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Health Policy Capacity and Reliance on Expert Advice in Comparative Perspective: COVID-19 Responses Across Brazilian States

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ABSTRACT *This paper compares subnational responses to the COVID-19 pandemic in Brazil, examining how differences in health policy capacity shaped the incorporation of expert advice into policy agendas. While prevailing literature on crisis-driven policymaking emphasizes reliance on expert knowledge, this article's findings nuance that relationship. Drawing on an original dataset of state-level measures and a mixed-methods design, the article demonstrates that higher-capacity states systematically integrated expert advice. In contrast, lower-capacity states resorted to heterogeneous informational sources. These patterns suggest that health policy capacity, shaped by prior trajectories of resource investment, plays a critical role in structuring policy agendas in response to complex crises.*

Keywords: Comparative policy analysis; health policy capacity; expert advice; COVID-19 pandemic; agenda-setting; Brazilian states; mixed methods

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Introduction

The COVID-19 pandemic revealed governments' limited preparedness, as the novelty of the virus generated unprecedented challenges for political decision-making (Christensen and Mortensen 2024). These dynamics correspond to what Boin et al. (2021) describe as a "creeping crisis": a slowly unfolding threat that heightens uncertainty, forces policymakers to act with scarce and evolving information, and increases reliance on expert advice.

The literature on evidence-based policymaking emphasizes that experts play a central role in grounding policy advice in rigorous knowledge and in providing direction under uncertainty (Cairney 2016; Baekkeskov and Öberg 2017). This role becomes especially important in health crises, where established professional networks supply essential guidance for interpreting fast-changing conditions and shaping governmental responses (Löblová 2018; McConnell and Stark 2021).

Expert advice is central in crises, yet countries varied widely in how they incorporated it during COVID-19 – some acted rapidly, while others delayed until health systems were under severe strain (Salajan et al. 2020; Weible et al. 2020). These differences were especially visible in federal systems, where divided authority complicated coordination. Brazil illustrates this dynamic: in the absence of a cohesive national strategy – and amid President Bolsonaro's denial of the crisis and resistance to expert advice – state governments were left to define their own responses, producing significant regional disparities (Abrucio et al. 2020; Fernandez et al. 2025).

This leadership vacuum was compounded by instability in the Ministry of Health: two ministers resigned in rapid succession during April and May 2020, and were replaced by Eduardo Pazuello, a military officer with no medical background and close ties to President Bolsonaro (Ortega and Orsini 2020). The absence of federal coordination undermined the cooperative model of Brazilian federalism, in which the Union – the federal government responsible for setting national guidelines and coordinating policies across states and municipalities – traditionally plays a central role in health policy (Arretche 2010). This rupture was consolidated in April 2020, when the Supreme Court upheld the authority of subnational governments to adopt their own social distancing measures, effectively curbing federal interference and institutionalizing state-level autonomy (Fonseca et al. 2021).

While previous studies have documented state-level variation, the factors explaining how expert advice is incorporated into political agendas remain underexplored. In this regard, Brazil provides an analytically valuable case for within-country comparisons, aligning with the emerging field of Subnational Comparative Policy Analysis (SCPA), which emphasizes the importance of subnational variation for understanding how context shapes policy (Béland et al. 2024).

This variation raises a central question: to what extent does health policy capacity – shaped by experience with past epidemics – explain differences in how Brazilian states incorporated expert advice during the COVID-19 pandemic?

This study explores how health policy capacity influences state-level reliance on expert advice within policy agendas (defined as the body of laws and decrees that together constitute a state's response to the COVID-19 pandemic). The study rests on a comprehensive and original daily database of decisions made by Brazilian states during the initial wave of COVID-19. The methodology of this study combines quantitative and

qualitative analysis: a logistic regression model evaluates the impact of health policy capacity on the incorporation of expert advice into decrees and laws, complemented by a text analysis exploring the composition of committees that guided decision-making during this critical period.

This article makes three contributions. Theoretically, it develops a framework linking health policy capacity to the use of expert advice in political agendas, challenging the assumption in evidence-based policy research that crises automatically heighten reliance on expertise. Empirically, it demonstrates that in Brazil, states with stronger health policy capacity – often consolidated through past epidemics – were more likely to incorporate expert advice into their agendas during COVID-19. Methodologically, it operationalizes health policy capacity through budgetary allocations and the composition of advisory committees, providing tools to assess how expertise is introduced into policymaking. Taken together, the findings bridge the literatures on evidence-based policy and agenda-setting, showing that the integration of expertise hinges on pre-existing policy capacity and historical trajectories.

Policy Capacity's Influence on the Utilization of Expert Advice During Health Crises

The COVID-19 pandemic renewed attention to the role of policy capacity in shaping crisis responses. Defined as the resources, infrastructures, and specialized personnel that enable governments to design and implement public health measures (Capano 2020), policy capacity became a decisive factor. In decentralized systems, the transfer of substantial authority to subnational governments made these differences visible: the effectiveness of crisis management ultimately depended on their respective capacity.

Comparative evidence confirms this pattern: capacity shapes not only the measures governments adopt, but also how effectively they implement them. In the United States, all states introduced mitigation policies, but only those with stronger policy capacity were able to enforce them consistently, leading to lower excess mortality (Auerbach et al. 2024).

In Europe, Italy's regional autonomy made the health response heavily dependent on subnational capacity: regions like Veneto, with robust epidemiological surveillance, managed to contain the outbreak more effectively, while Lombardy's weaker coordination produced severe outcomes (Capano and Lippi 2021). In Asia, Indonesia's decentralization intersected with unequal capacities: while the national response was slow and fragmented, Jakarta mobilized resources earlier but faced inadequate data systems, leading to uneven levels of preparedness and coordination (Asmorowati et al. 2022).

In Latin America, Brazil provides a clear example of how decentralization exposed underlying variations in health policy capacity (Abrucio et al. 2020). Whereas other federal systems in the region centralized pandemic responses and maintained stronger national control (Hernández and Altavilla 2021), the Brazilian Supreme Court's ruling in March 2020 confirmed the authority of states to adopt their own measures, thereby creating the institutional conditions for these differences to become visible (Fonseca et al. 2021). As a result, decentralization revealed entrenched territorial inequalities in health capacity: well-resourced states coped more effectively, while under-resourced ones faced higher mortality (Araújo and Ferreira 2023). Accordingly, decentralization functioned as the institutional condition that rendered capacity disparities visible,

amplifying structural inequalities and reinforcing territorial asymmetries in pandemic management (Grin et al. 2021).

Although extensive research links policy capacity to crisis effectiveness, less is known about how health policy capacity shapes the incorporation of expert advice into policy agendas. To address this gap, it is essential to clarify what policy capacity entails. Following the framework developed by Wu et al. (2015), policy capacity operates at three levels: individual (skills and competencies), organizational (resources and processes mobilized in decision-making), and systemic (public trust and support for state institutions).

Given this study's focus on expert advice in policy agendas, the organizational level of policy capacity is most relevant. We define health policy capacity as the size of government health budgets and the number of personnel in public health agencies that can be mobilized during a crisis. As the literature suggests, financial resources and the availability of qualified personnel strongly influence the extent to which policymakers rely on expert advice in times of crisis (Painter and Pierre 2005; Howlett 2009).

Policy capacity shapes the type of information prioritized in political agendas. Building on Baumgartner and Jones' theoretical framework (2015), we identify two patterns of information search: "expert search", which is most common, and "entropic search". Expert search occurs where a cohesive group of experts has a history, sometimes institutionalized in a government bureaucracy, that enables them to legitimately impose their authority on a problem, stabilizing its definition. In contrast, entropic search emerges where no such group exists or where it has lost its legitimacy, requiring policymakers to seek broader perspectives from a range of stakeholders before settling on a new problem definition (Beaulieu-Guay et al. 2023; Costa and Montpetit 2024). The formation of committees is often the method preferred by decision-makers to operationalize information gathering, particularly in times of crisis. It follows – and it is this paper's hypothesis – that states with strong health policy capacity are more inclined to rely on expert advice, potentially limiting their exploration of other perspectives. In contrast, states with lower health policy capacity are expected to incorporate a broader array of information into their policy agendas.

Policy Legacies: Policy-Bubble Formation in Brazil's Epidemic Responses

To understand how health policy capacity shapes state responses in Brazil, it is essential to consider the country's historical experiences with epidemics that redirected health resources during past crises. Outbreaks such as Zika and recurrent dengue fever prompted substantial increases in health budgets, particularly in the most affected regions (Filip et al. 2022). These dynamics reflect what the policy literature calls policy bubbles: disproportionate resource allocations under urgency that, unlike financial bubbles, leave enduring legacies shaping governance beyond the crisis (Jones et al. 2014; Maor 2025). Policy bubbles leave distinct legacies in states, which become relatively resistant to changing circumstances, guiding current responses to emerging health challenges (Pierson 2011; Weiss and Thurbon 2022).

These legacies activated causal mechanisms that help explain the divergent responses of Brazilian states to COVID-19. Two dimensions are central. First, states heavily affected by past epidemics increased epidemiological budgets over

time, expanding staff and surveillance systems, which in turn fostered organizational learning and stable networks of specialists that generated information for decision-making. Second, this accumulated capacity shaped the composition of the ad hoc advisory committees created during COVID-19: states with stronger budgets were able to mobilize health experts and give them greater prominence, whereas weaker states lacked this possibility. In those states, economic actors occupied a larger share of these arenas, and the influence of public health expertise remained limited.

As Koga et al. (2023a) show, the specific influence of structures such as ad hoc advisory committees ultimately depend on their design. Institutionalized routines of cohesive epistemic communities can notably strengthen the role of experts in policy-making. Lacking capacity, some states will not instinctively call on experts, leaving more room for interest representation within their institutions.

Taken together, epidemiological budgets capture the material dimension of health policy capacity, while committee composition reflects its institutional dimension, showing how resources and organizational choices conditioned the design of advisory arenas and the prominence of expert voices within them.

Thus, the second hypothesis of this paper is that states most affected by past epidemics developed higher health policy capacity, as recurrent exposure generated policy bubbles that expanded epidemiological budgets and fostered the institutionalization of advisory bodies.

Materials and Methods

For this study, we compiled a comprehensive and original daily database focusing on state-level responses to the COVID-19 pandemic during the first wave (February 25, 2020 to November 5, 2020), a period marked by a vast surge in case numbers that prompted various responses from state governments. The end of the period covered by this study was determined by the lowest point of the seven-day moving average for confirmed COVID-19 cases in Brazil (Salyer et al. 2021). The database included two levels – states and days – and focused on 22 of Brazil's 27 states for which data were available.

To explore whether the utilization of expert advice was influenced by health policy capacity, a combination of quantitative and qualitative methods was employed. For the quantitative analysis, we employed a Logistic Regression Model (LRM) to examine the impact of health policy capacity on the incorporation of expert advice into the policy agenda across Brazilian states.

For the qualitative analysis and to strengthen our argument, we performed a text-data analysis of decrees and laws from the initial wave of COVID-19 (Costa 2025). This analysis focused on the composition of committees mandated to inform decision-making. It examined whether the make-up of these committees, which included stakeholders from various sectors, such as government, public health, and the industry sector, varied between states.

Dependent Variable: Policy Agenda

In this research, the policy agenda is the dependent variable. While it comprises all decrees and laws that included the term "COVID-19", we were interested in the extent to which these decrees and laws referred to expert advice. Specifically, we randomly selected 150 decrees and laws, and read them in search of terms indicating a reliance on expert advice. Examples of such terms include "advice", "recommendations", and "guidance". The sample size of 150 was determined as the point where no new terms emerged during our reading. At that point, we created a dictionary of terms, which was subsequently applied to all decrees and laws in the database.

Then, we conducted a manual review to certify that these decrees and laws specifically referenced expert advice within the local health domain, thereby ruling out the influence of experts from other countries. We identified terms such as "Ministry of Health", "epidemiologist", and "Health Committee", assigning a value of 1 when the legislation referenced local expert advice and 0 otherwise.

Independent Variables

This study examines whether health policy capacity influences reliance on expert advice in policy agendas, controlling for covariates such as pre-existing advisory structures, COVID-19 cases per state, and governors' political ideology. These controls are not exhaustive – economic conditions and public opinion may also matter – but they capture the main sources of bias. The literature further suggests that a limited number of plausible controls is sufficient to obtain valid estimates of relationships between two variables (King 1989).

1. Health Policy Capacity: This analysis emphasizes the organizational level of health policy capacity, focusing on how financial resources and personnel within government shape variations in state responses (Wu et al. 2015). Two indicators are considered: one primary and one secondary.

The primary indicator is the epidemiological surveillance budget, used as a proxy for the financial resources available for pandemic response. These investments support the production of essential information – such as disease monitoring, control activities, and preventive guidance – necessary for managing infectious outbreaks (Ministério da Saúde n.d.).

The second indicator is the composition of state-level advisory committees created during the pandemic, which institutionalized expert participation by providing arenas where preventive and control measures were debated before adoption (Palotti et al. 2021; Koga et al. 2023b). This indicator complements the budget measure by capturing the institutional dimension of expertise mobilization – especially in low-capacity states, where limited surveillance resources made committee composition the clearest evidence of whether expert knowledge guided decision-making.

To create the first index of health policy capacity, we analyzed the budgets allocated for epidemiological surveillance, utilizing official data from January 2020 to assess the financial resource allocation of the states before the pandemic. We utilized a quantile-based method to categorize the states into groups based on their epidemiological budgets, ensuring a fair and statistically reliable representation. Specifically, the states were categorized into three groups – strong, moderate, and low health policy capacity – based on

their budget allocations. The percentage of the threshold mentioned refers to these quantiles, which delineate the varying levels of capacity within the ranking (Costa 2025).

Strong health policy capacity included states with epidemiological health budget allocations exceeding the 66 per cent threshold, indicating a substantial financial commitment to epidemiological surveillance.

Moderate health policy capacity comprised states with epidemiological health budget allocations ranging from 33 per cent to 66 per cent of the total, signifying a moderate allocation of resources.

Low health policy capacity encompassed states with epidemiological health budget allocations below the 33 per cent threshold, denoting a relatively smaller budget allocation to epidemiological surveillance.

The distribution of states is as follows:

Strong	Bahía, Ceará, Distrito Federal, Minas Gerais, Mato Grosso do Sul, Paraná, São Paulo.
Moderate	Alagoas, Amazonas, Maranhão, Mato Grosso, Pernambuco, Rio de Janeiro, Rio Grande do Sul, Tocantins.
Low	Acre, Amapá, Espirito Santo, Goiás, Piauí, Rondônia, Roraima, Santa Catarina.

The second index of health policy capacity focuses on human resources, which we assess by examining the composition of state committees established during the COVID-19 pandemic. These committees, established by state governments to assist in decision-making and propose measures during the crisis, comprised members from a range of sectors, including government, public health, and industry. To analyze the composition of the committees, we collected data on all those created through legislation and decrees, noting their creation dates. We then analyzed the diversity within each committee, which reflects the range of expertise and perspectives involved in shaping policy recommendations and action plans during the pandemic. While this index does not directly measure the size of specialized personnel available to the government during a health crisis, we assume that committees with a higher proportion of health experts reflect the presence of government health bureaucracies employing highly qualified personnel.

We harmonized categories to account for variation in terminology across states and to enable meaningful comparisons. We then analyzed the distribution of committee representation using the Herfindahl–Hirschman Index (HHI), a metric widely used in political science to assess concentration and diversity (Atkinson and Windett 2019). The HHI captures how representation is distributed across categories, providing a measure of the informational balance within committees (Costa 2025).

2. Pre-existing expert advice was included to assess whether states built on prior guidance when making new policy decisions. This variable captures the influence of previous advice on current choices. In time-series models, past values of the dependent variable are often strong predictors of present outcomes, so we included expert advice from the previous day as a control.

3. Confirmed cases were included to assess whether the intensity of the pandemic shaped states' use of expert advice (Eichenberger et al. 2023). This variable provides

essential contextual information, allowing us to examine whether higher case levels increased the likelihood of states drawing on expert guidance, independently of health policy capacity. Daily state-level case data were used for this measure.

To obtain consistent and comparable figures across states, we relied on the Oxford COVID-19 Government Response Tracker (OxCGRT), which compiles subnational case data for Brazil through a collaboration between the Blavatnik School of Government, Fundação Getulio Vargas (FGV) Escola Brasileira de Administração Pública e de Empresas (EBAPE), and the University of São Paulo (Petherick et al. 2020).

4. This study also controls state governors' political ideology, as the literature highlights that right-leaning ideologies prioritize economic considerations over health (Neelon et al. 2021; Prieto-Rodríguez et al. 2023). Acknowledging that political ideology could affect reliance on health expert advice, we deem it important to control the presence of governors who belong to Bolsonaro's Liberal Party (PL). As is well-known, Bolsonaro was reluctant to prioritize the health of the Brazilian population over the country's economy. PL governors were identified with a dummy variable, where 0 indicates the presence of a governor from a different party at the outset of the COVID-19 pandemic.

It is important to note that a potential limitation of this research is the treatment of states as independent units. The literature on policy diffusion in federal systems shows how information exchange allows states to learn from one another, replicate successful strategies, and engage in competitive behaviors (Mallinson 2020). While diffusion might have played a role during the pandemic, the key independent variable in this study – health policy capacity – precedes any such processes in the early phase of COVID-19. Any influence of diffusion should therefore appear only as unexplained variance in our models.

A second limitation concerns the correlation between policy capacity and population size. Larger states benefit from scale effects that translate into higher budgets and greater potential to professionalize their bureaucracies. According to the Brazilian Institute of Geography and Statistics (IBGE 2022), São Paulo (44.4 million inhabitants) and Minas Gerais (20.5 million) are both highly populated and classified as high-capacity states in our categorization. However, population does not map neatly onto capacity. Mato Grosso do Sul (2.8 million) is also classified as high capacity despite its small population, while Pará (8.1 million) is low capacity. These examples suggest that although population conditions the scale of resources, it does not fully explain their professionalization and the institutionalization of expertise. As shown below, health policy capacity in Brazil was primarily shaped by states' exposure to past epidemics, which drove investments in surveillance and professional bureaucracies – better captured by epidemiological budgets and committee composition than by demographic size alone. While it would have been ideal to include a control variable for population size, its correlation with health policy capacity prevents us from doing so without creating a collinearity problem.

Results

As the COVID-19 pandemic unfolded in Brazil, beginning with the first reported case on February 25, 2020, President Jair Bolsonaro systematically disregarded expert advice, largely because it conflicted with his economic priorities. This tension produced

Table 1. Descriptive statistics of the variables of the model

Health Policy capacity	**Low**	**Moderate**	**Strong**
Mean Expert Advice	0.00483871	0.012903226	0.023963134
Median Expert Advice	0	0	0
Min Expert Advice	0	0	0
Max Expert Advice	1	1	1
Mean Confirmed Cases	35,127	54,466	111,970
Mean Confirmed Cases	7,636	15,924	16,253
Min Confirmed Cases	0	0	0
Max Confirmed Cases	268,644	313,843	1,125,936
Mean Bolsonaro Party	0.375	0	0
Median Bolsonaro Party	0	0	0
Min Bolsonaro Party	0	0	0
Max Bolsonaro Party	1	0	0

Source: Self-made.

escalating conflicts and culminated in the dismissal of Health Minister Luiz Henrique Mandetta in April 2020. The main point of disagreement concerned Bolsonaro's insistence on promoting hydroxychloroquine – traditionally used to treat malaria – as a treatment for COVID-19, despite Mandetta's repeated warnings that experts offered little support for its use.

Following Mandetta's dismissal, Nelson Teich assumed office on May 17, 2020, but remained for only a month due to his opposition to Bolsonaro's decision to reopen gyms and beauty salons. He was succeeded by Eduardo Pazuello, an army general with no medical background, who served until June 2021. In the absence of stable federal leadership – and given the President's continued resistance to expert guidance – state governors became central actors in implementing mitigation measures. Yet our analysis shows that Brazilian states differed markedly in how they incorporated expert advice into their political agendas.

Table 1 presents the statistical summary of the variables analyzed, organized by policy capacity to facilitate interpretation. The distribution of *Mean Expert Advice* reveals a distinct pattern, with states exhibiting strong health policy capacities having a higher mean (0.023) than moderate-capacity (0.012) and low-capacity states (0.004). This suggests a potential correlation between health policy capacity and the prevalence of expert advice in the political agenda. Furthermore, when examining the *Mean Number of Confirmed Cases*, a similar trend emerges. States with strong health policy capacity exhibit the highest mean (111.970), followed by moderate-capacity (54.466) then low-capacity states (35.127).

States' Initial COVID-19 Responses

As the COVID-19 pandemic began, Brazilian states promptly enacted a series of decrees and measures to address public health challenges and mitigate the spread of the virus. These actions, informed by committees to combat COVID-19, represented a direct response to the pressing necessity of managing the unfolding public health crisis associated with COVID-19.

Throughout March and April 2020, states introduced a wide array of measures to combat the crisis, with 21 decrees and laws, making up 34 per cent of the total legislation adopted during the period. In this context, the initial months of the pandemic, particularly February and March 2020, were marked by swift government responses across Brazil, with states grappling with the evolving situation.

To contain the rise in COVID-19 cases, the adoption of measures, such as the suspension of non-essential activities, the establishment of curfews, and the implementation of isolation protocols, primarily characterized the initial phase of the pandemic. During this period, states with strong health policy capacity utilized expert advice more frequently, issuing a total of nine decrees and laws that incorporated such recommendations, compared to six in states with moderate and low health policy capacity.

Additionally, states with strong health policy capacity adopted measures that set them apart from weaker states. They established clear protocols for handling human bodies and conducting autopsies (Decree 64880), and introduced specialized procedures for laboratory-based COVID-19 testing (Decree 4261). These initiatives reflect their ability to process emerging information more rapidly, allowing expert advice to enter their policy agendas earlier as knowledge about the virus evolved (Auld et al. 2021).

The first regression model, shown in Table 2, includes data from all states, while the second model excludes São Paulo. São Paulo was excluded because it is an outlier, with a comparatively heavy reliance on expert advice, which could bias the results. Nevertheless, with or without São Paulo, the models confirm the hypothesis of this study: states with strong health policy capacity are more likely to incorporate expert advice into their policy agendas.

In Model 1, a one-unit increase in *Expert Advice at time −1 day*, a common variable in time-series analysis, is associated with a significant rise of 1.037 units in the dependent

Table 2. Logistic regression explaining the adoption (No, Yes) of expert advice

	Model 1	**Model 2**
Expert advice-1	1.037*	1.290*
	(0.445)	(0.610)
Low (ref: *Strong*)	−1.463***	−0.770+
	(0.413)	(0.448)
Moderate (ref: *Strong*)	−0.457^{+}	0.200
	(0.238)	(0.288)
Confirmed Cases	0.000**	0.000+
	(0.000)	(0.000)
Bolsonaro Party	−0.052	−0.055
	(0.629)	(0.629)
Num.Obs.	5796	5544
AIC	933	692.5
BIC	972.9	732.2
Log.Lik.	−460.479	−340.228
F	9.784	3.591

$^{+}$ p < 0.1, *p < 0.05, **p < 0.01, ***p < 0.001.
Source: Selfmade.

variable. This result underscores the influential role that past political decisions play in shaping current decisions.

The main variable of this study, *Health Policy Capacity*, compares *Strong*-capacity states, the reference category, to *Low*- and *Moderate*-capacity states. Low-capacity states, compared to strong-capacity states, are associated with a significantly lower reliance on expert advice. Similarly, moderate-capacity states, compared to the reference category *Strong*, are distinct when it comes to their reliance on expert advice. While the statistical significance and the size of the coefficient are lower, states with a moderate health policy capacity are less likely to rely on expert advice.

The variable *Confirmed Cases* is statistically significant, meaning the model reliably detects an association. However, the estimated coefficient is extremely small, so the effect has no practical impact on the dependent variable. The *Bolsonaro Party* control variable, however, did not yield statistically significant results, implying a limited impact of ideology on the dependent variable.

In Model 2, a similar pattern emerges. The effect of *Expert Advice at time −1* is strong. Likewise, removing the state of São Paulo did not significantly alter the results for health policy capacity. Low-capacity states have a statistically lower probability of relying on expert advice than strong-capacity states. The difference between moderate- and strong-capacity states, however, did not meet the usual standards of statistical significance. As in Model 1, the number of confirmed cases has a marginally significant impact, while the variable identifying governors from the *Bolsonaro Party* lacks statistical significance.

All in all, both models show a significant difference between the propensity of strong and weaker health policy capacity states to rely on expert advice in their COVID-19 decisions, after controlling for potentially important factors. This result is robust as it holds in a model that excludes São Paulo. It is also consistent with the hypothesis that the stronger the health policy capacity of states, the more likely they are to rely on expert advice.

Development and Reinforcement of Health Policy Capacity Over Time

In this section, we examine the distinctive development of health policy capacity, drawing on Brazil's historical experiences with epidemics. Following significant disease outbreaks, states generally strengthen their healthcare systems by allocating additional resources to be better prepared for future health crises. As intended, these resources have lasting effects on decision-making (Filip et al. 2022; Weiss and Thurbon 2022). Brazilian states face persistent health challenges with diseases such as dengue, Zika, and chikungunya, which are primarily transmitted by Aedes mosquitoes. These diseases threaten urban populations in tropical and subtropical regions, particularly in low- and middle-income states.

Our analysis builds on the findings of Pescarini et al. (2022), who calculated a mean yearly disease prevalence per 100,000 inhabitants in each state from 2014 to 2019, revealing significant variations from one state to another. More importantly, states with strong health policy capacity exhibit an average incidence rate of 98.56 cases, while states with moderate capacity have an average of 89.11 cases, and those with lower capacity have an average of 77.21 cases.

This segmentation highlights the differences in health policy capacity among states, and illustrates the significance of budget allocation for epidemiological surveillance. It

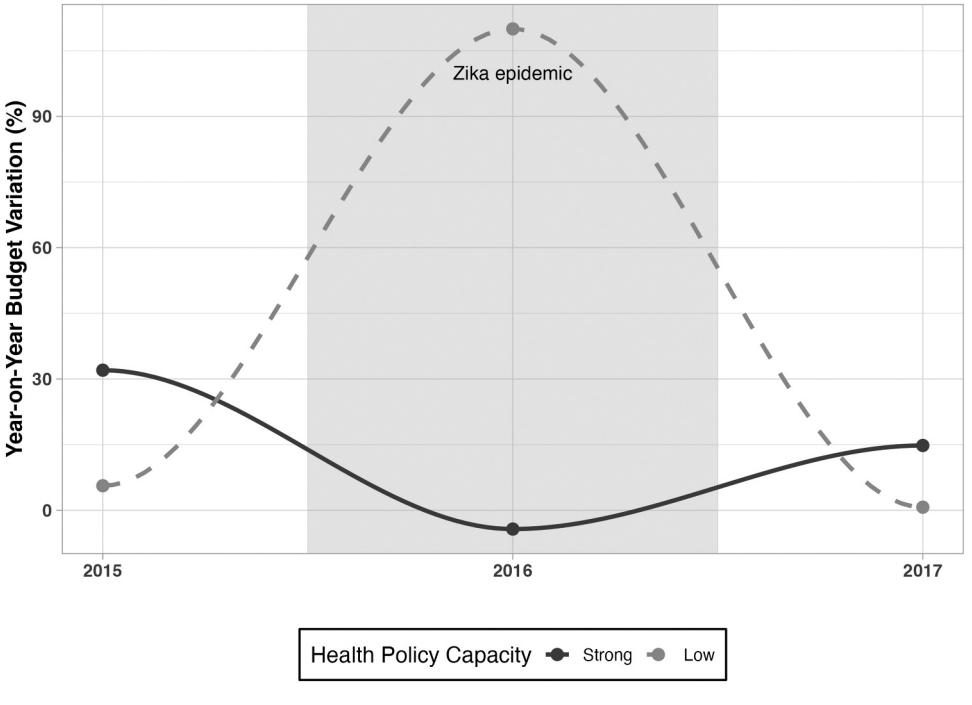
underscores that sustained funding is crucial for the long-term development of health policy capacity. In our analysis, we examined budget allocations for surveillance over time, comparing variations between states with strong and low health policy capacity.

We begin by examining the year with the highest average increase in both percentage and nominal year-on-year budget variation across the two groups of states. In 2015, states with strong health policy capacity recorded a 32 per cent average increase in their epidemiological surveillance budgets. In contrast, states with lower capacity experienced their highest growth in 2016, with an average rise of 110 per cent, coinciding with the outbreak of the Zika epidemic.

Importantly, the nominal year-on-year budget variation was significantly higher among high-capacity states, reaching an average of $45.9 million, compared to $5.3 million among low-capacity states. This difference suggests that, on average, high-capacity states invested nearly nine times more than their lower-capacity counterparts.

Sustained investment patterns also differed. States with lower capacity displayed greater volatility in their budgets, with an average variation of 39 per cent over the period. Meanwhile, states with strong capacity showed more consistent investment, averaging just a 14 per cent year-on-year variation. This analysis shows that today's health policy capacity in states was built following experiences with epidemics and the budgets to sustain this capacity persist over time (see Figure 1).

Figure 1. Year-on-year average variation in epidemiological surveillance budgets in Brazilian states with strong and low health-policy capacity (2015–2017)



The epidemiological situation deteriorated rapidly in early April 2020, with Brazil surpassing 11,000 confirmed cases by April 6 and reaching its first major peak later that month. From April to August, high-capacity states continued to draw on expert insights, extending measures such as quarantine, social isolation, and the suspension of non-essential activities. They also enhanced their data infrastructure: São Paulo introduced real-time monitoring mechanisms (Decree 64963), while Ceará created a specific system for processing COVID-19 information (Decree 33717), enabling expert advice to shape policy adjustments as the crisis evolved.

Additionally, states with strong health policy capacity passed legislation mandating the organized collection of information by laboratories, pharmacies, hospitals, and health institutions on patients who tested positive for COVID-19 (Decree 40601; Ordinary Law 20213). This emphasis on systematic data reporting reflected a data-driven approach to managing the pandemic and underscored the importance these states placed on expert advice. As the first wave drew to a close, high-capacity states also consistently extended measures such as social isolation, distancing, and quarantine, a continuity evident in a series of legislative decrees (Decrees 6541, 33722, and 33737).

Significantly, the political agenda underwent a notable evolution in the information considered, with a shifting focus toward the potential for a gradual update to resume educational activities (Decrees 33730 and 33742). Moreover, the legislative framework also included provisions for extending business hours (Decree 65141), with the persistence of these extensions depending on the prevailing epidemiological conditions in each region (Decrees 33775 and 33790). We suggest that these legislative adjustments were linked to the increased accessibility of pandemic-related information in states with strong health policy capacity.

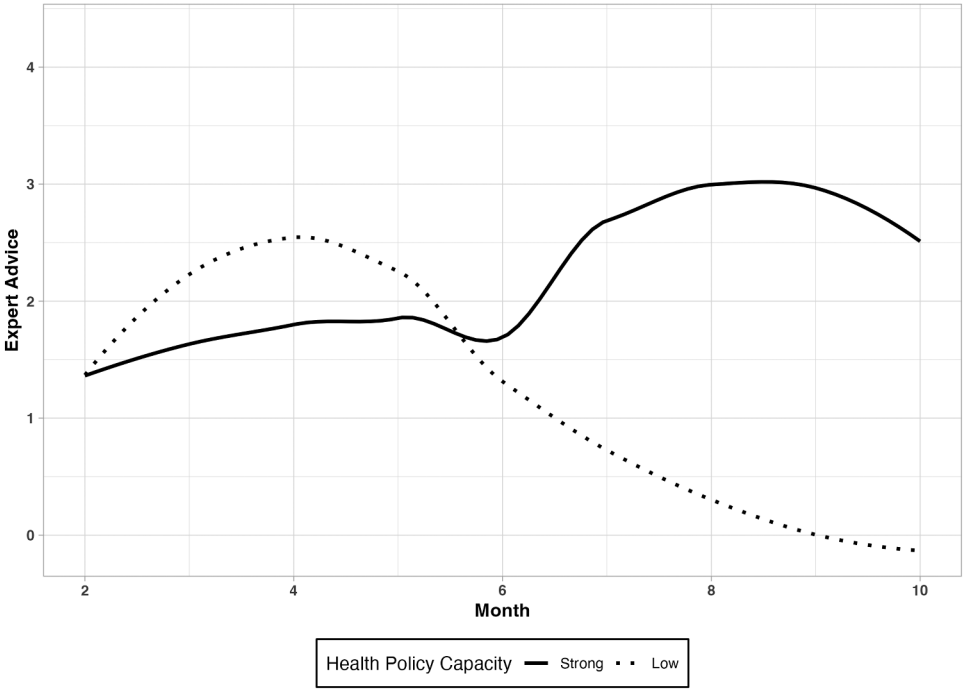
Committee Composition and Decision-Making

Our research revealed that states with strong health policy capacity, measured by the size of their epidemiological surveillance budgets, tended to integrate more expert advice into their policy agendas. By contrast, states with lower capacity exhibited a declining reliance on expert advice over time, even as the pandemic worsened. Figure 2[1] illustrates this divergence. From April 2020 onward, high-capacity states consistently incorporated expert recommendations, while low-capacity states relied less on them – a puzzling trend given the deterioration of conditions nationwide.

These findings indicate that it was not the mere existence of committees that mattered, but who sat on them and what kind of information they brought to the table. To trace this mechanism, we turned to a qualitative analysis of the committees created by state governments during the first wave of COVID-19. While every state set up a committee, their composition varied with health policy capacity, shaping whether decisions were anchored in technical expertise or influenced by economic and political interests.

Across the board, committees included government officials charged with coordinating pandemic responses, but low-capacity states drew more heavily from economic sectors such as agriculture, industry, and tourism. The concentration of economic actors reached 11 per cent in low-capacity states, compared with only 3 per cent in high-capacity states. Using the HHI, we find that low-capacity states have a value of 0.1317, indicating more

Figure 2. Trend analysis of expert advice by health policy capacity



diverse committee membership, while high-capacity states reach 0.1448, reflecting greater concentration in health and public administration. This pattern reinforces our main indicator: states with stronger epidemiological budgets relied more on specialized health personnel, whereas weaker states incorporated a more heterogeneous set of actors.

Differences in committee composition matter because they shape the information that enters decision-making and, consequently, the policies adopted. An examination of the legal instruments issued by states makes this clear. In the high-capacity state of São Paulo, for instance, Decree 64.880/2020 explicitly grounded its provisions in the recommendations of the Coronavirus Contingency Center and the State Public Health Emergency Operations Center (COE-SP), both linked to the Secretary of Health. By authorizing departments to adopt sanitary procedures endorsed by the scientific community, the decree effectively institutionalized health expertise in the state's pandemic response.

By contrast, in low-capacity states, committee composition tended to be more dispersed, and legislation reflected a stronger emphasis on economic rather than health considerations. This pattern is visible in states such as Roraima, Goiás, and Acre, whose committees were formally designated as State Socioeconomic Committees or Working Groups focused on the economic and social impacts of COVID-19. Rondônia offers a clear illustration: the state created the Socioeconomic Committee for Economic

Recovery Actions, composed of political authorities, legislators, and business associations, with a mandate explicitly centered on mitigating economic losses and supporting the private sector.

In conclusion, states with high health policy capacity – reflected in substantial epidemiological surveillance budgets – formed committees centered on government health specialists. Policymakers in these states not only had steady access to expert input but also invoked this guidance more often when justifying their decisions. By contrast, in low-capacity states, committees included a larger share of actors from economic sectors, which steered policymakers toward a broader mix of considerations when responding to the pandemic. In several of these states, socioeconomic committees were, in fact, the only advisory bodies formally established.

Taken together, the findings show that the concentration of health expertise was a crucial condition for ensuring that expert advice was not only available but substantively incorporated into state responses.

Discussion

The COVID-19 pandemic, a "creeping crisis" marked by prolonged uncertainty, revealed how uneven policy capacity shapes the incorporation of expertise into policymaking. In Brazil, the lack of federal coordination left states with primary responsibility for decision-making. By examining states' experiences with earlier epidemics, this study shows how past resource allocations built health policy capacity and shaped the incorporation of expertise into policymaking.

The empirical analysis shows a clear divide. States with stronger health policy capacity consistently privileged expert advice, while those with weaker capacity drew on a broader and more heterogeneous set of actors. Emergency committee composition mirrors this pattern: expert-dominated in high-capacity states and more mixed – often with greater economic representation – in states with lower capacity. These results reinforce the central claim that capacity conditions how governments access and use expertise during crises.

Theoretically, this article advances the literature on policy capacity and crisis governance by showing that capacity shapes not only the effectiveness of policy responses, as emphasized in previous studies, but also the informational structure through which expertise is mobilized and incorporated into policy agendas. By foregrounding the informational foundations of decision-making, the article extends the analytical reach of policy capacity beyond the Brazilian case. In other decentralized systems – such as Italy, Spain, or the United States – the same capacity-driven mechanism can help explain why governments differ in the types of expertise they rely upon when national coordination falters or when subnational units operate under uneven resource conditions.

Empirically, the study demonstrates that historical differences in epidemic incidence contributed to the development of health policy capacity in some Brazilian states. This capacity, accumulated gradually through past experiences and recurring investments in health infrastructure, shaped how states responded to COVID-19. Connecting expert incorporation during the pandemic to these longer-term trajectories shows that the use of evidence is embedded in broader patterns of state development.

Finally, the article advances a methodological contribution by demonstrating that budget allocations and advisory committee composition can serve as systematic indicators of health policy capacity. This strategy is particularly valuable in the Global South, where data constraints often hinder comparative inquiry. The study also contributes an original dataset that brings Latin America into the comparative analysis of policy agendas, helping address a persistent gap in the agenda-setting and public policy literature.

Although these indicators capture meaningful structural differences across states, they cannot account for micro-level organizational dynamics, such as individual expertise or internal bureaucratic practices. We recognize that these factors may shape how individual actors interpret and apply knowledge in specific decisions, but they fall outside the scope of a study focused on aggregate patterns of health policy capacity and state-level decision-making. Acknowledging this boundary clarifies the level of analysis adopted here and points to opportunities for future research that examines decision-making at the level of individual actors within organizations.

These findings also open avenues for future research. By showing that health policy capacity structures how governments access and incorporate expert advice, this study provides a basis for examining how external pressures interact with policy capacity. Signals such as public opinion or policy diffusion may shape agenda-setting differently depending on the level of capacity. Investigating this potential interaction would deepen our understanding of how informational environments influence policy choices during crises.

Notes

1. The figure excludes São Paulo from the states with strong health policy capacity.

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References

Abrucio, F. L., Grin, E., Franzese, C., Segatto, C. I., and Couto, C. G., 2020, Combate à COVID-19 sob o federalismo bolsonarista: um caso de descoordenação intergovernamental. *Revista de Administração Pública*, **54**(4), pp. 663–677. doi:10.1590/0034-761220200354

Araújo, J. M. D. and Ferreira, M. A. M., 2023, Análise das capacidades estatais no enfrentamento da pandemia da COVID-19 no Brasil. *REAd. Revista Eletrônica de Administração (Porto Alegre)*, **29**(2), pp. 337–363. doi:10.1590/1413-2311.387.126639

Arretche, M., 2010, Federalismo e igualdade territorial: uma contradição em termos? *Dados*, **53**(3), pp. 587–620. doi:10.1590/S0011-52582010000300003

Asmorowati, S., Schubert, V., and Ningrum, A. P., 2022, Policy capacity, local autonomy, and human agency: Tensions in the intergovernmental coordination in Indonesia's social welfare response amid the COVID-19 pandemic. *Journal of Asian Public Policy*, **15**(2), pp. 213–227. doi:10.1080/17516234.2020.1869142

Atkinson, M. L. and Windett, J. H., 2019, Gender stereotypes and the policy priorities of women in congress. *Political Behavior*, **41**(3), pp. 769–789. doi:10.1007/s11109-018-9471-7

Auerbach, K., Lerner, J. Y., and Ridge, H. M., 2024, State capacity and COVID-19 responses: Comparing the US states. *State Politics & Policy Quarterly*, **24**(4), pp. 349–369. doi:10.1017/spq.2024.11

Auld, G., Bernstein, S., Cashore, B., and Levin, K., 2021, Managing pandemics as super wicked problems: Lessons from, and for, COVID-19 and the climate crisis. *Policy Sciences*, **54**(4), pp. 707–728. doi:10.1007/s11077-021-09442-2

Baekkeskov, E. and Öberg, P., 2017, Freezing deliberation through public expert advice. *Journal of European Public Policy*, **24**(7), pp. 1006–1026. doi:10.1080/13501763.2016.1170192

Baumgartner, F. R. and Jones, B. D., 2015, *The Politics of Information: Problem Definition and the Course of Public Policy in America* (Chicago: University of Chicago Press).

Beaulieu-Guay, L.-R., Costa, M. A., and Montpetit, É., 2023, Policy change and information search: A test of the politics of information using regulatory data. *Policy Sciences*, **56**(2), pp. 377–418. doi:10.1007/s11077-023-09497-3

Béland, D., Marier, P., and Paquet, M., 2024, Subnational comparative policy analysis: Institutions, methodology, and research agenda. *Journal of Comparative Policy Analysis: Research and Practice*, **26**(6), pp. 553–566. doi:10.1080/13876988.2024.2426878

Boin, A., McConnell, A., and 'Thart, P., 2021, *Governing the Pandemic: The Politics of Navigating a Mega-crisis* (Cham: Springer Nature). doi:10.1007/978-3-030-72680-5

Cairney, P., 2016, *The Politics of Evidence-Based Policy Making* (Cham: Springer).

Capano, G., 2020, Policy design and policy capacity in the COVID-19 emergency in Italy: If you are not prepared for the (un)expected, you can be only what you already are. *Policy and Society*, **39**(3), pp. 326–344. doi:10.1080/14494035.2020.1783790

Capano, G. and Lippi, A., 2021, Decentralization, policy capacities, and varieties of first health response to the COVID-19 outbreak: Evidence from three regions in Italy. *Journal of European Public Policy*, **28**(8), pp. 1197–1218. doi:10.1080/13501763.2021.1942156

Christensen, J. G. and Mortensen, P. B., 2024, Coping with the unforeseen: Bounded rationality and bureaucratic responses to the COVID-19 crisis. *Journal of Public Policy*, **44**(1), pp. 24–43. doi:10.1017/S0143814X23000284

Costa, M. A., 2025, *Database on Public Opinion, Legislation, and COVID-19 Measures in Brazil (Version 1)* (Zenodo). doi:10.5281/zenodo.14687195

Costa, M. A. and Montpetit, É., 2024, State capacity and wicked problems: Examining the agri-environmental topic through media framing and the legislative agenda in Brazil, in: A. Lippi and T. N. Tsekos (Eds) *Policy Capacity, Design and the Sustainable Development Goals* (Bingley: Emerald Publishing Limited), pp. 89–117. doi:10.1108/978-1-80455-686-320241006

Eichenberger, S., Varone, F., Sciarini, P., Stähli, R., and Proulx, J., 2023, When do decision makers listen (less) to experts? The Swiss government's implementation of scientific advice during the COVID-19 crisis. *Policy Studies Journal*, **51**(3), pp. 587–605. doi:10.1111/psj.12494

Fernandez, M., Bertholini, F., and Maia, B., 2025, Políticas de saúde dos estados brasileiros durante a pandemia de Covid-19: um dataset das normativas produzidas. *Dados*, **68**(3), pp. e20230153.

Filip, R., Gheorghita Puscaselu, R., Anchidin-Norocel, L., Dimian, M., and Savage, W. K., 2022, Global challenges to public health care systems during the COVID-19 pandemic: A review of pandemic measures and problems. *Journal of Personalized Medicine*, **12**(8), pp. Article 8. doi:10.3390/jpm12081295

Fonseca, E. M. D., Nattrass, N., Lazaro, L. L. B., and Bastos, F. I., 2021, Political discourse, denialism and leadership failure in Brazil's response to COVID-19. *Global Public Health*, **16**(8–9), pp. 1251–1266. doi:10.1080/17441692.2021.1945123

Grin, E. J., Demarco, D. J., and Abrucio, F. L., 2021, Capacidades estatais em governos subnacionais: Dimensões teóricas e abordagens analíticas, in: E. J. Grin, D. J. Demarco, and F. L. Abrucio (Eds) *Capacidades estatais municipais: o universo desconhecido no federalismo brasileiro* (Porto Alegre: Editora da UFRGS/CEGOV), pp. 42–85.

Hernández, A. M. and Altavilla, C., 2021, Federalism and Covid-19 in Argentina: Centralisation and hyper-presidentialism, in: N. Steytler (Ed.) *Comparative Federalism and Covid-19* (London: Routledge), pp. 258–276.

Howlett, M., 2009, Policy analytical capacity and evidence-based policy-making: Lessons from Canada. *Canadian Public Administration*, **52**(2), pp. 153–175. doi:10.1111/j.1754-7121.2009.00070_1.x

IBGE, 2022, *Demographic Census 2022: Population of states and municipalities* (Rio de Janeiro: Instituto Brasileiro de Geografia e Estatística (IBGE)). Available at https://www.ibge.gov.br/ (accessed: 17 September 2025).

Jones, B. D., Thomas, H. F., III, and Wolfe, M., 2014, Policy bubbles. *Policy Studies Journal*, **42**(1), pp. 146–171. doi:10.1111/psj.12046

King, G., 1989, *Unifying Political Methodology: The Likelihood Theory of Statistical Inference* (Cambridge: Cambridge University Press).

Koga, N. M., Karruz, A. P., Palotti, P. L. M., Soares Filho, M. L. V., and Couto, B. G., 2023a, When bargaining is and is not possible: The politics of bureaucratic expertise in the context of democratic backsliding. *Policy and Society*, **42**(3), pp. 378–391. doi:10.1093/polsoc/puad023

Koga, N. M., Palotti, P., Couto, B. G. D., Lins, R. D. S., and Nascimento, M. I. B. D., 2023b, Uso, mediação e construção de evidências pela burocracia federal: quem está e o que acontece na interface entre a gestão e a academia? *Revista Brasileira de Ciência Política*, (41), pp. e264059. doi:10.1590/0103-3352.2023.41.264059

Löblová, O., 2018, Epistemic communities and experts in health policy-making. *European Journal of Public Health*, **28**(suppl_3), pp. 7–10. doi:10.1093/eurpub/cky156

Mallinson, D. J., 2020, Cooperation and conflict in state and local innovation during COVID-19. *The American Review of Public Administration*, **50**(6–7), pp. 543–550. doi:10.1177/0275074020941699

Maor, M., 2025, Towards a theory of policy bubbles. *Policy Sciences*, **58**(2), pp. 403–424. doi:10.1007/s11077-025-09573-w. Preprint

McConnell, A. and Stark, A., 2021, Understanding policy responses to COVID-19: The stars haven't fallen from the sky for scholars of public policy. *Journal of European Public Policy*, **28**(8), pp. 1115–1130. doi:10.1080/13501763.2021.1942518

Ministério da Saúde, n.d., Guia de vigilância epidemiológica – 7ª edição [online]: https://www.gov.br/saude/pt-br/assuntos/saude-de-a-a-z/f/febre-tifoide/publicacoes/guia-de-vigilancia-epidemiologica-7a-edicao/view (accessed 25 July 2024).

Neelon, B., Mutiso, F., Mueller, N. T., Pearce, J. L., and Benjamin-Neelon, S. E., 2021, Associations between governor political affiliation and COVID-19 cases, deaths, and testing in the U.S. *American Journal of Preventive Medicine*, **61**(1), pp. 115–119. doi:10.1016/j.amepre.2021.01.034

Ortega, F. and Orsini, M., 2020, Governing COVID-19 without government in Brazil: Ignorance, neoliberal authoritarianism, and the collapse of public health leadership. *Global Public Health*, **15**(9), pp. 1257–1277. doi:10.1080/17441692.2020.1795223

Painter, M. and Pierre, J., 2005, Unpacking policy capacity: Issues and themes, in: M. Painter and J. Pierre (Eds) *Challenges to State Policy Capacity: Global Trends and Comparative Perspectives* (London: Palgrave Macmillan UK), pp. 1–18. doi:10.1057/9780230524194_1

Palotti, P. L., Koga, N. M., Couto, B. G., and Nascimento, M. I., 2021, Mobilização da academia em instâncias colegiadas durante a crise da Covid-19: mapeamento das experiências nos estados brasileiros. *Nota Técnica* n° 47, DIEST.

Pescarini, J. M., Rodrigues, M., Paixão, E. S., Cardim, L., Brito, C. A. A. D., Costa, M. C. N. D., Santos, A. C., Smeeth, L., Teixeira, M. G. D., Souza, A. P. F. D., Barreto, M. L., and Brickley, E. B., 2022, Dengue, Zika, and Chikungunya viral circulation and hospitalization rates in Brazil from 2014 to 2019: An ecological study. *PLOS Neglected Tropical Diseases*, **16**(7), pp. e0010602. doi:10.1371/journal.pntd.0010602

Petherick, A., Kira, B., Barberia, L., Boby, T., Goldszmidt, R., and Luciano, M., 2020, Brazil's COVID-19 government response policies. Blavatnik School of Government Working Paper.

Pierson, P., 2011, *Politics in Time: History, Institutions, and Social Analysis* (Princeton: Princeton University Press). doi:10.1515/9781400841080

Prieto-Rodríguez, J., Salas, R., Noonan, D., Cabeza-Martinez, F., and Ramos-Gutierrez, J., 2023, Ideology and policy decision-making in the face of the Coronavirus pandemic in the USA. *Cambridge Journal of Regions, Economy and Society*, **16**(1), pp. 135–150. doi:10.1093/cjres/rsac037

Salajan, A., Tsolova, S., Ciotti, M., and Suk, J. E., 2020, To what extent does evidence support decision making during infectious disease outbreaks? A scoping literature review. *Evidence & Policy*, **16**(3), pp. 453–475. doi:10.1332/174426420X15808913064302

Salyer, S. J., Maeda, J., Sembuche, S., Kebede, Y., Tshangela, A., Moussif, M., Ihekweazu, C., Mayet, N., Abate, E., Ouma, A. O., and Nkengasong, J., 2021, The first and second waves of the COVID-19 pandemic in Africa: A cross-sectional study. *The Lancet*, **397**(10281), pp. 1265–1275. doi:10.1016/S0140-6736(21)00632-2

Weible, C. M., Nohrstedt, D., Cairney, P., Carter, D. P., Crow, D. A., Durnová, A. P., Heikkila, T., Ingold, K., McConnell, A., and Stone, D., 2020, COVID-19 and the policy sciences: Initial reactions and perspectives. *Policy Sciences*, **53**(2), pp. 225–241. doi:10.1007/s11077-020-09381-4

Weiss, L. and Thurbon, E., 2022, Explaining divergent national responses to COVID-19: An enhanced policy capacity framework. *New Political Economy*, **27**(4), pp. 697–712. doi:10.1080/13563467.2021.1994545

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