FGV EBAPE

RAP
BRAZILIAN JOURNAL OF PUBLIC ADMINISTRATION

Article

Does quantity mean quality? Comparing evidence of bureaucratic capacity and performance between agency groups in Brazil

Bruno Queiroz Cunha [1]

Pedro Cavalcante [2]

[1] Instituto de Pesquisa Econômica Aplicada (IPEA), Brasília / DF – Brazil

[2] Instituto Brasileiro de Ensino, Desenvolvimento e Pesquisa (IDP), Brasília / DF – Brazil

This article aims to assess whether the Brazilian government's preference for enhancing the power and scope of its regulatory agencies compared to its non-regulatory agencies has led to proportional gains in terms of capacity and performance. Regulatory state doctrine espouses the comparative advantages of autonomous regulatory agencies in these areas. We employ principal components and multivariate regression analyses on a survey dataset with over 3,200 respondents to vet this argument. The results do not vindicate claims of regulatory agency's comparative advantages. Instead, they point to a process of harmonization between the agency groups. This article deepens our understanding of the outcomes of regulatory agencies' maturation and legitimization within their institutional setting, thereby contributing to public administration scholarship that compares organizations based on their core tasks. It is also of use to policymakers to weigh the pros and cons of delegating powers to autonomous regulators.
Keywords: Brazil; bureaucracy; performance; regulatory agencies; state capacity.

Quantidade significa qualidade? Comparando evidências de capacidade burocrática e desempenho entre grupos de agências no Brasil

Este artigo busca avaliar se a preferência do governo brasileiro por fortalecer o poder e o escopo de suas agências reguladoras, em comparação com suas agências não reguladoras, resultou em ganhos proporcionais em termos de capacidade e desempenho. A doutrina do estado regulador defende as vantagens comparativas das agências reguladoras autônomas nessas **áreas.** Utilizamos análises de componentes principais e regressão multivariada em um conjunto de dados de pesquisa com mais de 3.200 respondentes para examinar esse argumento. Os resultados não confirmam as alegações sobre as vantagens comparativas das agências reguladoras. Em vez disso, apontam para um processo de harmonização entre os grupos de agências. Este artigo aprofunda nossa compreensão sobre os resultados da maturação e legitimização das agências reguladoras em seu contexto institucional, contribuindo assim para a literatura de administração pública que compara organizações com base em suas tarefas centrais. Também é útil para os formuladores de políticas ao considerar os prós e contras de delegar poderes a reguladores autônomos.
Palavras-chave: Brasil; burocracia; desempenho; agências reguladoras; capacidade estatal.

ISSN: 1982-3134

DOI: https://doi.org/10.1590/0034-761220230416x
Article received on December 16, 2023 and accepted on October 24, 2024.
[Original version]
Editor-in-chief:
Alketa Peci (Fundação Getulio Vargas, Rio de Janeiro / RJ – Brazil)
Associate editor:
Mauricio Ivan Dussauge Laguna (Facultad Latinoamericana de Ciencias Sociales, Ciudad de México / CDMX – Mexico)
Reviewers:
Marcos Vinicius Pó (Universidade Federal do ABC, Santo André / SP – Brazil)
Wescley Silva Xavier (Universidade Federal de Viçosa, Viçosa / MG – Brazil)
Peer review report:
The peer review report is available at https://periodicos.fgv.br/rap/article/view/93503/87514

¿Cantidad significa calidad? Comparación de evidencias sobre capacidad burocrática y desempeño entre grupos de agencias en Brasil

El objetivo de este artículo es evaluar si la preferencia del gobierno brasileño por aumentar el poder y el alcance de sus agencias reguladoras en comparación con sus agencias no reguladoras ha conducido a ganancias proporcionales en términos de capacidad y desempeño. La doctrina del estado regulador defiende las ventajas comparativas de las agencias reguladoras autónomas en estas áreas. Empleamos análisis de componentes principales y regresión multivariada en un conjunto de datos de una encuesta con más de 3.200 encuestados para examinar este argumento. Los resultados no respaldan las afirmaciones sobre las ventajas comparativas de las agencias reguladoras. En cambio, apuntan a un proceso de armonización entre los grupos de agencias. El artículo profundiza nuestra comprensión de los resultados de la maduración y legitimación de las agencias reguladoras en su contexto institucional, contribuyendo así a la literatura de administración pública que compara organizaciones en función de sus tareas principales. También es útil para que los responsables de políticas evalúen los pros y los contras de delegar poderes a reguladores autónomos.

Palabras clave: Brasil; burocracia; desempeño; agencias reguladoras; capacidad estatal.

1. INTRODUCTION

Regulatory reforms have developed hand in hand with broader New Public Management (NPM) proposals that have sought to redefine the structure and culture of the state since the 1990s (Bozeman, 2007). Their expectations were particularly high in the area of personnel capacity and performance (Berg, 2000; Majone, 1997). From this, regulatory agency staff, or 'regulocrats' (cf., Levi-Faur, 2005), would embody the technical expertise inherent to their organizations.

The common argument in favor of autonomous regulatory agencies (RAs) was that they were better suited to secure maximum economic efficiency in naturally concentrated markets given their sectoral expertise, enhanced administrative freedom and technical discretion (Keeler, 1984; Majone, 1997). Moreover, RAs would be designed under the assumption that they would be more capable and perform better than generalist bureaucratic organizations (Koop & Hanretty, 2018; Maggetti, 2022). These features would give the regulatory state a comparative advantage over the traditional interventionist state, which is the crux of the regulatory state doctrine (Braithwaite, 2008). Previous studies have come to different conclusions in this regard when comparing organizations based on their structure and primary task, including regulation (T. Christensen et al., 2007; Maggetti & Papadopoulos, 2022; Painter & Yee, 2010; Pollitt et al., 2005; Verhoest et al., 2010, 2023). This article has a similar purpose. However, it innovates by taking state capacity literature as its main theoretical frame of reference. We also articulate insights from regulatory policy and organization theory.

We focus our analysis on Brazil, a country with a deep-seated Weberian tradition and a public sector that frequently ranks as the most capable and meritocratic in Latin America (Organization for Economic Cooperation and Development [OECD], 2020; Parrado & Salvador, 2011). Brazilian regulocrats are career civil servants like those who work in ministries and executive or non-regulatory agencies (M&EAs). In this study, we employ "executive agencies or non-regulatory agencies" as an umbrella term to refer to traditional executive-branch agencies or bodies. These are entities under the direct control of ministries through sectoral formal arrangements. In Brazil they usually take the legal form of *autarquias* and *fundações*. Given their subordination to ministerial control, they differ from the autonomous regulators which are legally defined in the country as "special" agencies (*autarquias especiais*).

The main distinction between RAs and M&EAs is that the former have more formal autonomy than the latter (Cunha et al., 2017). Furthermore, Brazilian RAs have been permitted greater increases in staffing numbers since the early 21st century, while salary rises have also been frequent (Cunha & Goellner, 2020; Fernandes et al., 2022). Their structure has improved continuously and faster when compared with most of the other parts of the state, and their mandates as well as the areas of direct intervention have widened (Holperin, 2017). These trends have continued over the years, revealing a stable preference of the central government. In order to examine this phenomenon and, consequently, the relative advantage of RAs as an institutional model, we address the following research questions:

1. To what extent have regulatory agencies in Brazil wielded more capacity than the rest of the government?
2. Is the perception of greater organizational performance a function of the regulatory agency model?
3. Do the specific dimensions of state capacity have a similar impact on performance, when compared between specialized regulatory agencies and generalist bodies?

Methodologically, we draw on a survey dataset with over 3,200 respondents. Comparing RAs with M&EAs can reveal unanticipated organizational variations as well as institutional shortcomings. We categorize and systematize the dataset in a unique and novel way, isolating five capacity dimensions, namely, meritocracy, autonomy, relationship(s), accountability and resources, as well as performance. A principal components analysis helps to generate composite variables based on the civil servant's perceptions of the five dimensions. Moreover, from our data, we draw out synthetic indexes for both RAs and M&EAs to compare them. Finally, we run a multivariate regression procedure to test the effects of the state capacities on performance.

Our results partly contradict the claims of the superiority of the regulatory agency model and hints at new instances of asymmetry and heterogeneity in the Brazilian state. From this, the main contribution of this article is to measure the concrete implications of the expansion of RAs in the Brazilian federal government, possibly helping to untangle similar dynamics in comparable jurisdictions as well. The article is organized in the following way. In the next section, we define state capacity and its operational dimensions, and how they marry with performance. The subsequent section deals with methodology and our empirical strategy. Section four discusses the research findings. Finally, we lay down our concluding remarks and the possible implications for future theory and policy.

2. STATE CAPACITY AND ITS DIMENSIONS

State capacity is an interdisciplinary and methodologically diverse framework that allows the bridging of policy and administration to address concrete phenomena (Cingolani, 2018). It amounts to the capacity to "translate preferences into actions" (Geddes, 1996, p. 14), making the implementation of state-initiated policies possible (Skocpol et al., 1985). The first debates in this area focused on the formation of the modern states and their infrastructural powers (Tilly, 1975). Gradually, state quality

and performance became central concerns (Centeno et al., 2017; Rothstein & Tannenberg, 2015). The concept of state capacity is also particularly helpful to understand areas of government specialization and the dysfunctionalities that are particularly visible in developing countries' state apparatuses (Akbar & Ostermann, 2015; Cingolani, 2013).

Owing to its Weberian foundation, a crucial factor to explain state capacity is meritocracy (Dahlström et al., 2012; Evans & Rauch, 1999). The basic measurement criteria here are the quality of public sector recruitment and the extent to which it conforms to ideals of rationality and neutrality (Fukuyama, 2013). Another dimension of state capacity is bureaucratic autonomy. Autonomy can be understood as the ability of the state to set its own goals and objectives, i.e., to formulate, without the direct interference of interest groups (Skocpol, 1985). Borrowing from organizational theory, this is an idea close to the notion of policy autonomy (Verhoest et al., 2004). Recent contributions have extended the boundaries to encompass the ability of the state to shield policy implementation from short-term political and private interests (Cingolani et al., 2015). The latter is akin to the idea of structural autonomy from the organizational literature (Verhoest et al., 2004).

Additional features not directly linked to the original Weberian model of state capacity are relationships and accountability. Authors have argued that static administrative or organizational capabilities need to be complemented with relational or political ones (Evans, 2011; Gomide & Pires, 2014). These more dynamic capabilities relate to the competence of state actors to deploy the necessary tools to process conflicts within or between businesses, civil society and state actors in view of streamlined institutional coordination and greater effectiveness.

Resources are the fifth dimension. Wu et al. (2015) claim that state capacity is the product of the combination between competencies and resources. They underscore the multidimensional importance of resources, from technical knowledge at the individual level to organizational capabilities, and up to the system level where resources affect, for example, social trust in the public sector (Wu et al., 2015).

Considerable attention has been given in the literature on state capacity to the actual performance of state organizations (Evans & Rauch, 1999; Nistotskaya & Cingolani, 2015). In principle, every public organization aims to keep or improve its performance to pursue its statutory goals. Albeit complex to verify, performance is generally linked to the benefits to the target population (Verhoest, 2005). It is also driven by both technical and political factors (Oliveira et al., 2022).

These five capacity dimensions identified above, as well as performance, are relevant when evaluating the Brazilian state due to its particular traits. Social science scholars who have studied the country have pointed out that, even if recent professionalization waves have reduced the incidence of "pockets of efficiency", the Brazilian bureaucracy remains considerably heterogeneous (Abers et al., 2017; Cavalcante & Carvalho, 2017). Our research builds on previous findings but also seeks to redeem an important empirical gap (Jacobs, 2011). RAs in Brazil have not been sufficiently investigated in terms of their capacity and performance achievements, which is relevant given their expansion over the years. To inquire into it, we propose testing the following hypotheses:

- H1: RAs are more meritocratic than M&EAs.
- H2: RAs are more autonomous than M&EAs.
- H3: RAs have more overall resources than M&EAs.

- H4: RAs are more accountable than M&EAs.
- H5: RAs are more insulated, relating less with politicians, society, and the business sector than M&EAs.
- H6: The higher the degree of state capacity, the higher the perception of performance.

3. METHODOLOGY

To assess our hypotheses, we draw on a survey database on government quality and state capacity that is part of a joint project entitled *Global Survey of Public Servants*[1], an international research initiative whose goals are to better understand how public services work and help governments manage public servants. The Brazilian survey, which integrates the global initiative along with similar exercises from other nations, was carried out between May and July 2018. The institutions responsible for the survey were the Institute of Applied Economic Research (Ipea), a think tank linked to the Brazilian Ministry of Economy, and the Center on Democracy, Development and the Rule of Law (CDDRL) from the University of Stanford.

Pereira et al. (2019) summarize the Brazilian project and the available data, giving also extensive information on how the survey was designed and its descriptive statistics. The survey has not been repeated since 2018 and is to date the largest dataset of its kind in Brazil. For this reason, Bersch and Fukuyama (2024) account for autonomy and government quality in Brazil using the same survey data. Previously, Schuster et al. (2022) had relied on a 2017 survey for evaluating public service motivation in Brazil. In 2019 another important survey was conducted in the country, but this time focusing specifically on the use of evidence in public policy (Koga et al., 2020).

The population of the 2018 survey project that supports our study was made up of all the civil servants in the Brazilian federal government (permanent employees and those in commissioned positions, i.e., appointees) who were tasked with the formulation and implementation of public policies in M&EAs and in the legally defined RAs. Due to the project's aim to generate wider global comparability under the *Global Survey of Public Servants* initiative, the Brazilian survey excluded street-level bureaucracies (e.g., doctors and school teachers), as well as personnel from state-owned companies and the military. Participation in the survey was entirely voluntary and conducted under strict anonymity. The sample layers were defined based on three criteria:

- Positions and careers, which relates to the type of relationship established between the public servant and the federal public administration.
- Commissioned positions (appointees).
- The legal organizational model of the entity to which the employee is assigned.

[1] For more information, visit the project's international website: https://www.globalsurveyofpublicservants.org

This selection criteria allowed for a broad representation of the Brazilian federal administration, resulting in a sample population of 4,671 civil servants. A total of 3,226 civil servants responded to the survey, representing nearly 70% of the required sample. Weights were applied to extrapolate the sample results to the broader population, yielding an estimated total of 263,468 civil servants. The confidence interval was 95%, which means that the estimates contained in this article are statistically reliable for the set of selected respondents (Pereira et al., 2019).

The two civil servant groups that we set apart in this article consist of RAs personnel on one side and that of M&EAs on the other. Federal regulatory agencies are homogenous organizations as they abide by a sole legal statute[2]. Their formal career structures are identical, including entry, training and advancement requirements, as well as salary levels (Cunha et al., 2017). M&EAs are the rest of the survey respondents excluding RAs.

Based on the survey questionnaire, we formulated synthetic state capacity indicators, which are described in Table 3 in the Appendix. Table 3 also reports the set of responses from the survey that we used to evaluate the patterns of interaction between the respondents' organizations and other institutions. For performance, we formulated a composite index based on four questions that consider a broader approach to performance (R. K. Christensen & Gazley, 2008), also detailed in Table 3 in the Appendix. The performance index followed the same methodological procedure employed in calculating the state capacity scores.

It is worth stressing that the proper fit of the survey questions in each dimension is not an entirely objective task. To cope with it, for the selection of the questions we followed similar procedures adopted by previous studies backed by the *Global Survey of Public Servants* project (Boittin et al., 2016; Cavalcante & Lotta, 2021). Furthermore, we took careful note of the literature that compares public organizations based on their formal tasks, which has been a strand of research in public administration (T. Christensen et al., 2007; Doberstein, 2022; Pollitt et al., 2005; van Thiel & Yesilkagit, 2014; Verhoest et al., 2010, 2023). The latter was instrumental in validating our civil servant groups and the analytical dimensions. It has also guided the interpretation of our findings, even if our study innovates by adding elements from the state capacity literature as a theoretical frame of reference.

We employed a principal component analysis (PCA) to formulate the synthetic variables for the statistical analysis. Generally, composite indexes aim to summarize complex and multidimensional subjects, helping to interpret, classify and rank units of analysis in a particular case. We then used descriptive analysis to compare the state capacity and performance patterns between RAs and M&EAs, and applied a variance analysis (ANOVA) to test the group means for statistical significance. Finally, we ran a multivariate regression procedure to examine any correlations among these variables.

In terms of research limitations, the traditional caveats relating to survey data collection methods, volume and processing apply, which include the shortcomings of relying on human perception. Analytical strategies focusing on the views of the public sector have downsides, but mostly when they rest on small samples with so-called specialists (Andrews, 2008). In response, our research has attempted to reduce the likelihood of severe biases by amassing a fairly large-n dataset on separable and comparable bureaucratic groups. Each one of these groups is embedded in its own formal structures and cultures, and therefore expresses valuable interpretative data (March & Olsen, 1989).

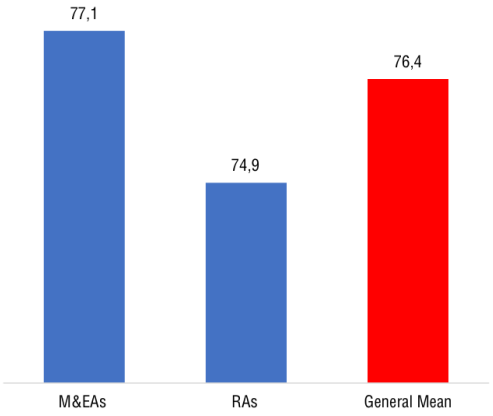
[2] Besides universal rules applying across all the civil service in Brazil, regulatory agencies have the Law No. 13,848/2019 as their specific legal statute.

4. EMPIRICAL ANALYSIS: RESULTS AND DISCUSSION

4.1 State capacity dimensions

The Figures in this section display the distribution of the indicators, while Table 4 in the Appendix contains the descriptive analysis of the indexes. Figure 1 shows meritocracy indexes average by types of organizations. Previous studies have sustained that work-place promotions in the Brazilian federal bureaucracy are largely a consequence of meritocratic decisions (Cavalcante et al., 2018; Praça & Lopez, 2019). Confirming these findings, Figure 1 indicates that both in the case of RAs and M&EAs, civil servants largely agree that their organizations recruit people with the right skills and that promotions are based on merit, technical competence, and career expertise. Even if the differences between the two groups in Figure 1 are not substantial (77.1 to 74.9), they are statistically significant and lead us to reject H1, namely that RAs are more meritocratic than M&EAs.

FIGURE 1 MERITOCRACY INDEXES AVERAGE

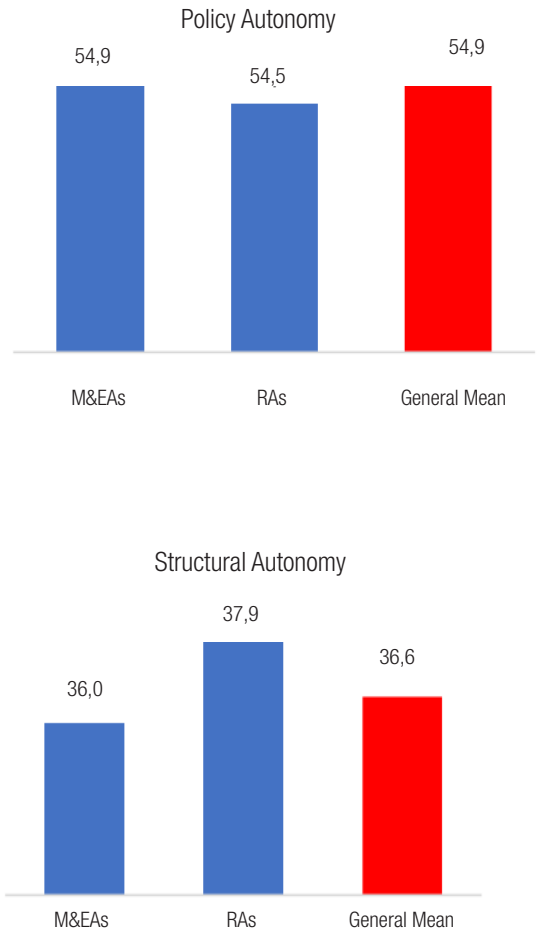


Source: Global Survey of Public Servants, described in Pereira et al. (2019) for data on Brazil.
Note: The results of the analysis of variance (Anova) test confirmed that these differences are statistically significant (F = 12.23, p-value < .005).

Figures 2A and 2B deal with the indexes average of two different aspects of autonomy. The first, policy autonomy, includes questions pertaining to civil servants' daily routine, such as the degree of flexibility to perform their tasks and the use of technical considerations in the projects that they are in. Structural autonomy, in turn, involves the bureaucrats' perspectives on the political neutrality of their roles, hierarchical obedience, and the level of discretion in their own decisions. Figures 2A and 2B do not show a clear pattern considering both aspects of autonomy. Even if the difference is small between the two groups, M&EAs have a higher mean in the policy autonomy index. In contrast, RAs score higher in structural autonomy. The latter could be down to the greater degree of formalism found in RAs, including in the provisions that constrain political supervision and direct micromanagement

(McAllister, 2010; Verhoest et al., 2004). As the data concerning autonomy present mixed results, we can neither confirm nor deny H2, that RAs are more autonomous than M&EAs. Painter and Yee have reached a similar conclusion when studying different public organizations in Hong Kong: "in the case of bodies describing their primary task as regulation, there are no significant relationships between them and various dimensions of autonomy" (Painter & Yee, 2010, p. 405).

FIGURE 2A AND FIGURE 2B POLICY AND STRUCTURAL AUTONOMIES INDEXES AVERAGE

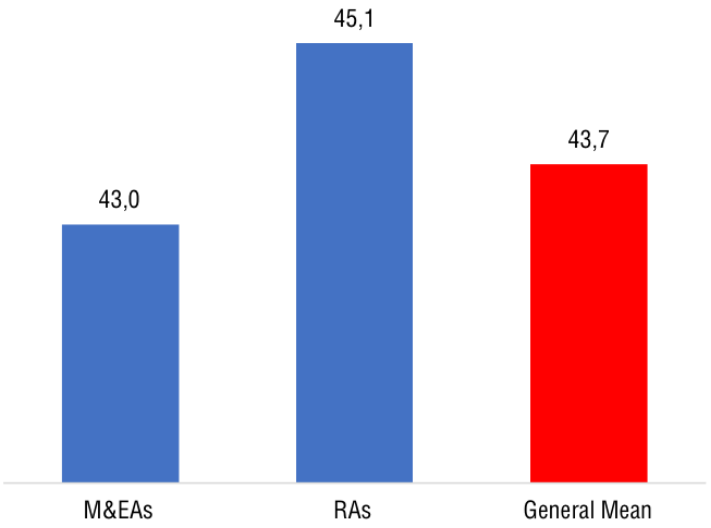


Source: Global Survey of Public Servants, described in Pereira et al. (2019) for data in Brazil.
Note: The results of the analysis of variance (Anova) test confirmed that these differences are statistically significant (policy autonomy: F = 12.23, p-value < .005; structural autonomy: F = 9.92, p-value < .001).

In Figures 3 and 4, the averages follow similar patterns with respect to resources and accountability. In both cases, RAs present the highest score averages sustained by the ANOVA tests. Figure 3 suggests that M&EAs face more serious constraints relating to human and financial resources, technology and others. This is consistent with the Brazilian state's decision to prioritize the structuring of RAs

compared to other areas of government. Figure 3 leads to the confirmation of H3: RAs have more resources than M&EAs.

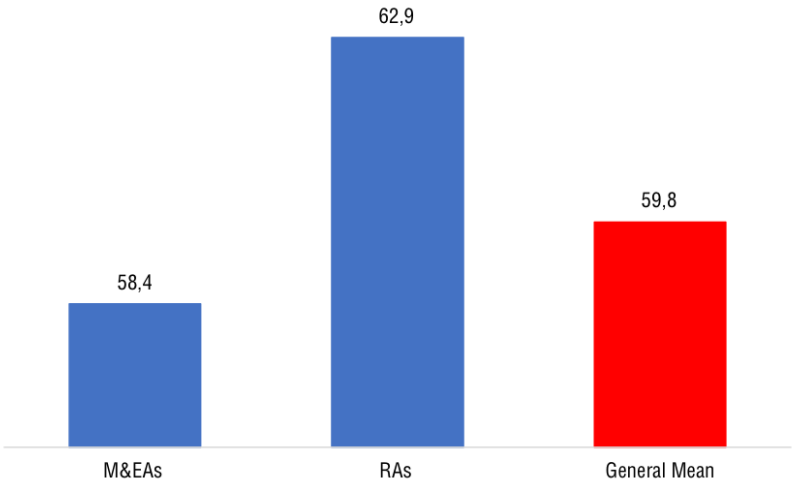
FIGURE 3 RESOURCES INDEXES AVERAGE



Source: Global Survey of Public Servants, described in Pereira et al. (2019) for data in Brazil.
Note: The results of the analysis of variance (Anova) test confirmed that these differences are statistically significant: F = 42.4, p-value < .000.

As shown in Figure 4, the difference between the two groups is even more pronounced regarding accountability. RAs appear 3.1pp higher than the general mean, and M&EAs about 1.4pp lower than that. In practical terms, considering the survey questions behind the construction of the index (listed in Table 3 in the Appendix), Figure 4 suggests that civil servants working in RAs more firmly believe that their organizations are open to external pressure, and are immersed in a culture of less permeability to corruption. This is a dominant understanding which advances 'regulatory integrity' as a fundamental principle (OECD, 2014). Beyond that, accountability is perceived as important for RAs as it refers to their legitimacy as a public actor, given that, in addition to executive powers, they also have normative and conflict resolution powers. Therefore, the empirical evidence leans toward confirming the fourth hypothesis in that RAs are held more accountable than the M&EAs.

FIGURE 4 ACCOUNTABILITY INDEXES AVERAGE



Source: Global Survey of Public Servants, described in Pereira et al. (2019) for data in Brazil.
Note: The results of the analysis of variance (Anova) test confirmed that these differences are statistically significant: F = 12.23, p-value < .003.

The last state capacity dimension is relationships, reflecting the frequency of civil servant's networks with outside actors. Patterns of external relations are supposed to vary according to the type of organization and its tasks (Bouckaert et al., 2010), and it is indeed the case in Table 1. Intragovernmental relationships refer to two types of interactions in Table 1. Firstly, relationships with organizations inside the same area of ministerial supervision and secondly, the relationships with other sectoral ministries and their line organizations. It is worth noting that every governmental agency in Brazil is formally linked to a sectoral ministry. In this sense, RAs are not standalone bodies, even though they enjoy a comparatively higher degree of formal autonomy. Although Table 1 reveals that M&EAs have more intense interactions than RAs within their policy areas, the ANOVA test does not confirm the statistical significance of the differences regarding the relations' frequency with other sectors.

TABLE 1 RELATIONSHIP FREQUENCY AVERAGE

How often do you interact with:		General	Ministries & Executive Agencies	Regulatory Agencies	Anova Test
Other organizations or agencies linked to my ministry	Mean	2.89	2.98	2.71	F = 22.1
	Standard deviation	1.51	1.53	1.44	p-value < .000
Other ministries or organizations linked to others ministries	Mean	2.43	2.45	2.38	F = 1.8
	Standard deviation	1.41	1.45	1.34	p-value < .18

(Continue)

How often do you interact with:		General	Ministries & Executive Agencies	Regulatory Agencies	Anova Test
Congress/ Parliamentarians	Mean	1.42	1.4	1.44	F = 1.15
	Standard deviation	0.92	0.91	0.94	p-value < .283
Private companies	Mean	2.91	2.65	3.48	F = 192.5
	Standard deviation	1.62	1.58	1.55	p-value < .000
Civil Society organizations	Mean	1.89	1.89	1.89	F = .00
	Standard deviation	1.23	1.24	1.2	p-value < .992
Universities and Research institutes	Mean	2.18	2.26	2.02	F = 22.36
	Standard deviation	1.35	1.4	1.2	p-value < .000

Source: Global Survey of Public Servants, described in Pereira et al. (2019) for data in Brazil.

In presidential systems like the Brazilian one, a crucial relationship exists between the Executive and the Legislative branches, also displayed in Table 1. As with previous variables, the evidence here does not present significant differences between RAs and M&EAs. Extrapolating from the data, it is possible to conclude that RAs are not as insulated from political considerations as otherwise expected. Nevertheless, the ability to sustain interactions with instances of political power is a precondition for the functioning of decentered regulation. Following Niklasson and Pierre (2012), a preparedness to interact with decision-makers on matters of technical judgment may be a sign of organizational maturity and practical autonomy, which both RAs and M&EAs may exert.

Additional findings of note here concern interaction with the private sector. As RAs have been created on the premises of equidistance and neutrality, the frequency of private sector interaction should not be considerably different from the level of interaction with other legitimate interest groups. The numerical findings, in this case, invite alternative and diverging interpretations, and yet not all of them are negative. As "government regulation is not antithetical to collaboration" (Phillips & Smith, 2011, p. 22), the private sector can serve a functional purpose in collective regulatory endeavors. From another angle, regulatory institutions can themselves promote coordination in and beyond the market in a virtuous capitalist dynamic (Thatcher, 2008). Nonetheless, the highest frequencies here stand out as they might hint at an institutionalized type of shared commonsense, underpinned by privileged loci of exchange at the disposal of regulated companies.

Processes of cognitive dependence, including more entrenched epistemic capture (Sunstein, 2014), can be detrimental to the system as a whole if they establish a "notion of difference" *vis-à-vis* the other parts of the same system that do not share the dominant interpretative values (Black, 2002, p. 178). Moreover, while close contact with the private sector could be understood as a natural consequence of the business of regulation, absent severe abnormalities, we could expect that only a fraction of the regulocrats would interact with regulated companies actively and simultaneously. In typical situations, most regulocrats would rather spend the bulk of their time leading analytical or mechanical tasks independently.

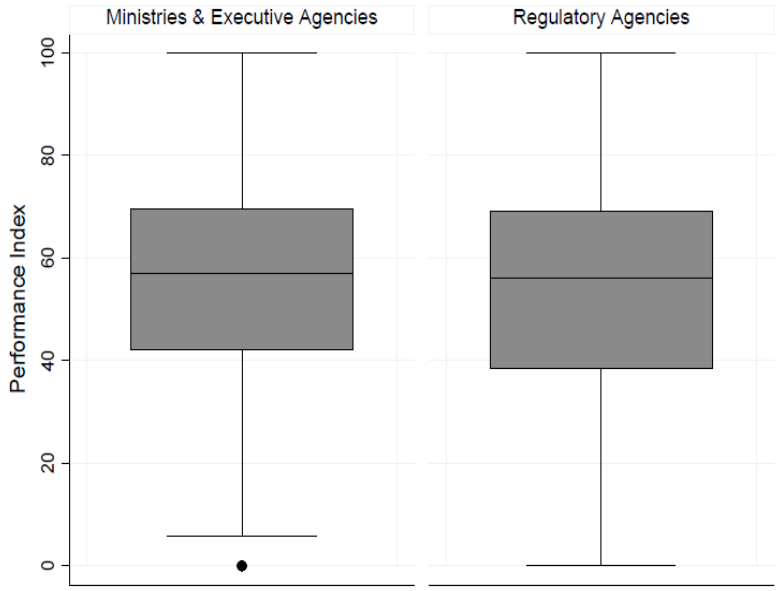
Another type of relationship featured in Table 1 is with civil society. In this case, the data point to the same mean for the two groups (1.89). In addition, Table 1 shows that M&EAs relate more frequently with university and research institutes than RAs. ANOVA tests confirm the statistical significance of the differences.

Our results are convergent with previous studies that have also noted heterogeneous relationship patterns among bureaucrats tasked with different competencies within government, including in Brazil (Cavalcante & Lotta, 2021; Cavalcante & Pereira, 2022; Howlett & Ramesh, 2016; Wu et al., 2018). However, with the combined data of the relationships as shown here, H5 cannot be validated. While the frequency of the interactions between politicians and society is about the same for RAs and ME&As, M&EAs are more connected to academia, whereas RAs are more connected to the private sector.

4.2 Performance and its determinants

This section reports on the final hypothesis. The sixth hypothesis is attuned to the literature on the regulatory state, which traditionally associates regulatory agency's expertise with greater efficiency and stability (Estache & Wren-Lewis, 2009; Levy & Spiller, 1996). The composite index presented in Figure 5 is built with survey questions referring to the civil servants' perceptions of their organization's achievements and reputation, as also detailed in Table 3 in the Appendix. The average of the indexes grouped by the type of organizations in Figure 5 is statistically significant.

FIGURE 5 PERFORMANCE INDEXES DISTRIBUTION



Source: Global Survey of Public Servants, described in Pereira et al. (2019) for data in Brazil.
Note: The results of the analysis of variance (Anova) test confirmed that these differences are statistically significant (F = 8.36, p-value < .000).

Based on the survey results, civil servants in M&EAs have a slightly more positive view of their organizations performance (55.6%) than those in RAs (53.3%). Another estimation relates to the civil servants' perceptions of the extent to which state capacity affects their organizations' performance. The multivariate regression model used to test these correlations is defined by the formula below. Table 2 presents the estimated coefficients, with standard errors in parentheses. The dependent variable, the left-hand side of the equation, is the composite index of performance. On the right side are the state capacity indexes, the independent variables.

$$Performance_i = \beta_{0+}\beta_1 Meritocracy_{i+}\beta_2 Policy\ Autonomy_{i+}\beta_3 Structural\ Autonomy_i \\ {}_+\beta_4 Accountability_{i+}\beta_5 Resources_{i+}u_i$$

Table 2 also displays the models' coefficients of the determination for the general model (all the sample), and for the M&EAs and RAs separately. Considering the large sample used in the estimations, T-test and F-test are valid asymptotically. Although not all variables are statistically significant, generally, the significance of the regressions is confirmed (Wooldridge, 2006). A check for multicollinearity was carried out, and the results proved that the degree of collinearity among the independent variables is not worrisome.

TABLE 2 THE PERFORMANCE DETERMINANTS

Variables	General Model	Ministries and Executive Agencies	Regulatory Agencies
Meritocracy	.12***	.12***	.09***
	(.01)	(.02)	(.27)
Policy Autonomy	.25***	.26***	.20***
	(.01)	(.02)	(.02)
Structural Autonomy	-.00	.01	-.00
	(.01)	(.02)	(.04)
Accountability	.48***	.50***	.48***
	(.17)	(.02)	(.03)
Resources	.15***	.15***	.16***
	(.02)	(.02)	(.34)
Constant	-2.8	-4.23*	-2.60
	(.18)	(2.38)	(2.96)
N	3.210	2.191	1.019
Adjusted R^2	0.364	0.368	0.384

Source: Elaborated by the authors based on the Global Survey of Public Servants, described in Pereira et al. (2019) for data in Brazil.
Note: Standard errors in parentheses. * p < .05 ** p < .01 *** p < .001.

The model's results from the Ordinary Least Square regression (OLS), using cross-sectional data, are revealing in several ways. Beginning with meritocracy, the data in Table 2 confirm that merit-based organizational practices positively affect performance, even if the meritocracy coefficients were the lowest in our models. In Brazil, since the publication of the Federal Constitution of 1988, admission to civil service positions is dependent on open and nondiscriminatory public competition. Thus, the importance of meritocracy in the estimations seems quite logical.

Policy autonomy, which relates to the space of discretion for the bureaucrat to make decisions, is critical to explain group performance and its estimates in Table 2 are illuminating. They are even stronger than meritocracy since a one-point change in this index would affect the performance scores by .25pp in the general model, *ceteris paribus*. The coefficients, however, demonstrate that regulocrats feel less policy autonomous than the rest of the Brazilian federal public service. In turn, structural autonomy was not shown to be a statistically significant variable. The data in Table 2 suggest that for both RAs and M&Eas structural autonomy has no apparent effect on their perception of performance. This arguably diverges from the theoretical presumption that discretion, coupled with expertise and structural separation from the center of government, would lead to greater efficiency in the case of regulatory agencies. Our finding in this case echoes the argument that structural autonomy cannot be assumed to automatically boost performance (T. Christensen et al., 2007; Verhoest et al., 2004).

The fourth state capacity dimension confirms that the organizations' degree of accountability affects their performance. As Table 2 showcases, a one-point increase in the accountability index alters by approximately .48pp the performance score for the regulatory agencies and .50pp for the rest of government, *ceteris paribus.* This is in line with previous studies that have also mapped similar correlations (Howlett & Ramesh, 2016).The last independent variable in our regression model assumes that the deployment of resources links to performance to generate effectiveness. As shown in Table 2, our estimates are statistically significant in all models, with a slight difference between the groups. This indicates, as expected, a positive correlation between organizational resources and performance, keeping other variables constant.

Finally, the coefficients of determination (R^2), for all three models in Table 2, denote that the state capacity variables account for almost 40% of the perception of performance in federal government organizations. For RAs, the effect is slightly higher (.38pp) than in M&EAs (.37pp). All independent variables affect the performance index with different intensities, except structural autonomy. The multivariate regression estimates confirm H6, that the higher the degree of state capacity, the higher the perception of performance. This accords with the results of prior research with similar objectives (Cavalcante & Pereira, 2022; Gomide et al., 2021).

Overall, our results converge to previous studies that have explored distinct features of public organizations based on their core tasks, and how contextual determinants shape organizations' structures, outputs and behaviors (T. Christensen & Lægreid, 2006; Egeberg, 2012; Verhoest et al., 2023). Reviewing the literature on the topic, van Thiel & Yesilkagit (2014) concluded that existing scholarship was varied and pointed to mixed results on task effects, which were contingent on national contexts. We complement this line of research with an in-depth analysis of the Brazilian case. The differences between M&EAs and RAs in our indexes bear relevance for the theoretical and practical debates since the original presumption, embedded in our hypotheses, was that of superiority of autonomous RAs over M&EAs. Confronting the 'regulatory orthodoxy' (cf., T. Christensen & Lægreid,

2008) with a strong empirical backing has allowed falsifying its central claims from the perspective of the largest Latin American economy.

5. CONCLUSIONS

This article compared Brazilian regulatory agencies and non-regulatory bodies using state capacity and performance indexes, thereby building on but also going beyond existing public administration scholarship that compares organizations based on their tasks. We know from previous studies featuring Global North countries that tasks matter, i.e., that the nature of organizations core competences can directly affect their structure, behavior and performance. Our research builds on this research tradition but offers a fresh look as it unearths Global South dynamics by focusing on Brazil.

Our analysis, drawn from a sizeable survey dataset, shows that RAs in Brazil do not exhibit a superior capacity across all the five dimensions that we analyzed, nor do regulocrats consider their organizations' performance superior. Compared with M&EAs, the group of capacity dimensions that we reviewed has very similar estimated effects on the performance of RAs. The unexpected similarities between RAs and M&EAs could be seen as an expression of the legitimization of the former. Nonetheless, a less optimistic way to look at RAs capacity and performance results in our study is that they have not confirmed the comparative advantage that they promised, which is an assumption that lies at the core of the regulatory state doctrine. The implications of our conclusions are both theoretical and practical. First, it deepens our understanding of the outcomes of RAs maturation and gradual legitimization within their institutional settings. Second, it is hoped that the conclusions reached here will assist policymakers to weigh the pros and cons of delegating powers to autonomous regulators, especially in heterogeneous institutional settings like the ones in Latin America and other parts of the Global South.

Ultimately, our study provides a nuanced appreciation of the regulatory state beyond the normative contentions that underpin most of the foundational debates on regulatory reform and agencification. It also offers clear contributions to the literature especially as it contradicts the expectations of the superiority of the regulatory agency model *vis à vis* generalist bureaucracies.

Limits to our conclusions include the fact that data drawn from people's perceptions do lend itself to some degree of subjectivity. At the same time, our data derive from a large-n survey, which substantially reduces the likelihood of biases that small-n studies are prone to, such as an overly positive or negative interpretation of reality. As much as this study presents new findings on the actual functioning of RAs in an economy that has firmly embraced the model, further research will be necessary to complement it with other country cases to help confirm the patterns recorded here or further elucidate variations.

REFERENCES

Abers, R. N., Oliveira, M. S. de, & Pereira, A. K. (2017). Inclusive Development and the Asymmetric State: Big Projects and Local Communities in the Brazilian Amazon. *The Journal of Development Studies*, *53*(6), 857-872. https://doi.org/10.1080/00220388.2016.1208177

Akbar, N., & Ostermann, S. L. (2015). Understanding, Defining, and Measuring State Capacity in India. *Asian Survey*, *55*(5), 845-861. https://doi.org/10.1525/as.2015.55.5.845

Andrews, M. (2008). The good governance agenda: Beyond indicators without theory. *Oxford Development Studies*, *36*(4), 379-407. https://doi.org/10.1080/13600810802455120

Berg, S. V. (2000). Sustainable regulatory systems: laws, resources, and values. *Utilities Policy*, *9*(4), 159-170. https://doi.org/10.1016/S0957-1787(01)00012-1

Bersch, K., & Fukuyama, F. (2024, April 08). Calibrating autonomy: How bureaucratic autonomy influences government quality in Brazil. *Governance*. https://doi.org/https://doi.org/10.1111/gove.12865

Black, J. (2002). Regulatory Conversations. *Journal of Law and Sociey*, *29*(1), 163-196. https://doi.org/10.2307/4489085

Boittin, M., Distelhorst, G., & Fukuyama, F. (2016). *Reassessing the Quality of Government in China* (MIT Sloan Research Paper No. 5181-16; MIT Political Science Department Research Paper No. 2016-38). https://doi.org/10.2139/ssrn.2875244

Bouckaert, G., Peters, B. G., & Verhoest, K. (2010). *The Coordination of Public Sector Organizations: Shifting Patterns of Public Management*. Palgrave Macmillan.

Bozeman, B. (2007). *Public Values and Public Interest: counterbalancing economic individualism*. Georgetown University Press.

Braithwaite, J. (2008). *Regulatory Capitalism: how it works, ideas for making it work better*. Edward Elgar.

Cavalcante, P., & Carvalho, P. (2017). Profissionalização da Burocracia Federal Brasileira (1995-2014): avanços e dilemas. *Revista de Administração Pública*, *51*(1), 1-26. https://doi.org/10.1590/0034-7612144002

Cavalcante, P., & Lotta, G. S. (2021). Are Governance Modes Alike? An Analysis Based on Bureaucratic Relationships and Skills. *International Journal of Public Administration*, *45*(4), 319-334. https://doi.org/10.1080/01900692.2021.1874983

Cavalcante, P. L. C., Lotta, G. S., & Yamada, E. M. K. (2018). Exploring Mid-level Bureaucracy: a tentative typology. *Revista Brasileira de Ciência Política*, *26*, 187-222. https://doi.org/10.1590/0103-335220182605

Cavalcante, P., & Pereira, A. K. (2022). Do State Capacity Dimensions Differently Affect Policy Areas Performance? *Administração Pública e Gestão Social*, *14*(2), 1-23. https://doi.org/10.21118/apgs.v14i2.12439

Centeno, M. A., Kohli, A., & Yashar, D. J. (2017). Unpacking States in the Developing World: Capacity, Performance, and Politics. In M. A. Centeno, A. Kohli, & D. J. Yashar (Eds.), *States in the Developing World* (pp. 1-31). Cambridge University Press.

Christensen, R. K., & Gazley, B. (2008). Capacity for Public Administration: analysis of meaning and measurement. *Public Administration and Development*, *28*(3), 265-279.

Christensen, T., & Lægreid, P. (2006). Agentification and Regulatory Reforms. In T. Christensen & P. Lægreid (Eds.), *Autonomy and regulation: coping with agencies in the modern State* (pp. 8-49). Edward Elgar.

Christensen, T., & Lægreid, P. (2008). The Regulatory Orthodoxy in Practice. In U. Sverdrup & J. Trondal (Eds.), *The Organizational Dimension of Politics*. Fagbokforlaget.

Christensen, T., Lægreid, P., Roness, P. G., & Røvik, K. A. (2007). *Organization Theory and the Public Sector: Instrument, Culture and Myth*. Routledge Taylor & Francis Group.

Cingolani, L. (2013). *The State of State Capacity: a review of concepts, evidence and measures* (No. 053; UNU-MERIT Working Paper Series 053, 2013, Issue 053). http://collections.unu.edu/eserv/UNU:40/wp2013-053.pdf

Cingolani, L. (2018). The Role of State Capacity in Development Studies. *Journal of Development Perspectives*, *2*(1-2), 88-114. https://doi.org/10.5325/jdevepers.2.1-2.0088

Cingolani, L., Thomsson, K., & de Crombrugghe, D. (2015). Minding Weber More Than Ever? The Impacts of State Capacity and Bureaucratic Autonomy on Development Goals. *World Development*, *72*, 191-207. https://doi.org/10.1016/j.worlddev.2015.02.016

Cunha, B. Q., & Goellner, I. de A. (2020). As Agências Reguladoras Brasileiras no Século XXI: enraizamento institucional e características organizacionais em perspectiva comparada. In Pedro Luiz Costa Cavalcante & M. S. Silva (Eds.), *Trajetória e Desafios do Estado Brasileiro: 25 anos pós Reforma Administrativa*. Instituto de Pesquisa Econômica Aplicada.

Cunha, B. Q., Pereira, A. K., & Gomide, A. A. (2017). State Capacity and Utilities Regulation in Brazil: Exploring Bureuacracy. *Utilities Policy*, *49*, 116-126. https://doi.org/https://doi.org/10.1016/j.jup.2017.06.004

Dahlström, C., Lapuente, V., & Teorell, J. (2012). The Merit of Meritocratization: Politics, Bureaucracy, and the Institutional Deterrents of Corruption. *Political Research Quarterly*, *65*, 656-668. https://doi.org/10.1177/1065912911408109

Doberstein, C. (2022). Assessing the Promise and Performance of Agencies in the Government of Canada. *Canadian Journal of Political Science*, *55*, 600-618. https://doi.org/10.1017/S0008423922000324

Egeberg, M. (2012). How Bureaucratic Structure Matters: An Organizational Perspective. In B. G. Peters & J. Pierre (Eds.), *The Sage Handbook of Public Administration* (pp. 116-127). SAGE Publications.

Estache, A., & Wren-Lewis, L. (2009). Toward a Theory of Regulation for Developing Countries: Following Jean-Jacques Laffont's Lead. *Journal of Economic Literature*, *47*(3), 729-770. https://doi.org/10.1257/jel.47.3.729

Evans, P. (2011). The Capability Enhancing Developmental State: Concepts and National Trajectories. In E. M. Kim, & P. H. Kim (Eds.), *The South Korean Development Experience. Critical Studies of the Asia Pacific Series*. Palgrave Macmillan. https://doi.org/10.1057/9781137278173_6

Evans, P., & Rauch, J. E. (1999). Bureaucracy and Growth: A Cross-National Analysis of the Effects of "Weberian" State Structures on Economic Growth. *American Sociological Review*, *64*(5), 748-765. https://doi.org/10.2307/2657374

Fernandes, C. C. C., Palotti, P. L. de M., & Souza, P. M. S. (2022). A trajetória recente da construção do serviço civil na administração pública federal brasileira: dilemas e perspectivas. In P. F. Ribeiro, M. Troiano, & N. Albrecht (Eds.), *Mosaico da Burocracia Pública Brasileira: Novos Olhares Sobre Burocratas e Interesses no Brasil* (pp. 111-153). Editora Universidade Federal de São Carlos.

Fukuyama, F. (2013). What Is Governance? *Governance*, *26*(3), 347-368. https://doi.org/10.1111/gove.12035

Geddes, B. (1996). *Politician's Dilemma: Building State Capacity in Latin America*. University of California Press.

Gomide, A. de Á., Machado, R. A., & Albuquerque, P. M. (2021). Capacidade Estatal e Desempenho na Percepção dos Burocratas Brasileiros: desenvolvimento e validação de um modelo de equações estruturais. *Cadernos EBAPE.BR*, *19*(Especial), 689-704. https://doi.org/10.1590/1679-395120200159

Gomide, A. A., & Pires, R. R. C. (2014). Capacidades Estatais e Democracia: a abordagem dos arranjos institucionais para análise de políticas públicas. In A. A. Gomide & R. R. C. Pires (Eds.), *Capacidades estatais e democracia : arranjos institucionais de políticas públicas* (pp. 15-28). Instituto de Pesquisa Econômica Aplicada.

Hair, J. F., Black, B., Babin, B., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate Data Analysis*. Pearson Prentice Hall.

Holperin, M. M. (2017). *The Institutional Pluralism of the State* (Tese de Doutorado). Fundação Getulio Vargas, Rio de Janeiro, RJ, Brasil.

Howlett, M., & Ramesh, M. (2016). Achilles' heels of governance: Critical capacity deficits and their role in governance failures. *Regulation & Governance Governance*, *10*(4), 301-313. https://doi.org/10.1111/rego.12091

Jacobs, R. L. (2011). Developing a Research Problem and Purpose Statement. In T. S. Rocco & T. G. Hatcher (Eds.), *The Handbook of Scholarly Writing and Publishing* (pp. 125-142). Jossey-Bass.

Keeler, T. E. (1984). Theories of Regulation and the Deregulation Movement. *Public Choice*, *44*(1), 103-145. https://doi.org/10.1007/BF00124820

Koga, N. M., Palotti, P. L. de M., do Couto, B. G., do Nascimento, M. I. B., & Lins, R. da S. (2020). *O Que Informa as Políticas Públicas: survey sobre o uso e o não uso de evidências pela burocracia federal brasileira* (Texto Para Discussão nº 2619). Instituto de Pesquisa Econômica Aplicada.

Koop, C., & Hanretty, C. (2018). Political Independence, Accountability, and the Quality of Regulatory Decision-Making. *Comparative Political Studies*, *51*(1), 38-75. https://doi.org/10.1177/0010414017695329

Levi-Faur, D. (2005). The Global Diffusion of Regulatory Capitalism. *The Annals of the American Academy of Political and Social Science*, *598*(1), 12-32. https://doi.org/10.1177/0002716204272371

Levy, B., & Spiller, P. T. (Eds.). (1996). *Regulations, Institutions, and Commitment: Comparative Studies of Telecommunications*. Cambridge University Press.

Maggetti, M. (2022). Independent Regulators in the Post-delegation Stage. In M. Maggetti, F. Di Mascio, & A. Natalini (Eds.), *Handbook of Regulatory Authorities* (pp. 227-239). Edward Elgar Publishing.

Maggetti, M., & Papadopoulos, Y. (2022). Happily unaccountable? Perceptions of accountability by public managers. *Public Policy and Administration*, *38*(4), 381-404. https://doi.org/10.1177/09520767221074487

Majone, G. (1997). From the positive to the regulatory state: Causes and consequences of changes in the mode of governance. *Journal of Public Policy*, *17*(2), 139-167. https://doi.org/10.1017/S0143814X00003524

March, J. G., & Olsen, J. P. (1989). *Rediscovering Institutions: The Organizational Basis of Politics*. The Free Press.

McAllister, L. K. (2010). Dimensions of enforcement style: Factoring in regulatory autonomy and capacity. *Law and Policy*, *32*(1), 61-78. https://doi.org/10.1111/j.1467-9930.2009.00308.x

Niklasson, B., & Pierre, J. (2012). Does Agency Age Matter in Administrative Reform? Policy autonomy and public management in Swedish agencies. *Policy and Society*, *31*(3), 195-210. https://doi.org/10.1016/J.POLSOC.2012.07.002

Nistotskaya, M., & Cingolani, L. (2015). Bureaucratic Structure, Regulatory Quality, and Entrepreneurship in a Comparative Perspective: Cross-Sectional and Panel Data Evidence. *Journal of Public Administration Research and Theory*, *26*(3), 519-534. https://doi.org/10.1093/jopart/muv026

Organization for Economic Cooperation and Development. (2020). *Panorama de las Administraciones Públicas América Latina y el Caribe 2020*. https://doi.org/10.1787/f5db66a1-es

Organization for Economic Cooperation and Development. (2014). *The Governance of Regulators*. https://doi.org/10.1787/23116013

Oliveira, P. H. de, Santos, F. C. A., Paschoalotto, M. A. C., Nagano, M. S., Hashimoto, E. M., & Robertson, P. J. (2022). Organizational Culture and Strategic Management in Brazilian Public Organizations: Systematization of Factors to Improve School Management. *International Journal of Public Administration*, *46*(15), 1061-1075. https://doi.org/10.1080/01900692.2022.2069118

Painter, M., & Yee, W. H. (2010). Task Matters: A Structural-Instrumental Analysis of the Autonomy of Hong Kong Government Bodies. *Http://Dx.Doi.Org/10.1177/0275074010380451*, *41*(4), 395-410. https://doi.org/10.1177/0275074010380451

Parrado, S., & Salvador, M. (2011). The Institutionalization of Meritocracy in Latin American Regulatory Agencies. *International Review of Administrative Sciences*, *77*(4), 687-712. https://doi.org/10.1177/0020852311419386

Pereira, A. K., Machado, R. A., Cavalcante, P., Gomide, A. A., Bersch, K., Magalhães, A., Goellner, I. de A., & Pires, R. R. C. (2019). *Qualidade do Governo e Capacidades Estatais: Resultados do Survey sobre Governança Aplicado no Brasil* (Relatório de Pesquisa). Instituto de Pesquisa Econômica Aplicada.

Phillips, S. D., & Smith, S. R. (2011). Between Governance and Regulation: Evolving Government – Third Sector Relationships. In S. D. Phillips & S. R. Smith (Eds.), *Governance and Regulation in the Third Sector* (pp. 1-36). Routledge Taylor & Francis Group.

Pollitt, C., Talbot, C., Caulfield, J., & Smullen, A. (2005). *Agencies: How Governments Do Things*

through Semi-Autonomous Organizations. Palgrave MacMillan.

Praça, S., & Lopez, F. (2019). Political Appointments, Political Parties and Bureaucracy. In B. Ames (Ed.), *Handbook of Brazilian Politics* (pp. 358-371). Routledge.

Rothstein, B., & Tannenberg, M. (2015). *Making Development Work: The Quality of Government Approach*.

Schuster, C., Mikkelsen, K. S., Correa, I., & Meyer-Sahling, J. H. (2022). Exit, Voice, and Sabotage: Public Service Motivation and Guerrilla Bureaucracy in Times of Unprincipled Political Principals. *Journal of Public Administration Research and Theory*, *32*(2), 416-435. https://doi.org/10.1093/JOPART/MUAB028

Skocpol, T. (1985). Bringing the state back in: strategies of analysis in current research. In P. Evans, D. Rueschemeyer, & T. Skocpol (Eds.), *Bringing the State Back In* (pp. 3-43). Cambridge University Press.

Skocpol, T., Evans, P. B., & Rueschemeyer, D. (Eds.). (1985). *Bringing the State Back In*. Cambridge University Press.

Sunstein, C. R. (2014). *Valuing Life: Humanizing the Regulatory State*. University of Chicago Press.

Thatcher, M. (2008). Reforming National Regulatory Institutions: the EU and Cross-National Variety in European Network Industries. In B. Hancké, M. Rhodes, & M. Thatcher (Eds.), *Beyond Varieties of Capitalism: Conflict, Contradictions, and Complementarities in the European Economy* (pp. 147-172). Oxford University Press.

Tilly, C. (1975). *The formation of national states in Western Europe*. Princeton University Press.

van Thiel, S., & Yesilkagit, K. (2014). Does Task Matter? The effect of task on the establishment, autonomy and control of semi-autonomous agencies. *International Review of Administrative Sciences*, *80*(2), 318-340. https://doi.org/10.1177/0020852313514524

Verhoest, K. (2005). Effects of Autonomy, Performance Contracting, and Competition on the Performance of a Public Agency: A Case Study. *Policy Studies Journal*, *33*(2), 235-258. https://doi.org/10.1111/j.1541-0072.2005.00104.x

Verhoest, K., Boon, J., Boye, S., & Salomonsen, H. H. (2023). How does organizational task matter for the reputation of public agencies? *Regulation & Governance*, *17*(1), 158-176. https://doi.org/10.1111/rego.12441

Verhoest, K., Peters, B. G., Bouckaert, G., & Verschuere, B. (2004). The study of organisational autonomy: a conceptual review. *Public Administration and Development*, *24*(2), 101-118. https://doi.org/10.1002/pad.316

Verhoest, K., Roness, P. G., Verschuere, B., Rubecksen, K., & MacCarthaigh, M. (2010). Autonomy and Control of State Agencies: Comparing States and Agencies. In *Autonomy and Control of State Agencies*. Palgrave MacMillan. https://doi.org/10.1057/9780230277274

Wooldridge, J. M. (2006). *Introductory Econometrics: A modern approach*. Thomson-South-Western College Publishing.

Wu, X., Ramesh, M., & Howlett, M. (2015). Policy capacity: A conceptual framework for understanding policy competences and capabilities. *Policy and Society*, *34*(3-4), 165-171. https://doi.org/10.1016/j.polsoc.2015.09.001

Wu, X., Howlett, M., & Ramesh, M. (Eds.). (2018). *Policy Capacity and Governance: Assessing Governmental Competences and Capabilities in Theory and Practice*. Palgrave MacMillan.

Bruno Queiroz Cunha

Ph.D. in Public Policy from the Federal University of Rio de Janeiro (UFRJ); Policy manager and applied researcher at Institute of Applied Economic Research (IPEA). E-mail: bruno.cunha@ipea.gov.br

Pedro Cavalcante

Ph.D. in Political Science from the University of Brasilia (UNB); Professor in the Professional Master's Program in Public Administration at the Brazilian Institute of Education, Development, and Research (IDP).
E-mail: cavalcante.pedro@gmail.com

AUTHORS' CONTRIBUTION

Bruno Queiroz Cunha: Conceptualization (Lead); Investigation (Lead); Methodology (Equal).

Pedro Cavalcante: Data curation (Lead); Formal Analysis (Lead); Methodology (Equal).

DATA AVAILABILITY

The entire dataset supporting the results of this study was made available in Ipea's repository and can be accessed in https://repositorio.ipea.gov.br/handle/11058/950

APPENDIX

The synthetic indexes of state capacity dimensions and performance used in this article were built using the frequency of civil servant's perceptions in each dimension. The frequencies of responses were converted into numbers from the survey questions, as described in the tables below. Next, we employed Principal Component Analysis method (PCA), a type of factor analysis that permits the identification of factors and objectively points to the aggregation and reduction of a number of measures. The method retains the explanatory power of the original data and lessens the degree of subjectivity of the research (Hair et al., 2006). The main purpose is thus to create new variables that are linear combinations of the primary variables. Hence, unlike the arbitrary definition of weights, the methodology takes advantage of the correlation between indicators and creates an index corresponding to a weighted average of these variables.

Once built, the indexes were transformed, aiming at normalizing their values within a 0 to 100 range. For the calculation we used the following equation:

$$IS^{X}_{i} = [(X_{i} - X_{min}) / (X_{max} - X_{min})] * 100 = 0...100$$

Where:

IS = Synthetic Index
X_{i} = Observed Index
X_{min} = Minimum value
X_{max} = Maximum value

Table 3 includes the percentage variation of the first component and the respective factor loadings used for the indexes, while table 4 shows the descriptive analysis of the indexes.

TABLE 3 LIST OF VARIABLES AND LOADINGS OF THE FIRST COMPONENT (MERITOCRACY, POLICY AND STRUCTURAL AUTONOMIES, RESOURCES, ACCOUNTABILITY AND PERFORMANCE)

Meritocracy - Questions		Frequency	Eingvalue	% Explained
QB1	My work unit is able to recruit people with the right skills.	5- Strongly agree 4- Agree 3- Don't agree or disagree 2- Disagree 1- Strongly disagree 999- Don't know/Refuse to answer	2,19	36,5%
QB2	Promotions for political appointees in my work unit are based on merit.			
Evaluate how important each of the following items are to promotion				
QB5	Technical competence	4- Very important 3- Important 2- Moderately important 1- Not important 999- Don't know/Refuse to answer		
QB6	Political party affiliations*			
QB7	Career expertise			
QB8	Personal network*			
Policy Autonomy - Questions		**Frequency**	**Eingvalue**	**% Explained**
QC2	In my current role, I feel empowered to come up with new and better ways of doing things.	5- Strongly agree 4- Agree 3- Don't agree or disagree 2- Disagree 1- Strongly disagree 999- Don't know/Refuse to answer	1,93	48,2%
QC3	I am able to make my own decisions in the performance of my work.			
QC4	The approval of a project depends on my technical considerations			
QC6	How frequently do formal rules and regulations prevent you from doing your job?*	5- All of time 4- Most of the time 3- Sometimes 2- Rarely 1- Never 999- Don't know/Refuse to answer		
Structural Autonomy - Questions		**Frequency**	**Eingvalue**	**% Explained**
QC9	Bureaucrats are politically neutral in their professional roles	5- Strongly agree 4- Agree 3- Don't agree or disagree 2- Disagree 1- Strongly disagree 999- Don't know/Refuse to answer	1,24	41,4%
QC10	Bureaucrats must strictly obey their superiors*			
QC11	Bureaucrats are free to override rules in favor of their own judgment			

Resources - Questions		Frequency	Eingvalue	% Explained
*In my work unit, the following itens are obstacles***		5- Strongly agree 4- Agree 3- Don't agree or disagree 2- Disagree 1- Strongly disagree 999- Don't know/Refuse to answer	4.54	32,5%
QE1	Human Resources			
QE2	Budgeting			
QE3	Technologies			
QE4	Top Official Stability			
QE5	Planning, monitoring and evaluation processes			
QE6	Legislation			
QE7	Relationship with the Judiciary and the Public Prosecution Office			
QE8	Relationship with the Legislative branch			
QE9	Interfederative coordination instruments with states and municipalities.			
QE10	Interfederative coordination with states and municipalities			
QE11	Audit and control processes			
QE12	Social participation			
QE13	Access to key policymakers			
QH3	The resources available are sufficient to achieve my organization's functions			
Accountability - Questions		**Frequency**	**Eingvalue**	**% Explained**
QD1	The organizational culture of my working unit hinders corruption practices	5- Strongly agree 4- Agree 3- Don't agree or disagree 2- Disagree 1- Strongly disagree 999- Don't know/Refuse to answer	1,5	50%
QD2	Civil society organizations are able to participate in the decision-making processess of the policies of my working unit			
QD3	My organization is hold accountable for getting better results			

Performance - Questions		Frequency	Eingvalue	% Explained
QH1	Currently, your organization has achieved more or less results compared to five years ago?	5- More effective 4- Effective 3- Same 2- Less effective 1- Much worse 999- Don't know/Refuse to answer	2,4	60,1%
QH2	The policies produced by the organization have reached the expected results.	5- Strongly agree 4- Agree 3- Don't agree or disagree 2- Disagree 1- Strongly disagree 999- Don't know/Refuse to answer		
QH5	My organization is creative and innovative.			
QD4	The performance of my organization is well evaluated by society			

Source: Global Survey of Public Servants, described in Pereira et al. (2019) for data in Brazil.
Notes: In these questions, the values are considered in the opposite way, e.g., the more important the less meritocratic.
** In these questions, the values are considered in the opposite way, e.g., the greater the agreement, the fewer resources.

TABLE 4 DESCRIPTIVE ANALYSIS OF THE INDEXES

		General	Ministries & Executive Agencies	Regulatory Agencies
Performance	Mean	54.9	55.6	53.3
	Standard deviation	20.8	21.2	19.8
Meritocracy	Mean	76.4	77.1	74.9
	Standard deviation	16.6	15.8	18.0
Policy Autonomy	Mean	54.7	54.9	54.5
	Standard deviation	19.5	19.5	19.4
Structural Autonomy	Mean	36.5	35.9	37.8
	Standard deviation	15.8	15.8	15.6
Resources	Mean	43.7	43.0	45.1
	Standard deviation	15.7	16.2	14.3
Accountability	Mean	59.8	58.4	62.9
	Standard deviation	18.2	18.1	18.2

Source: Elaborated by the authors based on the Global Survey of Public Servants, described in Pereira et al. (2019) for data in Brazil.

FIGURES CAPTIONS (LIST)

Figure 1 – Meritocracy Indexes Average

Figure 2A – Policy Autonomy Index Average

Figure 2B – Structural Autonomy Index Average

Figure 3 – Resources Indexes Average

Figure 4 – Accountability Indexes Average

Figure 5 – Performance Indexes Distribution

Table 1 – Relationship Frequency Average

Table 2 – The Performance Determinants

Table 3 - List of variables and loadings of the first component (meritocracy, policy and structural autonomies, resources, accountability and performance)

Table 4 - Descriptive Analysis of the Indexes