
| MINISTERIO DO TRABALHO E EMPREGO | 8557 | 76,18 |
| MINISTERIO DO TURISMO | 313 | 29,39 |
| MINISTERIO DOS TRANSPORTES | 1819 | 75,10 |
| NUCLEBRAS EQUIPAMENTOS PESADOS | 884 | 87,78 |
| PRESIDENCIA DA REPUBLICA | 3692 | 19,07 |
| PROCURADORIA GERAL DA REPUBLICA | 60 | 100,00 |
| RECEITA FEDERAL DO BRASIL | 150 | 100,00 |
| SERVICO FED. DE PROCESSAMENTO DE DADOS | 10333 | 90,36 |
| SUPERINT.NAC.DE PREVIDENCIA COMPLEMENTAR | 187 | 43,85 |
| SUPERINTENDENCIA DE SEGUROS PRIVADOS | 461 | 75,05 |
| SUPERINTENDENCIA DO DESENV. DA AMAZONIA | 158 | 60,13 |
| SUPERINTENDENCIA DO DESENV. DO NORDESTE | 185 | 69,19 |
| SUPERINTENDENCIA ZONA FRANCA DE MANAUS | 329 | 76,90 |
| VALEC ENG.CONSTRUCOES E FERROVIAS S/A | 358 | 35,20 |
| VICE-PRESIDENCIA DA REPUBLICA | 100 | 14,00 |
| Total | 314.351 | 80,29 |

Table 2: Agency Types

| Agency Type | Number of Agencies | Characteristics |
|--------------|--------------------|--|
| A | 103 | Agencies in state and municipal governments to which federal civil servants were transferred |
| B | 10 | Agencies with oversight mandate only |
| C | 110 | Agencies which do not have national jurisdiction |
| D | 15 | Extinct or “ghost” agencies |
| E | 90 | Agencies of the federal government |
| Total | 327 | -- |

Table 3: Components of the Brazilian State Capacity Index (SCI)

| Variable | Source |
|--|--|
| A. Career strength <ol style="list-style-type: none"> 1) Proportion of civil servants in core career (%) 2) Proportion of civil servants in specialist career (%) | Portal da Transparência do Governo Federal; Tabela de Remuneracao dos Servidores Públicos Federais; Boletim Estatístico Pessoal n. 184, Ministry of Planning, August 2011. |
| B. Agency career specialization <ol style="list-style-type: none"> 1) Average longevity in civil service 2) Existence of core career 3) Civil servants requisitioned from other agencies (%) | B1) Portal da Transparência do Governo Federal B2) Tabela de Remuneração dos Servidores Públicos Federais; Boletim Estatístico Pessoal n. 184, Ministry of Planning, August 2011. B3) Portal da Transparência do Governo Federal |
| C. Politicization <ol style="list-style-type: none"> 1) Proportion of DAS appointments filled by party members (%) 2) Proportion of DAS appointments that could <i>potentially</i> be filled by party members (%) 3) Proportion of regular civil servants that are party members (%) | Portal da Transparência do Governo Federal and Tribunal Superior Eleitoral |

Figure 2: Average SCI scores, by agency type

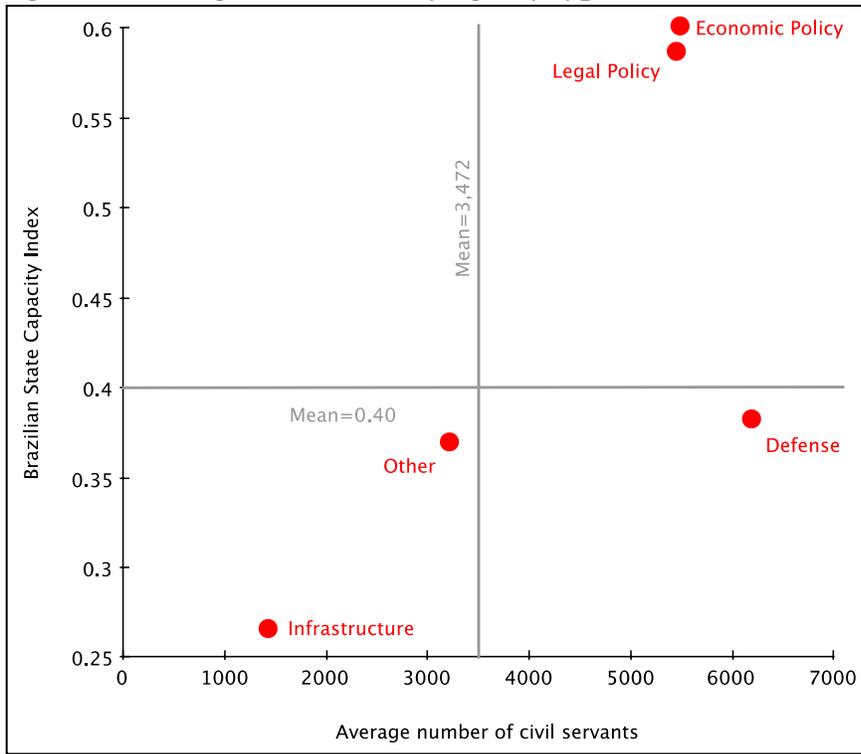


Figure 3: Leaders and laggards in the SCI

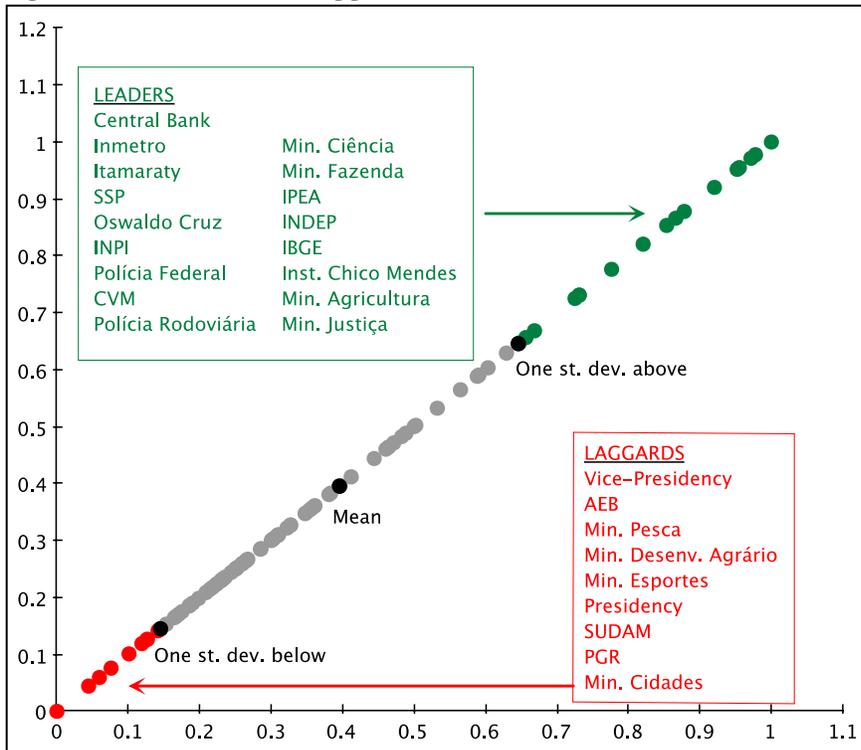


Figure 4: Civil Servants within CGU

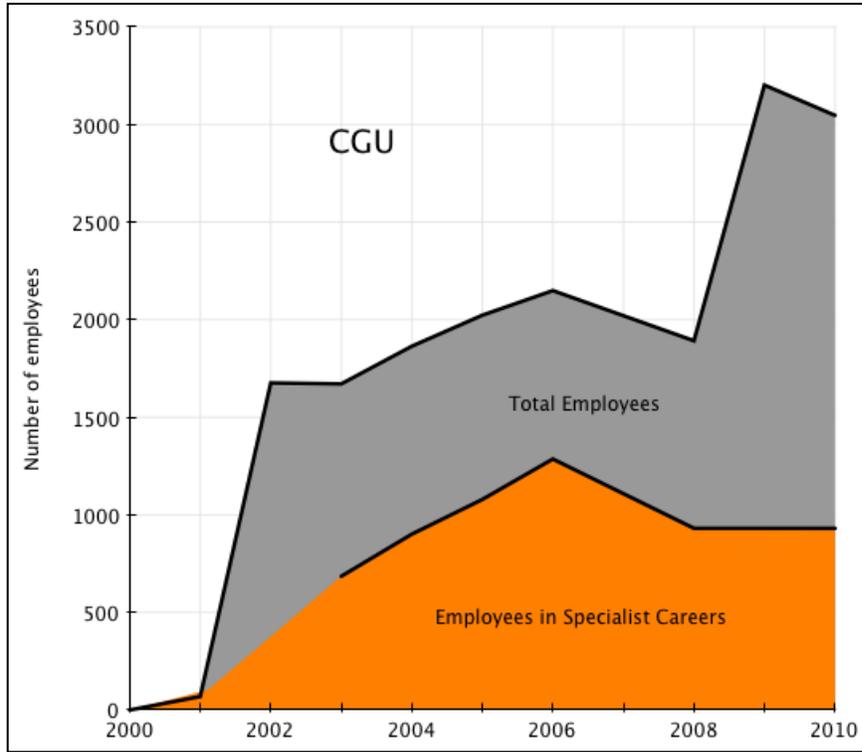
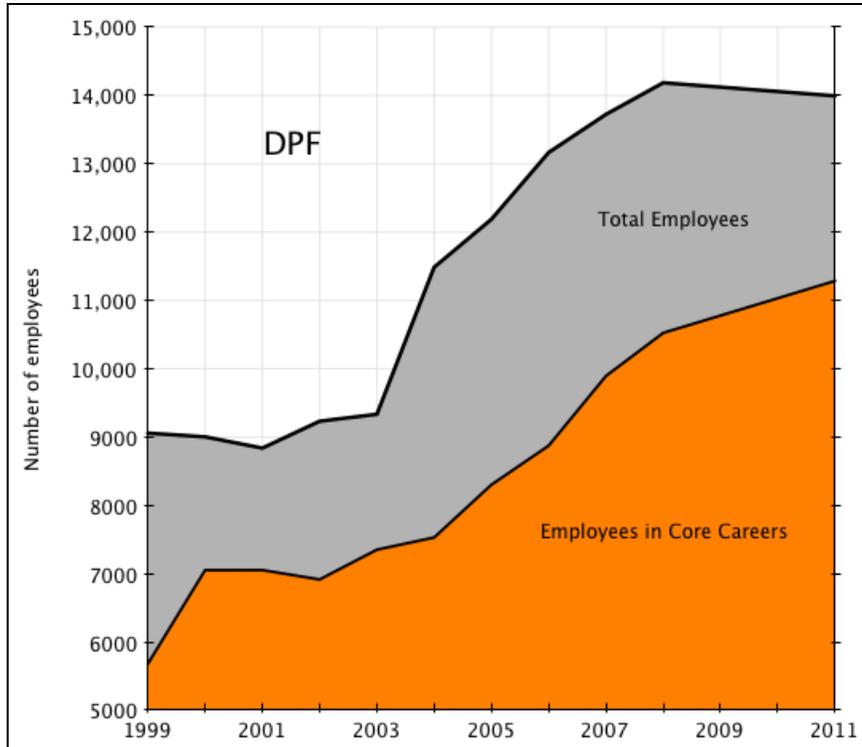


Figure 5: Civil Servants within DPF



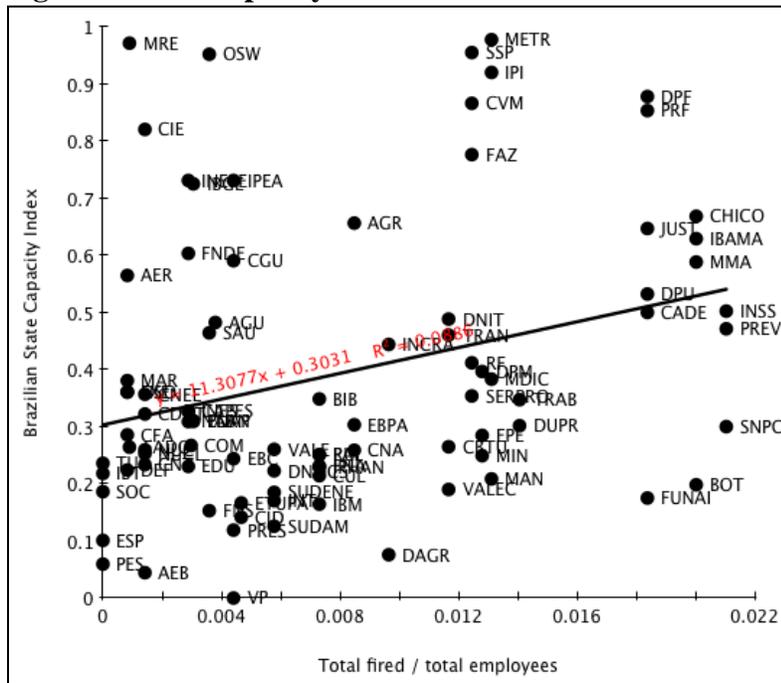
Source: Santos 1996, p. 388-389; Relatórios Anuais do Departamento de Polícia Federal, 2002-2008; Portal da Transparência do Governo Federal. Note: Core careers within the CGU do not include EPPGG civil servants. Data on CGU specialist careers is missing for the years 2001-2002, 2007, 2009-2010.

Table 7: Results of multivariate analysis

| Dependent variable | Model 1a | Model 1b | Model 2a | Model 2b |
|---------------------|------------------------------|------------------------------|-----------------------|-----------------------|
| | Ministerial corruption count | Ministerial corruption count | Civil servant firings | Civil servant firings |
| (Constant) | 23.469** | 20.482 | .009** | .007 |
| BSCI | -.680 | 6.928 | .006* | .004 |
| Budget rate | -3.297 | -3.401 | -.001 | -.001 |
| Turnover | -.016 | -.100 | .000* | .000** |
| Ddespex | .041 | .648 | .000 | .000 |
| NumEmployees | .001 | .001* | 2.36E-007* | 2.70E-007* |
| Auditor | 2.253 | 4.826 | .001 | .002 |
| PMDB | | 1.561 | | .001 |
| PDT | | 32.095 | | .007 |
| PT | | -4.560 | | .004 |
| PR | | 26.264 | | .009 |
| PP | | -6.389 | | .008 |
| PTB | | 24.938 | | .002 |
| PSDB | | -11.531 | | .011 |
| PC do B | | 98.235** | | -.003 |
| Shared | | 6.380 | | .005 |
| F statistic (sig.) | .753 (.609) | 2.721 (.003) | 2.557 (.027) | 1.511 (.131) |
| Adj. R ² | -.021 | .261 | .113 | .095 |

* statistically significant at 10%; ** statistically significant at 5%.

Figure 6: State capacity and civil service dismissals



Appendix 1: Construction of the State Capacity Index and Description of Sources

The State Capacity Index is compiled from three groupings of variables:

1. Career strength is compiled on the basis of two observed variables: the percentage of employees in core careers, and the percentage of employees in specialist careers. We sum the two percentages, then normalize the resulting sum according to the following method:

$$\frac{X_i - X_{\min}}{X_{\max}}$$

where X_i was the individual agency's score on the particular item in question.²⁴

2. Agency career specialization is compiled from three observed variables: average civil servant longevity, existence of a core career, and percentage of employees allocated from other agencies. To ensure that all indicators are pointing in the same direction (toward higher specialization), we use the inverse of the percentage of employees allocated from other agencies. Average civil servant longevity is normalized, and agency career specialization is the average of the resulting three variables.

3. Politicization is measured as the inverse of the average of the normalized variables de facto partisan occupation of DAS spots and de facto partisan occupation of regular civil service spots. We invert the result to ensure that the politicization variable is pointing in the same direction as the other two variables (i.e., higher results indicate less politicization).

The composite State Capacity Index is the normalized sum of the three variables.²⁵

A word on sources is also in order. Table 3 lists the sources for the component variables. The Federal Transparency Website, online since November 2004, is kept by the Controladoria-Geral da União. It gathers data on budget expenditure, revenue extraction, transfers to states and municipalities and on human resources in the federal civil service. The website makes available an Excel file listing all civil servants currently hired at the federal level – who may be working in a federal agency or loaned to state and city governments, assemblies and courts. With exception to the Central Bank, all information regarding civil servants comes from a system called Sistema Integrado de Administração de Recursos Humanos (SIAPE), managed by the Ministry of Planning. The file is updated monthly and the data used in this article is from August 2011.

The Federal Civil Service Wage Table was created by the now defunct Ministério da Administração Federal e Reforma do Estado (MARE) in June 1998 and is now updated by the

²⁴ An alternate way of normalizing the results would be:

$$\frac{X_i - X_{\min}}{X_{\max} - X_{\min}}$$

However, this would artificially constrain the results between 0 and 1, which would make it impossible to compare results across years.

²⁵ Munck and Verkuilen (2005), Goertz (2008, 110-111) and Schedler (2010, 11-13) offer thoughtful overviews of the key issues involved in aggregation and index construction.

Ministry of Planning. It holds information regarding the existence and structure of civil service careers in each federal agency, as well as wage information on civil servants and political appointees at the federal level. It permitted us to determine just how many different types of careers exist in the Brazilian federal government.

The Federal Civil Service Statistical Bulletin was also created by the MARE in May 1996 and is now updated monthly by the Ministry of Planning. It lists exactly how many civil servants work in each specific career. Therefore, consulting this Bulletin alongside the Federal Civil Service Wage Table informs us the proportion of civil servants in core and specialist careers for each federal agency.

Finally, the Federal Electoral Court (TSE) since March 2011 has made available on its website, a full list of all individuals who are members of political parties in Brazil. This information allows us to check the proportion of political appointees and civil servants that are party members, giving us a rare glimpse into the partisan logic that may or may not govern the distribution of patronage and policymaking posts at the federal level. To compile the politicization variable, we have cross-checked the Federal Civil Service Wage Table against the TSE data.