State Capacity, Bureaucratic Politicization, and Corruption in the Brazilian State

KATHERINE BERSCH,* SÉRGIO PRAÇA,** and MATTHEW M. TAYLOR***

Responding to recent articles in Governance highlighting the need for improved measurement of bureaucratic characteristics, this article describes efforts to map Brazil’s federal agencies on three dimensions—capacity, autonomy, and partisan dominance—derived from data on more than 326,000 civil servants. The article provides a “proof of concept” about the utility of agency-level measures of these variables, demonstrating how they relate to an output common to all agencies: corruption. The article provides a first step in the direction of building a comparative research program that offers objective evaluation of bureaucracies within nation-states, with the intent of better disentangling their impact on governance outcomes.

Introduction

Fukuyama (2013) issued a clarion call in these pages for conceptual clarity and improved measurement of state capacity, highlighting two dimensions of governance: capacity, conceived of as resources and professionalization, and autonomy, the independence of bureaucrats from political principals. He suggested that better measurement techniques are needed, going beyond the cross-national, subjective, and results-oriented measures that dominate this field. In this, he is joined by Holt and Manning (2014), who argue that state capacity is best measured by focusing on internal measures, rather than outputs, and that administrative data sources should supplement expert assessments.

This article summarizes one measurement effort (Bersch et al. 2016) and demonstrates the use of these measures in a single nation-state, Brazil. The measures are intra-national, addressing individual bureaucracies within the national state; objective, based on administrative data about individual actors rather than subjective expert assessments; and generated independently of outcomes. The article investigates the relationship between capacity and autonomy, alongside a third variable that is relevant to governance outcomes in multiparty systems: the political dominance of individual parties within each agency.

Together these variables are found to influence corruption in important ways. Low capacity and low autonomy are associated with higher corruption. But the results also suggest the potentially damaging effect of single-party control over agency appointments. Partisan dominance is found to indirectly increase corruption through its negative effects on agency capacity. Partisan dominance also has a detrimental impact when autonomy is high, presumably because fewer rivals will be present in the agency to whistleblow on their erstwhile allies.

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The article thus provides an empirical contribution to the study of the relations between bureaucratic capacity, politicization, and governance outcomes. It begins with a discussion of why bureaucratic capacity and politicization are thought to matter. It then describes new measures of capacity, autonomy, and partisan dominance built from employee-level data on the Brazilian federal government. Third, it analyzes these findings in their local context, noting their association with corruption.

Bureaucracies and Political Appointments

The relationship between government bureaucracies and elected political parties has been a recurring source of tension in democracies. In an ideal conception of bureaucracy, civil servants are given certain career and salary protections in exchange for the impartial execution of their duties, following the dictates of their political masters. However, there is an inherent conflict between the Weberian ideal of bureaucracy as a powerful but neutral actor acting at the behest of elected leaders, and the multiple pressures on civil servants that may impinge on their neutrality (e.g., Bendix 1945; Dargent 2014). To ensure that there are clear policy mandates for civil servants to fulfill, and also guarantee that bureaucrats are responsive to politicians, most regimes ensure that government agencies are led by appointees, with political appointments sometimes reaching two or three tiers downward into the bureaucracy (Peters and Pierre 2004, 11). In democracies, major realignments at the polls usually lead to similarly momentous changes in appointments, ensuring that bureaucratic priorities are linked to electoral preferences.

Although political controls may enhance bureaucratic accountability, they may also have corrosive effects. By realigning the career incentives of bureaucrats, the political considerations behind appointments may move civil servants away from the Weberian ideal of loyal, neutral servants of the state. A bureaucrat serving in an agency tightly controlled by partisan appointees may find her career prospects shaped by fidelity to party priorities. A further threat is the possibility that political appointments will be used, not to guarantee that bureaucracy follows the policy objectives of the elected party, but instead to build political support (Grindle 2012, 208). This problem is particularly relevant in countries governed by multiparty systems, in which legislative coalitions are frequently constructed through the overt exchange of policies, budgets, and appointments, and where civil servants’ career prospects may turn on their ability to serve the needs of coalition partners.

Under multiparty systems, building state capacity thus involves a series of trade-offs. These have been highlighted in at least two streams of research on the Brazilian state, an influential case in scholarship on capacity and development. The first is exemplified by Geddes’s “politician’s dilemma” (1994). In her account of Brazil’s 1930–1964 Republic, politicians faced a conflict between ensuring their immediate political survival and building long-term governmental performance. To achieve their goals in some policy arenas, politicians traded long-term performance in other arenas for political support, purchasing capacity in their favored agencies by handing other agencies to coalition allies.

One result was a very clear variation in the capacity of Brazilian federal agencies, with the coexistence of bureaucratic “pockets of efficiency” (bolsões de eficiência) or “islands of excellence,” alongside other agencies featuring lackluster capacity (Evans 1979, 1995, 257; Geddes 1994; Martins 1985; Pereira 2016; Schneider 1991; Willis 1986). Since the 1930s, the federal government has worked to construct state capacity that would facilitate economic modernization. In some policy spheres, this effort has been highly successful: Agencies such as the Brazilian Geographical and Statistical Institute and the Central
Bank are widely acknowledged to be world-class. Other bureaucracies have been hijacked by partisan interests: Many infrastructure agencies, for example, have been tools of patronage, used to hold together fractious governing coalitions.

A second stream of research, focused on contemporary Brazilian democracy (1985–present), has addressed a related issue: how “coalitional presidentialism” (Abranches 1988) permits basic governability in Brazil. It has emphasized the “toolkit” of instruments available to presidents to corral political support, including both formal rules and informal institutions (Figueiredo 2007; Figueiredo and Limongi 1999; Palermo 2000; Raile, Pereira, and Power 2011). The overall trend has been toward recognition that coalition formation under presidentialism is not as unusual as once thought (Cheibub, Przeworski, and Saiegh 2004), that Brazilian coalitional presidentialism is not as idiosyncratic as many believe (Chaisty, Cheeseman, and Power 2014), and that the Brazilian political model has led to less ungovernability than initially feared (Melo and Pereira 2013; Montero 2014).

However, the bureaucracy, and its use as a tool of coalition management, has been relegated to the sidelines of the governability debate over the past two decades. This is curious in light of the growing evidence of a “Weberian” shift in the federal bureaucracy, with professionalization and meritocracy improving under the 1988 Constitution and through subsequent reforms (Pereira 2016). Further, despite widely held popular impressions of a horse-trading culture in Brasília, there is very little empirical understanding of how the bureaucracy is politicized and the effect of appointments on governance outcomes.

The article addresses three questions. First, at the most basic empirical level, how dominated are Brazilian federal agencies by particular partisan interests? Second, what is the relationship between agency politicization, capacity, and autonomy? Finally, what is the relationship between these variables and governance outcomes, specifically corruption? First, though, we briefly detail the measurement of the variables of interest.

**Measurement of State Capacity within National States**

The central conceit guiding much of the resurgent interest in state capacity concerns “institutional power—the ability of the state to induce residents, firms, and organizations to act in ways they would not in the absence of its regulatory and administrative presence” (Kurtz 2013, 3). Pioneering early works providing cross-national comparisons of capacity (Evans 1995; Rueschemeyer, Stephens, and Stephens 1992) have been reinforced by recent studies of the relationship between state capacity and economic and political development (e.g., Centeno, Kohli, and Yashar 2016; Holmberg and Rothstein 2012; Kurtz and Schrank 2007).

With very few exceptions (e.g., Ang 2016), however, the study of state capacity remains a cross-national endeavor. The dominance of cross-national approaches does not permit the evaluation of the questions noted earlier, in part because of confounding influences on governance outcomes, such as the varying territorial reach of national states (Giraudy 2012; Soifer 2012), and differences in socioeconomic development, local cultures, political regimes, and political institutions.

Further, cross-national measures say little about the variance within national states, and thus, while they may permit us to draw some conclusions about whether capacity matters in the aggregate (e.g., Holmberg and Rothstein 2012), they are unable to distinguish one bureaucracy’s capacity from another’s intranationally (within the same national government). The state’s ability to extract revenue (Cheibub 1998; Levi 1988), for example, is very helpful in cross-national comparison, but provides little purchase on the differences in capacity between foreign ministries and social welfare agencies.
within the same state. Measurement challenges have also been addressed in cross-
national perspective through the use of expert surveys (e.g., Dahlström, Lapuente, and
Teorell 2012; Evans and Rauch 1999, 2000; Rothstein and Teorell 2012). These provide
the important service of allowing comparison of state capacity across national bounda-
ries, but they are subjective and expensive, and thus unlikely to become a widely used
tool for the analysis of state capacity at the intra-national level, despite impressive
recent efforts in this direction (e.g., Gingerich 2013). A final concern about extant meas-
ures concerns conceptual bleeding between capacity and related terms, such as
autonomy, impartiality, and discretion, as well as the conflation of capacity with desid-
erata such as quality, efficiency, or the rule of law (Holmberg and Rothstein 2012;
Fukuyama 2013, 2–4).

Below we summarize measures of capacity and autonomy for the Brazilian federal
bureaucracy developed by Bersch et al. (2016) that respond to the frustrations voiced
above: they are intranational; objective, based on administrative data about individual
actors rather than subjective expert assessments; and parsimonious, permitting repli-
cation within Brazil and application to other national contexts. They are built from
publicly available data on more than 326,000 individual civil servants, aggregated
within the 95 most important federal agencies in Brazil.2

The latent variable Capacity is a measure of esprit de corps, derived from the propor-
tion of civil servants in expert careers, career longevity, staff requisitioned from other
agencies, and average salaries. This follows the logic of Evans and Rauch (1999), whose
work suggests a number of causal paths by which meritocratic recruitment and a pre-
dictable bureaucratic career ladder may contribute to more effective bureaucracies:
Shared norms may build resistance to the subversion of internal rules, long-term career
paths may increase competence and corporate coherence, and meritocracy and a clear
career path may enhance the ability of organizations to pursue long-term objectives.

The Capacity measure follows this logic in the expectation that career specialization,
longevity, and wages may all improve the relative risk–reward calculation within the
agency career path and thus improve “corporate coherence” and performance.3 This
assumption is buttressed by strict rules concerning public service employment: Under
the 1988 Constitution, civil service positions are obtained only on passage of an
entrance examination. Indeed, since legislation defining these issues was passed in the
first half of the 1990s, with a few minor exceptions, the only positions in the federal
bureaucracy open to nonmeritocratically hired employees are High-Level Direction
and Advisory (Direção e Assessoramento Superior [DAS]) slots. All civil servants outside
the DAS slots must be hired directly by civil service examination, and a large propor-
tion of the DAS slots—slightly more than 70% (Bersch et al. 2016)—are also filled by
civil servants.4 The end result, as the OECD (2010, 232) notes, is: “Merit assurance
seems robust; there are ample oversight and recourse mechanisms, including legal
recourse . . . . There appears to be strong public confidence that the system is fair . . . .”

The latent variable Autonomy5 is derived from the percentage of high-level (DAS
4–6) and low-level (DAS 1–3) political appointees who are members of political
parties, as well as the share of civil servants who are party members. The latent vari-
able Autonomy is thus a measure of the overall politicization of the bureaucracy. The
measure does not say anything about the extent to which any single political party
dominales the DAS and civil service within the agency; it simply measures the degree
of overall politicization below the minister or agency head. It therefore is in keeping
with Fukuyama’s (2013, 357) notion of autonomy as a measure of the relationship of
the bureaucracy to its principals, with the notion that the more principals there are
(overall politicization), the more mandates there will be.
Latent variable analysis is used to aggregate the results, driven by the notion that bureaucratic capacity and political autonomy cannot be directly observed, but must instead be inferred from other observable manifestations (i.e., indicators) of the latent quantity. After selecting indicators that represent the concept of interest, latent variable analysis extracts what is common to them to weigh the indicators and produce the latent variable score (for further description of the method, see Bersch et al. 2016; Pemstein, Meserve, and Melton 2010; Treier and Jackman 2008).

Rather than simply aggregating these variables into an index by summing and weighting them on the basis of subjective views about their relative importance, the latent variable approach is agnostic as to the relative importance of the component variables. Rather, the resulting estimates of Capacity and Autonomy are weighted to reflect the pattern of correlation among the indicators. In this way, latent variable analysis helps to resolve the issue of how best to aggregate component indicators, avoids subjective preferences, and helps to address the fact that there is “no strong prior theoretical reason to believe that any one indicator is a better (or worse) indicator than any other...” (Treier and Jackman 2008, 201).

Autonomy does not evaluate the question of which principals’ mandates are likely to be considered most relevant by the bureaucracy. This is a significant concern in a multiparty system. To measure the extent to which any single party dominates a particular agency, we develop a third variable, Partisan Dominance, that measures the percentage of DAS and civil servant slots held by the dominant party in the agency, weighted in a 5-3-1 ratio according to the seniority of the position. The correlations between Capacity, Autonomy, and Partisan Dominance are low, varying from 0.098 to 0.305, as shown in Table 1.5

The empirical data collection exercise permits the mapping of the constellation of potential combinations of Capacity and Autonomy (Figure 1). The northeast and southwest quadrants of Figure 1 offer the best confirmation of arguments about “islands of excellence” previously stated in the literature. For example, economic policy and foreign policy agencies, which are often described in qualitative research as “islands of excellence,” are mostly found in the northeast quadrant of high capacity and high autonomy. Infrastructure and development agencies, long depicted as tools of patronage, are largely found in the southwest quadrant of low capacity and low autonomy.

Equally important, Figure 1 points to two combinations that are seldom considered in the literature on “islands of excellence,” or incorporated into the model of the “politician’s dilemma.” Because of their focus on the supposed trade-off of capacity for political support, these literatures essentially have focused on only two possible combinations, of high capacity and high autonomy, and low capacity and low autonomy. Figure 1 points to two other potentially intriguing combinations: high capacity and low autonomy (in the northwest quadrant), and low capacity and high autonomy (in the southeast quadrant). The northwest quadrant contains the Federal Highway Police (PRF) and the Agriculture Ministry (AGR), both of which have been very important to political actors as instruments of control and regulation, generating efforts to establish political control (low relative autonomy) but also bureaucratic competence (high relative capacity). The southeast quadrant includes agencies that are presumably there because of their inherent function: the Public Defender’s Office (DPU) in most countries is anathema to politicians, who see little to gain from funding and building up an agency seen to be defending criminals, and still less from controlling it. Others reflect specifically Brazilian political battles of the past two decades, such as the economic antimonopoly board CADE, which was designed under the neoliberal reforms of the 1990s to be highly autonomous but has not been popular with the “developmentalist” governments of the early twenty-first century, and the
civilian offices controlling the military branches (AER, MAR, EXE, DEF), which reflect the difficult dynamics of postauthoritarian civil–military relations. These agencies are neither attractive to politicians nor especially high priorities for capacity building.

With regard to Partisan Dominance, a striking finding is the variety of combinations of politicization and partisan control across agencies. Figure 2 offers a graphical visualization of four agencies that lie near the maximum or minimum values of Autonomy and Partisan Dominance: (1) DNOCS, an infrastructure agency tasked with fighting drought; (2) the comptroller general’s office (CGU), tasked with fighting corruption; (3) PRF, tasked with ensuring safety and order on federal highways nationwide; and (4) the agrarian development ministry (DAGR), designed to oversee agrarian reform and ensure sustainable family farming. The gray shading indicates the proportion of

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Correlations between Core Variables</th>
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<tr>
<td></td>
<td>Capacity</td>
</tr>
<tr>
<td>Capacity</td>
<td>1.000</td>
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<tr>
<td>Autonomy</td>
<td>0.178</td>
</tr>
<tr>
<td>Partisan dominance</td>
<td>0.305</td>
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</tbody>
</table>

FIGURE 1
Capacity and Autonomy of Brazilian Federal Agencies

Note: The dots represent mean posterior scores for individual agencies.
the bureaucracy at each level affiliated with a political party, while the black shading indicates the proportion belonging to the dominant party in that agency.

It is perhaps not surprising that DNOCS has the lowest Autonomy score in the sample, as it offers important benefits to political partisans. A very high proportion of the budget is dedicated to investment (19.7% vs. a sample average of 2.5%), the agency is responsible for carrying out electorally important projects mandated by congressional budget amendments, and the agency has a number of offices within the 27 states, prized by local political machines. On the other end of the Autonomy spectrum, the CGU is a relatively new agency, created only in 2001, with the explicit goal of corruption prevention. The agency has a central role in preventing corruption at the state and municipal levels, and has received strong presidential backing for its oversight of other federal agencies (Loureiro et al. 2012; Praça and Taylor 2014). The CGU has been staffed from the outset by civil servants ceded from the Planning and Finance Ministries, and there has been a strong internal norm against partisan attachments that might create a perception of bias.

The PRF is a largely “street-level” bureaucracy. The agency has a low Autonomy score, in part because there are ample opportunities for political profits from the PRF’s work, through appointment powers or control of highway commerce. But because federal highways pass through every state, and different political coalitions govern each state, no party dominates the agency nationally. A single party, by contrast, has dominated the DAGR since its creation in 2003. In part this was because, in an effort to obtain legislative support from the powerful agricultural bloc, President Luiz Inácio Lula da Silva (henceforth, Lula) offered the Agriculture Ministry to

\[\text{FIGURE 2} \]
\textbf{Autonomy and Partisan Dominance}

\[\text{Source: Authors.} \]
\textit{Note: (1) = minister; (2) = DAS 4–6 high-level appointments; (3) = DAS 1–3 low-level appointments; (4) = civil service.}
Roberto Rodrigues, who had close ties to agro-industry. Lula needed to find a way to assuage members of the Workers’ Party (PT) with ties to the land reform movement, who had long advocated for agrarian reforms aimed at small family farmers and landless peasants. As a result, he created the DAGR, whose appointments have been dominated by Workers’ Party members.

Even in the extreme case of the DAGR, however, members of the PT account for only 35% of the high-level appointment slots, and slightly less than 7% of the civil service within the agency. While these large proportions no doubt influence the manner by which policy is implemented, they demonstrate that even highly politicized agencies are not completely handed over to any single party. Even the least autonomous or most partisan agencies still draw many of their potential DAS appointees from the ranks of the civil service, and in no case is partisanship in the civil service above 25%; the sample mean is 11.4%. The empirical evidence thus parts ways with discussions of coalitional presidentialism that assume that partisan control—especially of the most patronage-ridden agencies—is complete or nearly complete. It also serves as a useful corrective to the not-infrequent assertion that agencies are given lock, stock, and barrel to coalition allies (this belief is so widely held that it has a name, *porteira fechada*, or “closed gate,” meaning that the agency is handed to the allied party with the understanding that other parties will not make it past the front gate).7

As these various combinations of Autonomy and Partisan Dominance demonstrate, the logic of political appointment under Brazilian coalitional presidentialism offers considerable leeway for various forms of politicization along the dimensions of Autonomy and Partisan Dominance, with additional variation in patterns across the four tiers of the bureaucracy.

Figure 3 plots Capacity, Autonomy, and Partisan Dominance. One might expect to see some high-performing agencies that have both high levels of Partisan Dominance and high levels of Capacity. Yet, most of the agencies in the upper half of Figure 3, marked by relatively high capacity, do not show extreme values of Partisan Dominance; indeed, only 3 of the 24 agencies in the fourth quartile of Partisan Dominance inhabit the northern half of the figure.8 The results suggest a further dimension to the “politician’s dilemma” that should be taken into account in multiparty systems: Not only does the politicization of agencies matter, but so too does the degree of control of agencies by specific parties.9

**Politicization, Partisanship, State Capacity, and Corruption**

To what degree do the different forms of politicization matter? The central challenge in answering this question is finding governance outcomes that can be compared across policy arenas as diverse as race relations, agricultural policy, and macroeconomic policy. To surmount this challenge, we turn to one governance outcome that is common to all agencies: corruption.

*Reported Corruption* is a count of newspaper stories on corruption within each agency appearing in the *O Estado de S. Paulo* newspaper over the decade beginning in 2002. Although media counts are an imperfect measure, this instrumentalization is necessary in light of the problems of Brazil’s judiciary, which is exceedingly slow and overburdened, leading to few convictions for corruption.10 Competition between coalition partners gives politicians reason to alert the media to malfeasance by their erstwhile allies, making this measure a more robust approximation of expected corruption than it would be if newspaper reports relied solely on investigative reporting. To avoid conflating corrupt agencies with corruption-fighting agencies, the
measure is constructed by evaluating the content of each article to ensure that it reflects allegations of corruption within that respective agency. The 10-year total count is used as a means of diluting any scandal-specific effects.11

The analysis proceeds in three stages. The first is to analyze the independent relationship between each of the core variables (Capacity, Autonomy, and Partisan Dominance) and Reported Corruption. The second and third stages evaluate the interaction between these variables, and the extent to which Capacity and Autonomy mediate or moderate the effect of Partisan Dominance on Reported Corruption. By way of refresher, a mediating variable is one that lies on the causal pathway between an independent variable and the dependent variable, and influences the dependent variable when controlling for the independent variable; some of the effect of the independent variable passes through the mediating variable (Baron and Kenny 1986, 1176; Imai et al. 2011). In other words, a mediating variable captures the indirect effect of the independent variable on the dependent variable; if the indirect effect is particularly strong, then the effect of the independent variable on the dependent variable will pass entirely through the mediating variable. Moderation involves interaction; the effect of an independent variable on the dependent variable changes depending on the value of the moderator (Brambor et al. 2006).
Stage 1: Relations between the Core Variables

To understand to what degree the different forms of politicization matter, we first analyze the relationship between each of the core independent variables of interest (Capacity, Autonomy, and Partisan Dominance) and Reported Corruption, using a negative binomial regression.\(^\text{12}\) The number of Employees (including both appointees and civil servants) controls for the size of the agency. We are agnostic about the effect of size, as two hypotheses are possible: that as the number of employees increases, there is a greater likelihood that agency-specific core or expert career paths will be developed, boosting Capacity, or that a larger agency may be marked by patronage, which may act against Capacity or Autonomy. The Budget is agency-executed spending in Brazilian reais, logged. This tests whether agencies with higher relative budgets are likely to develop higher Capacity. Leadership Turnover measures the number of months that the average agency head remained in office during the Lula administration. Agencies with more volatile leadership are likely to have lower esprit de corps and hence, lower Capacity, while turnover may contribute to decreased Autonomy, since each new agency head may bring a train of partisans, some of whom remain in the agency.

While low capacity, low autonomy, and high partisan dominance are all hypothesized to be associated with higher levels of corruption, it is plausible that this association could be either positive or negative. Low capacity might be expected to facilitate corrupt practices, low political autonomy might suggest rents from bureaucratic functions, and high partisan dominance might be indicative of agency capture for patronage purposes. Alternately, low capacity might make it hard to engage in corruption, low autonomy might mean sterner control over bureaucrats, and high partisan dominance might enhance accountability to voters, reducing corruption.

Table 2 presents the results of negative binomial regressions of Reported Corruption on each of the core independent variables. Models 1, 2, and 3 confirm our hypothesis: Low capacity, low autonomy, and high partisan dominance are each associated with higher levels of corruption and are statistically significant. Model 4 takes a preliminary step toward assessing the relationship between the core independent variables of interest by simultaneously evaluating all independent variables of interest. Capacity and Autonomy are still statistically and substantively significant, suggesting that they both have an important additive effect on Reported Corruption. Partisan Dominance, however, is no longer significant, suggesting that its effect on reported corruption may be moderated or mediated by Autonomy and/or Capacity.

Stage 2: Capacity as Mediating Variable

This stage evaluates the relationship between Partisan Dominance and Capacity, assessing whether Capacity mediates or moderates the effect of Partisan Dominance on Reported Corruption. We hypothesize that Capacity mediates some portion of the effect of Partisan Dominance on Reported Corruption. That is, the effect of Partisan Dominance on Reported Corruption is not only direct, but also indirect through its effects on Capacity (Partisan Dominance influences Capacity, the mediator or intervening variable, which in turn influences Reported Corruption). Alternately, Capacity may moderate the effect of Partisan Dominance on Reported Corruption, meaning that the effect of Partisan Dominance on Reported Corruption varies depending on level of Capacity.

We use the standard approach to assessing intervening variables (Baron and Kenny 1986). Three requirements must be met to establish a mediation effect. First, the independent variable (Partisan Dominance) influences the dependent variable (Reported Corruption). Second, the independent variable (Partisan Dominance)
influences the mediator (either Capacity or Autonomy). Third, the mediator (Capacity or Autonomy) influences the dependent variable (Reported Corruption) when controlling for the independent variable. If the effect is completely mediated, the effect of the independent variable will be reduced and may no longer be significant (or the independent variable may exert both a direct and indirect effect—through the mediator—on the dependent variable, in which case it will remain significant). To assess the moderating hypothesis, we evaluate the interaction between Partisan Dominance and Reported Corruption.

Models 5–7 in Table 3 present the casual steps analysis focused on Capacity as the mediating variable. Model 5 shows that Partisan Dominance is statistically significant, with a substantial impact on Capacity, demonstrating that the independent variable Partisan Dominance influences the mediator, Capacity. Rather than numerous partisans of the same party enhancing capacity, these results suggest corrosive effects: A 0.1 increase in Partisan Dominance (i.e., moving from 10% of agency partisans from the same party to 20%) would be associated with a 0.23-unit decrease in Capacity, all else equal, roughly the vertical distance between the Institute for Educational Studies and Research (INEPE; 0.426) and the Labor Ministry (TRAB; 0.199) in Figure 1. The size of the agency (Employees) is substantively and statistically significant, with Capacity increasing by 0.03 units for each additional 1,000 employees, holding constant other control variables. Model 6 (the same as Model 1) was discussed above, reporting the results of a negative binomial regression predicting Reported Corruption with Partisan Dominance and the controls. Model 7 reports a negative binomial regression predicting Reported Corruption with both Partisan Dominance and Capacity. The effect of Partisan Dominance is cut by over half and is no longer significant once the mediator, Capacity, is included. These results are consistent with our hypothesis that Capacity mediates the effect of Partisan Dominance. Moreover, Model 8 shows that the interaction

| TABLE 2 | Effect of Core Independent Variables on Reported Corruption |
|-----------------|-----------------|-----------------|-----------------|-----------------|
|                 | (1)             | (2)             | (3)             | (4)             |
| Intercept       | −6.20*          | −4.24†          | −3.84           | −4.02†          |
|                 | (2.58)          | (2.39)          | (2.37)          | (2.36)          |
| Partisan Dominance | 3.50*          | 0.47            |                 |                 |
|                 | (1.70)          |                 |                 |                 |
| Capacity        | −0.94***        | −0.63†          |                 |                 |
|                 | (0.27)          | (0.28)          |                 |                 |
| Autonomy        |                 | −1.21***        | −0.98***        |                 |
|                 |                 | (0.25)          | (0.25)          |                 |
| Budget (logged) | 0.31**          | 0.26*           | 0.25*           | 0.25*           |
|                 | (0.12)          | (0.11)          | (0.11)          | (0.11)          |
| Employees (thousands) | 0.04      | 0.06†          | 0.02            | 0.04            |
|                 | (0.04)          | (0.04)          | (0.03)          | (0.03)          |
| Leadership Turnover | 0.81        | 0.45            | −0.04           | 0.14            |
|                 | (0.83)          | (0.81)          | (0.78)          | (0.77)          |
| Theta           | 0.30***         | 0.32***         | 0.36***         | 0.38***         |
|                 | (0.05)          | (0.06)          | (0.07)          | (0.07)          |
| N               | 91              | 91              | 91              | 91              |
| AIC             | 467.54          | 462.61          | 456.57          | 455.95          |
| BIC             | 527.81          | 522.87          | 516.83          | 536.30          |
| log L           | −209.77         | −207.30         | −204.28         | −195.97         |

Note: Standard errors are in parentheses.
†significant at p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001.
Partisan Dominance and Capacity is not significant, as do graphs of the interaction,\(^{13}\) which allows us to reject the interaction hypothesis. Although we are cautious about making causal claims,\(^ {14}\) in the Brazilian context of coalitional presidentialism, the empirical evidence shows that Partisan Dominance is associated with higher Reported Corruption and lower levels of Capacity and suggests that Partisan Dominance may indirectly affect Reported Corruption through Capacity.

**Stage 3: The Interaction between Autonomy and Partisan Dominance**

The third stage is to evaluate the relationship between Autonomy and Partisan Dominance. It is possible that Autonomy may be a mediator, rather than a moderator, of Partisan Dominance. Yet because there are strong theoretical reasons to believe that there is an interactive effect between Autonomy and Reported Corruption, we begin by testing the interaction hypothesis. To do so we follow the recommendations of Berry, Golder, and Milton (2012) regarding testing interaction models by making

### TABLE 3

**Testing Relationships between Core Independent Variables**

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<th>Assessing Capacity as an Intervening Variable</th>
<th>Interactions</th>
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<td></td>
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<td>Reported Corruption</td>
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<tr>
<td></td>
<td>(5)</td>
<td>(6) (7)</td>
</tr>
<tr>
<td>Intercept</td>
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<td></td>
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<td>(2.58)</td>
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<tr>
<td>Partisan Dominance</td>
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<td>3.50*</td>
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<td>(1.70)</td>
</tr>
<tr>
<td>Capacity</td>
<td></td>
<td>-0.85**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.29)</td>
</tr>
<tr>
<td>Partisan Dom. (\times) Capacity</td>
<td>1.08</td>
<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partisan Dom. (\times) Autonomy</td>
<td>4.59**</td>
<td></td>
</tr>
<tr>
<td>Budget (logged)</td>
<td>0.00</td>
<td>0.31**</td>
</tr>
<tr>
<td></td>
<td>(0.04)</td>
<td>(0.12)</td>
</tr>
<tr>
<td>Employees (thousands)</td>
<td>0.03*</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(0.04)</td>
</tr>
<tr>
<td>Leadership Turnover</td>
<td>0.28</td>
<td>0.81</td>
</tr>
<tr>
<td></td>
<td>(0.30)</td>
<td>(0.83)</td>
</tr>
<tr>
<td>Theta</td>
<td></td>
<td>0.30***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.05)</td>
</tr>
<tr>
<td>N</td>
<td>94</td>
<td>91</td>
</tr>
<tr>
<td>R(^2)</td>
<td>0.24</td>
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<tr>
<td>Adj. R(^2)</td>
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<td></td>
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<tr>
<td>Resid. sd</td>
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<tr>
<td>AIC</td>
<td>467.54</td>
<td>464.29</td>
</tr>
<tr>
<td>BIC</td>
<td>527.81</td>
<td>534.59</td>
</tr>
<tr>
<td>log L</td>
<td>-209.77</td>
<td>-204.15</td>
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*Note:* Standard errors are in parentheses.\(^ {\dagger}\)Significant at \(p < 0.10\); \(*p < 0.05; **p < 0.01; ***p < 0.001.\)
explicit the predictions of our interaction theory with two hypotheses: one regarding the variation in the marginal effect of Partisan Dominance as Autonomy changes and one about the marginal effect of Autonomy as Partisan Dominance changes.

\( H_{\text{Partisan} \mid \text{Autonomy}} \): The marginal effect of Partisan Dominance on Reported Corruption will be positive at all values of Autonomy; this effect will be weakest, though, when Autonomy is at its lowest and strengthens in magnitude as Autonomy increases.

That is, Partisan Dominance’s effects vary according to the overall politicization of the agency, and we expect that as Autonomy increases, the effect of Partisan Dominance on Reported Corruption will increase. The reasoning is that as an agency becomes more politicized, Partisan Dominance’s effect will be diluted; by contrast, in an agency with fewer political affiliates, the dominant party is likely to have freer rein.

\( H_{\text{Autonomy} \mid \text{Partisan}} \): The marginal effect of Autonomy on Corruption is negative at all levels of Partisan Dominance. This negative effect is strongest when Partisan Dominance is low and weakens as Partisan Dominance increases.

That is, we expect that as Partisan Dominance increases, the effect of Autonomy on Reported Corruption will decline in strength, as there will be relatively fewer members of rival parties within the agency to blow the whistle on corruption.

Model 9 shows a positive and statistically significant coefficient for the interaction of Partisan Dominance and Autonomy. To evaluate this result for the hypotheses outlined above, Figure 4 presents the marginal effects plots for both hypotheses, showing how the effect of \( X \) on Reported Corruption varies over the entire observed range of \( Z \), as recommended by Berry, Golder, and Milton (2012). The marginal effect of Partisan Dominance on Reported Corruption is positive and statistically significant when Autonomy exceeds 0.44, and negative and statistically significant when less than \(-1.67\).\(^{15}\) The superimposed histogram portrays the frequency distribution and the rug plot shows the observations. Nearly a quarter (24%) of the observations in the sample fall into the range of a positive and statistically significant marginal effect, and 2.2% in the negative and statistically significant marginal effect. This partially confirms our initial hypothesis: When Autonomy is high, Partisan Dominance has a positive effect on Reported Corruption, perhaps because the dominant party has more relative authority over the bureaucratic structure, which it might use to corrupt ends. This finding is not significant across the entire range of Autonomy: While the findings do not permit a definitive conclusion, it may be that below a certain level of Autonomy, rival party whistleblowers within an agency are able to attenuate the most egregious effects of Partisan Dominance. Where autonomy is very low, Partisan Dominance is negatively related to Reported Corruption. While this last finding is at odds with our initial hypothesis, it is important to note that only two observations fall into this range.

To test the second relationship, Figure 4b plots the estimated marginal effect of Autonomy on Reported Corruption across the observed range of Partisan Dominance values. This graph provides strong support for the second hypothesis. As expected, Autonomy has a statistically significant negative marginal effect on Reported Corruption (higher levels of Autonomy result in lower levels of Reported Corruption), but this effect weakens as Partisan Dominance increases and is no longer significant above a Partisan Dominance level of 0.39. While the results are not statistically significant over the entire range, it worth noting that 84% of observations fall into the significant range.

In sum, the estimated marginal effects plots provide a partial confirmation of our hypothesized predictions and also offer a more nuanced understanding of the interaction between our core variables. Partisan Dominance is associated with higher Reported
Corruption, but only when agencies have fewer political employees overall (high Autonomy). Having fewer political employees (greater Autonomy) decreases Reported Corruption, but a strongly dominant party weakens that effect.

The analysis lends strong support to three findings: Other things equal, increasing levels of politicization of the bureaucracy has detrimental effects on governance; building up the capacity and autonomy of the bureaucracy may provide a partial antidote; and competition between political parties within an agency may serve to check the worst impulses of a dominant party.

The substantive effect of changes in these variables is significant. Model 6 shows that a move from an agency at the mean on Partisan Dominance (e.g., the CVM, Brazil’s Securities and Exchange Commission) to an agency one standard deviation above (e.g., the Education Ministry), results in nearly three additional predicted reports of corruption, when all other variables are at their mean. However, when we include Capacity, as in Model 7, the same move from an agency at the mean on Partisan Dominance to an agency one standard deviation above would lead to only 0.75 additional reports of corruption, other things equal. If the agency were one standard deviation above the mean on Capacity (e.g., the equivalent of a move from the Fundação Joaquim Nabuco, an organization focused on diffusing educational research, to the Comptroller General’s Office), the predicted number of news reports would drop from 5.6 to only 3.0. Model 9 shows that if the agency were one standard deviation higher on Autonomy (e.g., a move from the Instituto Chico Mendes, dedicated to conservation, to the Public Defender’s Office), predicted reports of corruption would drop from 9.8 at the mean to 3.9.

**Conclusion**

The findings reported here offer three overarching contributions to the existing literature. First, they provide a robust empirical complement to the seminal works of Evans (1979, 1995), Geddes (1994), and Schneider (1991) on Brazil, highlighting the
enormous variation between bureaucracies within the national government in contemporary Brazilian democracy. This project yields two important addenda to these authors’ works, revealing that (1) the politicians’ dilemma yields a variety of agency mixtures of capacity and autonomy, including two combinations not previously considered, of high capacity and low autonomy, and of high autonomy and low capacity, and (2) the dimension of partisan dominance suggests that the calculus of capacity formation may not be solely about political autonomy, but also about the degree to which parties are forced to share agency control.

Second, the findings offer substantively important insights and correctives to the debate over the use of agency politicization as a tool of coalition management under coalitional presidentialism. The empirical data collected for this project demonstrate that partisan control over agencies is never as complete as popular impressions would have it. Nonetheless, there is good reason to be concerned about the potential effects of partisan allocation of bureaucratic positions. Partisan dominance of political appointments is associated with lower agency capacity, which is important to the everyday functioning of the bureaucracy and to the bureaucracy’s ability to effectively combat corruption. There is an important interaction between partisan dominance and autonomy, and as a result, partisan dominance’s effects on corruption are found to be conditional on the overall level of autonomy. There is a clear finding that partisan dominance is associated with corruption, suggesting that perhaps fear of the pernicious effects of partisan dominance explains why Brazilian presidents have largely avoided doling out agencies to single parties, preferring instead to divvy up appointments among allies. These findings suggest that the literature on coalitional presidentialism might strive to be less agnostic about the costs of coalition formation for the machinery of government. Conversely, although coalitional presidentialism is frequently criticized for its lack of horizontal accountability (given the domination of the legislature by the executive), the article suggests at least preliminary evidence that political appointments shared among multiple parties may be associated with lower reported corruption within agencies.

Finally, these results will be relevant to scholars developing the growing literature on the relationship between state capacity and the quality of government. The findings suggest that in multiparty democracies, partisan dominance is an important third dimension to add to Fukuyama’s arguments about the effects of capacity and autonomy on governance. The article provides a “proof of concept” about the utility of agency-level measures of capacity, autonomy, and partisan dominance, suggesting that more granular and objective measures for agencies within national governments are not only possible, but may yield insightful analytical gains that permit theory testing and theory development in Brazil and elsewhere around the world.

Going forward, many potentially intriguing research projects follow on this article, including the extension of this project both to other countries and to a longer time series. Within Brazil, it is our hope that extension of the measures to a longer time horizon may enable researchers to trace how bureaucratic capacity, political autonomy, and partisan dominance shift over time, and to track the extent to which policymakers are able to proactively alter state priorities through changes to the bureaucracy. Cross-nationally, this article is an early step in an effort to build a productive comparative research program that evaluates intranational bureaucracies across nation-states, so as to simultaneously analyze not only national cases, but also to compare the constellations of capacity and politicization in multiple country cases, and better evaluate the manner by which these patterns influence broader governance outcomes.
Acknowledgments

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Notes

2. We are unable to analyze federal companies and autarquies such as Petrobras, BNDES, and Banco do Brasil, as they are not required to make public the same data as federal agencies.
3. Capacity, as measured here, is distinct from technocratic skill, training, and education, creativity, or any number of other bureaucratic characteristics that are sometimes referred to as “capabilities” (Holt and Manning 2014, 718).
4. There is a common misconception that the federal government in Brazil is heavily populated by partisan or patronage appointees. In part, this derives from long historical practice, as well as lackluster record keeping. Drawing on newspaper reports from the 1980s, Schneider (1991, 70) suggests that there might be more than 50,000 appointed positions in the federal bureaucracy, in comparison to several thousand in the USA and only dozens in Japan. Changes in the Brazilian state, better record keeping, and stronger laws have reduced the number of appointees and provided more exact estimates: There were 22,000 DAS appointee slots in the federal government as of 2013, and nearly 70% of these slots were filled by civil servants. A 2005 decree law established that external appointees could fill no more than 25% of the low DAS positions, and only 50% of the DAS 4 positions. All DAS 4, 5, and 6 level appointments must be approved by the president’s Casa Civil, ensuring tighter political oversight.
5. Given the earlier reliance on Evans and Rauch’s work in constructing the Capacity variable, readers may incorrectly assume that the Autonomy variable also seeks to emulate Evans’s work, and most notably, his notion of “embedded autonomy” (Evans 1995). Desirable although it might be, the Autonomy variable used here does not presume to measure the complex links between society and bureaucracies highlighted by Evans, which probably could only be approximated through intense case study analysis. The Autonomy variable used here is closer in conceit to the political control that Geddes (1994) analyzes, and is particularly relevant to evaluating the partisan dimension of her assumption that “[b]ureaucratic agencies perform more effectively when they are insulated from personalistic and partisan demands” (79). It is also similar to the concept of “insulation” used by Schneider (1991, 73–75), in referring to the freedom of the bureaucracy from outsiders, especially patronage politicians.
6. The correlations are not worrisome from the perspective of the independence of the estimates, given that the component ingredients are derived independently from each other, and the correlations are thus exogenous to variable measurement. Given that one might expect Partisan Dominance and Autonomy to be highly correlated, it is noteworthy that they have the lowest correlation of the three pairs of variables.
8. The three are the National Library (BIB), the National Institute for Educational Studies and Research (INEPE), and the National Council for Scientific and Technological Development (CDCT). They are relatively small agencies, of between 340 and 503 employees, and the few partisan appointments are predominantly filled by the PT. These cases demonstrate the importance of controlling for agency size.

9. There are three plausible explanations of this phenomenon: the bureaucracy’s strong *esprit de corps* may prevent parties from garnering control, jealousy between coalition allies may protect high capacity agencies against domination, and/or partisan dominance may not permit capacity to develop. These questions are not addressed here, but should be analyzed once longitudinal data are compiled.

10. Such instrumentalization is not uncommon (e.g., Glaeser and Goldin 2006; Pereira, Rennó, and Samuels 2011). Golden and Chang (2001) and Balán (2011) find a similar phenomenon of intracoalitional corruption revelations in Italy, Chile, and Argentina. On the slow pace of Brazilian justice in fighting corruption, see Taylor (2011) and Zimmermann (2008).

11. While the *Estado de S. Paulo* is a conservative newspaper, and may be biased against the leftist government in office, there is no indication that it is biased against particular agencies. The fact that the data are compiled by media external to the agency and to the government eliminates endogeneity concerns. An earlier draft experimented with a second measure, the number of civil servant dismissals. Although the data are collected by a largely objective source, the CGU, and were available over a decade-long period, this alternate measure was missing for roughly one-third of agencies and posed a confounding endogeneity problem, given that the very agency being evaluated was responsible for dismissing its members.

12. Due to the discrete and nonnegative properties of the dependent variable, we use an event count procedure to model the process underlying the number of times an agency appears in the *Estado*. A negative binomial regression is used instead of the standard Poisson event count model because the overdispersion in our dependent variable violates Poisson assumptions (King 1988; Long 1997). When in doubt about model specification, we used a likelihood ratio test to compare the poisson and negative binomial results.

13. Available on request.

14. Our ability to provide a more robust test of these mediation effects (cf. Imai et al. 2011) is limited by our observational data. We are unable to make strong identifying assumptions with respect to causal inference, and thus report the results as correlations without causal interpretation.

We are hesitant to make causal claims for three important reasons. First, because the data are real-world data, rather than being drawn from experiments, we cannot claim that partisan dominance is independent of the potential values for reported corruption, nor can we control for a hypothetical treatment group. Indeed, agencies may be attractive targets for political appointments *precisely* because they have a prior propensity to corruption (e.g., infrastructure agencies). To control for the relative “graft attractiveness” of the agencies, we tested a measure of discretionary investment (measured as discretionary budget executed as a percentage of the total agency budget executed). Inclusion of this measure did not alter the results (results available on request).

Second, our data set provides only a snapshot of the bureaucracy in 2011, and so we cannot analyze the causal effect of any variable across time. Third, and perhaps most important to scholars of bureaucracy, the units of observation—agencies—are not independent of each other. This is best exemplified in the case of the DAGR, described earlier, in which the partisan dominance of the PT is a direct response to the perceived dominance of large farming interests within the Agriculture Ministry.

15. The dashed curves around the marginal effect line depict a 95% confidence interval, identifying the values of $Z$ at which the marginal effect of $X$ is statistically significant. Where both dashed lines fall below or rise above zero, the values are statistically significant.

References


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