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READY, WILLING, AND ABLE?

BUREAUCRATIC CAPACITY, SLACK RESOURCES AND POLITICAL CONTROL

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Ready, willing, and able?

Bureaucratic capacity, slack resources and political control

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Abstract

Recent research suggests that bureaucratic responsiveness to political preferences may depend as much on organizational capacity as it does on incentive alignment, information recovery, and the strategic interaction of principal and agent. Better-resourced bureaucracies should be more *able* to comply with new political directions, irrespective of their *willingness* to do so. But because so much bureaucratic capacity is sunk into implementing the prior policy commitments of current and former principals, responding to new political signals will depend – much more specifically – on agents possessing adequate *slack* resources. This spare capacity should aid signal detection and program development; decrease hesitance at over-committing to new assignments in volatile environments; and provide resources for implementing changes whilst maintaining prior commitments. Using two-way fixed-effects regression and a novel dataset of 1,430 legislative requests of the UK executive, we confirm that possession of slack resources specifically (rather

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than organizational capacity generally) significantly increases the likelihood of bureaucracies consenting to program changes requested by parliament. Agents with slack also commit to more precise timelines for implementation. And survival analysis further reveals that, once committed, bureaucracies with increasing slack complete their assignments more expeditiously.

Keywords

Accountability; bureaucracy; bureaucratic control; capacity; civil service; slack resources

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1. Introduction

Ensuring that civil service bureaucracies respond to changing political preferences is a democratic imperative. Alongside orthodox economic theories of principals, agents, incentives, and information asymmetry, a small and innovative body of research has begun to show that bureaucratic responsiveness may also be explained by organizational capacity (Bolton, Potter, and Thrower 2016; Bolton and Thrower 2022; Drolc and Keiser 2020; Huber and McCarty 2004; Dasgupta and Kapur 2020). In this account, political control depends not only on "getting the contract right" in terms of preference alignment and information recovery, but also on ensuring that bureaucracies are sufficiently resourced to detect, interpret and respond to new political signals. That is, rather than posing a necessary risk to a less expert, less attentive, and easily outmaneuvered principal, agent capacity may actually assist in minimizing agency loss. In short, civil servants must be ready, willing, *and able*.

Within empirical political science, bureaucratic capacity tends to be a fairly simple construct, measured pragmatically with little reference to management science. Notwithstanding some recent objections and innovations (for instance, Bednar 2023; Bersch, Praça, and Taylor 2017; Dasgupta and Kapur 2020), capacity is typically estimated from basic workforce metrics – often simply the bureaucracy's headcount, degree of professionalization, or ratio of merit-to-patronage appointments. And although these measures have so far proven fruitful in research and reflect

how political scientists conceive of the related concept of *legislative* capacity (see Woods and Baranowski 2006; Huber, Shipan, and Pfahler 2001; Boushey and McGrath 2017), management science would caution against relying exclusively on such metrics when trying to understand what an organization is "capable of."

A further impediment to advancing a capacity-based theory of responsiveness is determining which aspects of bureaucratic capacity are most relevant to detecting and adapting to new political preferences. To date, scholars contributing to this new perspective have largely assumed that the entirety of an agent's capacity is freely available for these purposes, leading to *total* headcount, professionalization, or similar being adopted as the relevant explanatory variable (Bolton, Potter, and Thrower 2016; Bolton and Thrower 2022; Drolc and Keiser 2020). But this misunderstands the role of bureaucracies within political systems. In the main, government ministries and agencies are created and funded in order to implement the (incumbent or predecessor) principal's *prior policy commitments* – such as welfare entitlements for the poor, work permits for migrants, regulation of industry, or healthcare. Because so much capacity is sunk into implementing this "accumulation" of enduring policy commitments (Fernández-i-Marín et al. 2024a, 2024b; Adam et al. 2020; Knill, Steinbacher, and Steinebach 2021), and because those resources cannot be immediately redeployed without incurring significant organizational and political costs, the civil service is greatly constrained in how it can respond to *additional* instructions. As a

result, political control should depend less on total bureaucratic capacity than on what fraction of this is "left over" once current unavoidable commitments are met.

Take, for example, the largest public service bureaucracy in the UK: the English National Health Service (NHS). With some 1,500,000 employees, 140,000 hospital beds, and 3,000 operating theatres, this gargantuan organization has remarkable capacity. But the continuing demand on that capacity is also immense: in every 36-hour period, NHS organizations interact with more than one million patients. When politicians desire healthcare reform, therefore, the need to maintain a ceaseless "business-as-usual" operation is a significant drag on resourcing any new policy ideas (Elston 2024). And although it might be assumed that larger bureaucracies are more prone to accumulating spare resources that can be diverted to innovation purposes when the need arises (in which case total capacity would remain a proxy for "slack" resources), the correlation is unstable. Indeed, as Figure 1 illustrates, for the sample of UK government bureaucracies that we analyze below, there is no discernible relationship between headcount and three distinct measures of slack (explained later).

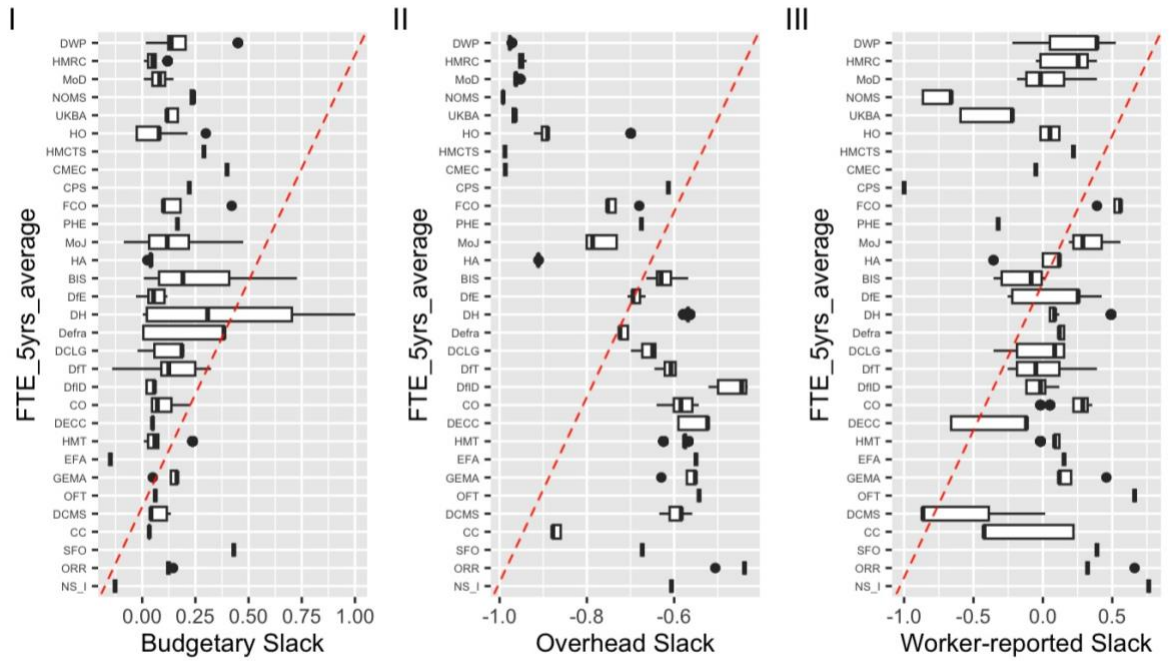

Figure 1. Relationships between total headcount and three measures of slack resources. Note: Slack variables are standardized within the range of -1 to 1. Bureaucracies are ranked by average staff size (full-time equivalent) during 2010-15, with the smallest organization at the bottom. Whisker plots depict the range of within-organization variation in slack for each year 2010-15.

Our aim in this article is therefore to extend but re-orientate the recent turn to capacity-based explanations of political control by developing a more precise and authentic account of how bureaucratic capacity affects responsiveness. Firstly, we posit that slack resources – those "in excess of current business requirements" (Bentley and Kehoe 2020, 181) – will help bureaucracies to detect signals from politicians, develop change programs, and secure agreement among different internal constituencies. This is consistent with much management research indicating that organizational slack facilitates environmental monitoring, innovation processes and internal deal-making (Daniel et al. 2004; Mount et al. 2024; Carnes et al. 2019). Next, since slack also acts to "buffer" organizations from environmental

perturbations (Leuridan and Demil 2022; Moulick and Taylor 2017; O'Toole and Meier 2010), we further expect that possession of surplus resources will decrease bureaucrats' hesitance at over-committing to new policy assignments in volatile environments. This should lead to more precise commitments on timeframes for delivering the requested changes. And finally, slack should also provide a more-or-less accessible stock of resources necessary for completing these tasks, resulting in more expeditious implementation. Overall, then, our claim is that politicians will obtain greater responsiveness – on multiple dimensions – from bureaucracies with slack resources specifically, rather than organizational capacity in general.

We test our theory on a novel dataset consisting of more than 1,400 exchanges between the UK parliament and executive during 2010-15, and a panel measuring slack resources and assignment completion for 49 government organizations during 2010-*20* (to allow time for implementing parliament's requests). We capture the legislature's policy requests by focusing on the work of the Public Accounts Committee. During 2010-15, this committee published 244 inquiry reports containing 1,674 separate requests of the bureaucracy, of which we analyze 1,430 relating to 49 ministries and agencies. For each recommendation, we record the organization's response to the committee (i.e., whether it agrees to implement the change), the timeframe it commits to, and each of its progress updates until completion. As for the measurement of slack resources, we employ a combination of financial, personnel and workforce-survey data. We measure the degree of

underspend in each organization's administration budget, taking larger surpluses to indicate greater capacity for extra work. We also calculate the management overhead of each organization, since, in the short term, manager time is more fungible than that of frontline staff with primarily responsibility for business-as-usual (O'Toole and Meier 2010). And we use the annual civil service staff surveys to measure perceived workload in each organization over time.

Using two-way fixed-effects regression, we confirm that both budgetary slack and worker-reported slack correlate with substantially higher predicted probability of bureaucracies consenting to the Public Accounts Committee's requests. For each unit increase in budgetary slack, the average marginal effect on the probability of acceptance rises by 26 per cent; and for worker-reported slack, the figure is 32 per cent per unit increase. Departments and agencies with higher budgetary slack also propose more precise timelines for completion, consistent with our view of slack as hedging against over-commitment. As for the rapidity of implementation, survival analysis reveals that organizations with more slack are significantly more expeditious in delivery. At any given instant, the probability of an outstanding commitment being fulfilled (i.e., no longer "surviving" in the dataset) is 57 per cent higher when there is one additional unit of budgetary slack. And where an organization experiences an increase in slack compared to the previous year, it is 1.37 times more likely to fulfil its assignment than otherwise. By

contrast, a conventional "headcount" measure of capacity is a poor predictor of all three outcomes (acceptance, commitment, completion).

The remainder of the article proceeds as follows. The second and third sections elaborate our core argument. The fourth section describes our empirical case, the fifth introduces our data and methods, and the sixth presents our results and robustness checks. Finally, we discuss implications, limitations, and future research priorities.

2. Capacity and political control

Control of civil service bureaucracies has long been regarded as a prototypical principal-agent problem, in which the influence of elected officeholders over policy implementation hinges on the intensity of goal conflict and hidden information, and the feasibility of curbing opportunism through effective contracting (see reviews in Moe 2012; Brierley et al. 2023; Miller 2005; Wood 2010). Questions of organizational capacity are not entirely absent from this literature; but, in the main, researchers have focused on the *principal's* capacity for writing detailed instructions, monitoring performance directly or through third parties, and generally producing a credible threat against bureaucratic rent-seeking (Lillvis and McGrath 2017; Boushey and McGrath 2017; Huber and Shipan 2002; Huber, Shipan, and Pfahler 2001; Aberbach 1990; Woods and Baranowski 2006; Appeldorn and Fortunato 2022). The *agent's* capacity, by contrast, whilst assumed to both motivate the decision to delegate in the first place and yet pose an inherent threat to the

principal's interests (Ting 2011; Bawn 1995), has received far less theoretical or empirical attention. Indeed, raising the question of agent capacity only seems to have accelerated research interest into whether *politicians* have sufficient resources to deploy effective countermeasures against civil servants.

Huber and McCarty (2004, 481) were among the first to turn attention to the potential *enabling role* of bureaucratic capacity in securing political control. As they argued: "the information problem has dominated the existing delegation literature, whereas the capacity issue has been essentially ignored." And although preferences remained firmly part of Huber and McCarty's formal theory of responsiveness, which models bureaucrats as unmotivated to comply with instructions in low-capacity contexts, their general critique struck a chord more widely and provoked some scholars to advocate distinguishing bureaucratic *interests* and *ability* more clearly (e.g., Moe 2012; Krause 2010; Krause and Woods 2014).

Although empirical projects taking this agenda forward were slow to emerge, two recent studies in the US made notable advances. Focusing on the quantity and quality of human resources in social security agencies, Drolc and Keiser (2020, 774) show that increased oversight by national and state-level politicians is effective only if bureaucratic capacity is also high. "Agencies need internal capacity," they conclude, "to respond to the signals and pressure from elected officials…." Similarly, Bolton, Potter, and Thrower (2016, 242) analyze leader turnover, workforce size, and workload at the

Office of Information and Regulatory Affairs to suggest that: "the political control apparatus of the administrative state is fundamentally constrained by organizational capacity. … [T]he implementation of political goals is stymied in low-capacity organizations." Both studies add credence to Huber and McCarty's (2004, 484) earlier, unorthodox conjecture that: "the politician can often induce a better action from a high-capacity "enemy" bureaucrat (with an ideal point far from the politician's) than from a low-capacity "friendly" bureaucrat." But this type of work remains rare, and the potential for combining the inchoate political science on capacity and control with concepts from management science is yet to be explored.

Organizational capacity is notorious difficult to conceptualize and measure. Unlike organizational performance, which is a retrospective metric, capacity is future-orientated and somewhat speculative – a "prospective ability" (Bednar 2023, 2) denoting "the range of possible implementation levels" that might be achieved by an organization (Benn 2023). To date, the pragmatic response from political scientists has been to measure the size, composition, or perceived quality of the bureaucracy's workforce as proxy for its capacity. While this mirrors the approach taken in studies of legislative capacity (e.g., Boushey and McGrath 2017; Huber, Shipan, and Pfahler 2001), it is not without critics (Bednar 2023; Williams 2021). Moreover, it is not clear that capacity in legislatures, which are largely concerned with producing new policy (see Bucchianeri, Volden, and Wiseman 2024), should determine how capacity in bureaucracies is measured, these being mainly established and funded to

meet *past* policy commitments. Scholars have long suspected that legislators tend to prioritize new policy creation over the dismantling of old policies (Bardach 1976), and recent empirical work has found the effect of this to be the gradual "accumulation" of public policies and progressive "overburdening" of the administrative state (Fernández-i-Marín et al. 2024a, 2024b; Adam et al. 2020; Knill, Steinbacher, and Steinebach 2021; Mettler 2016). In consequence, as Krause (2010, 539) observes, "many bureaucratic agencies are sufficiently occupied with present policy and administrative tasks such that they are not in a position to want or seek additional responsibilities."

To begin to accommodate these "business-as-usual" constraints on bureaucratic responsiveness, several recent quantitative studies of bureaucratic capacity have controlled for "current workload" (Bednar 2023; Bolton, Potter, and Thrower 2016; Dasgupta and Kapur 2020). And even in the realm of legislative capacity for executive oversight, Aberbach (1990, 69) has suggested that effective monitoring might be most evident among congressional committees with "excess" staff and "slack resources." It is this line of thinking that we now seek to develop.

3. Slack resources and bureaucratic responsiveness

All organizations must acquire and coordinate resources in order to pursue their objectives (Lee and Whitford 2012; Barney and Clark 2007). Organizational slack arises when the stock of resources held (or potentially held) exceeds "the minimum necessary to produce a given level of organizational output" (Nohria and Gulati 1997, 604). In other words, slack is "the difference between total resources and total necessary payments" (Cyert and March 1963, 36) – although, in practice, measuring this surplus is complicated by uncertainties over what activities are truly *necessary* (rather than discretionary) for maintaining the organization's objectives, and what *minimum* level of inputs is required to achieve those necessities. (As discussed later, this conceptualization is also myopic in that necessity may differ in the short and long term.)

It is usual in management science to distinguish between "available," "recoverable," and "potential" slack, according to how readily the surplus can be accessed and put to use (Bourgeois and Singh 1983; Mount et al. 2024). As Cheng and Kesner (1997, 2) explain, "Available slack consists of resources that are not yet committed to organizational design or a specific expenditure (e.g., excess liquidity)." Recoverable slack, by contrast, involves "resources that have already been absorbed into the system operation as excess costs (e.g., excess overhead expenditures)." Only through reform can managers extract and then redirect this kind of surplus. Finally, "potential slack consists of future resources that can be generated from the

environment by raising additional debt or equity capital." We exclude this subtype from discussions hereafter.

There are a number of routes by which available and recoverable slack accumulate in organizations (Sharfman et al. 1988). Slack may be deliberately sought by managers, either as a "buffer" against unpredictable or adverse events (McCrea 2022; Bradley, Shepherd, and Wiklund 2011; Yılmaz, Özer, and Günlük 2014), or to provide a more benign environment for task completion (Busch 2002; Bradshaw et al. 2007). The organization's internal and external control apparatus should moderate this. In addition, since excess resources are consumed by running operations at anything other than optimal efficiency, all organizations are prone to some degree of recoverable slack, known by economists as X-inefficiency (Leibenstein 1978). The complexity of the organization's technology, dynamic variation in demand for its output, the competitiveness of its operating environment, and, again, the effectiveness of the control apparatus will all influence slack accumulation (Sharfman et al. 1988; Jensen 1993; Ruggiero, Duncombe, and Miner 1995). And in the public bureaucracies specifically, slack may also depend on general fiscal conditions, the presence of public management reforms that prioritize cost-cutting, the attentiveness of oversight authorities to the matching of supply and demand, or political attitudes toward contingency staffing and "rainy day" funds (Leuridan and Demil 2022; O'Toole and Meier 2010).

A vast literature in management science investigates the impact of slack resources on the decision-making and performance of (particularly business) organizations (for reviews and/or meta-analyses, see Daniel et al. 2004; Mount et al. 2024; Carnes et al. 2019). Many studies find that those with more slack tend to adapt more rapidly and substantively to signals from their external environments, including from shareholders and customers (Cheng and Kesner 1997; Xiao et al. 2018; Bowen 2002). As Bourgeois (1981, 30) explains, slack resources "allow an organization to adapt successfully to internal pressures for adjustment or to external pressures for change in policy." In particular, slack releases managers from being preoccupied with business-as-usual, either because production of a surplus provides reassurance that current organizational routines are effective, or because slack hedges against any operational mistakes that may result from management inattention.[2] As a result, slack increases opportunities for horizon scanning and inquisitive "slack search," rather than conventional "problemistic" search driven by specific errors in current operations.[3] Moreover, slack also increases the organization's ability to overcome "strategic discord" between internal constituencies with conflicting priorities (Bourgeois and Singh 1983, 43). With surplus resources in hand, investing in one proposal is less contingent on disinvesting in others. And when slack is available to absorb any mistakes, the governance of such decision-making tends to be more relaxed, meaning

[2] As Nohria and Gulati (1997, 605) explain, "In tight organizations with little slack, managerial attention is likely to be consumed by short-term performance issues," since there is little margin for error. But while scarcity "discourages any kind of experimentation whose success is uncertain" (Nohria and Gulati 1997, 609), "slack … buffers organizations from downside risk" (Singh 1986, 567)

[3] As Vanacker, Collewaert, and Zahra (2017, 1309) argue, slack "allows managers to explore projects … that would not have been approved in the face of resource scarcity."

that "the legitimacy of experimenting is less likely to be questioned" (Singh 1986, 567).[4]

Interpreting this canon of knowledge in light of the question of civil service responsiveness, we expect public bureaucracies with more slack resources to be more attentive to shifts in political preferences, better placed to interpret and explore their implications for current and future operations, and less constrained in what new projects they can "take on" and agree internally whilst still meeting other obligations. We thus hypothesize:

> H1: Bureaucracies with greater organizational slack will *agree* to implement more political requests than those with less slack.

We also expect bureaucracies with slack resources to make firmer commitments about when the agreed changes will be implemented. One of the primary functions of slack is to "buffer" organizations against environmental perturbations by providing a stock of resources to deal with unexpected problems as they arise (McCrea 2022; Bradley, Shepherd, and Wiklund 2011; Yılmaz, Özer, and Günlük 2014). Indeed, Bourgeois (1981, 29, 30) refers to slack as an "absorption mechanism" that "prevents a tightly wound organization from rupturing in the face of a surge of activity." In the

[4] Indeed, as Cheng and Kesner (1997, 3) argue, "When resources are tight, organizational members spend a great deal of time forming coalitions and bargaining for their fair share of resources" (Cheng and Kesner 1997, 3). But when slack abounds, "there will be a solution for every problem" (Moch and Pondy 1977, 356) and a commensurate reduction in infighting. Moreover, governance and decision-processes differ in the two scenarios. Greater control and corporate discipline is required in low slack environments, resulting in more formalized, centralized, and robust processes of investment approval (Nohria and Gulati 1997; Singh 1986).

presence of slack, therefore, we expect more confident predictions from bureaucrats about the time required for delivery, safe in the knowledge that the agency is well placed to both deliver the assignment and meet any additional but as yet unknown challenges as they arise. Conversely, where additional commitments are taken on in the absence of slack but in full knowledge of environmental volatility and the likelihood of unplanned-for disruptions during the execution period, bureaucrats will include a "safety valve" in their commitment to politicians by specifying more vaguely the timeframe for task completion. Then, should the need arise, progress on the assignment can be paused when other priorities emerge, without contract violation. Hence:

> H2: Bureaucracies with greater organizational slack will commit to a more explicit and precise *timeline* for completing political requests.

Lastly, once committed, organizations in possession of slack resources will complete their assignments more rapidly than those lacking surplus capacity. In particular, if staff, materials, or cash can be redeployed to non-routine purposes relatively easily, task completion should be more straightforward and less intermittent and interrupted than if managers must continually "beg and borrow" from other teams and budgets in order to advance the new project. As Bourgeois (1981, 31) argues, "slack is an agent of top management in … executing strategic change." Therefore:

H3: Bureaucracies with greater organizational slack will more rapidly *complete* the political requests they have accepted for implementation.

4. Empirical context

To test this more constrained account of how organizational capacity should affect bureaucratic responsiveness, we analyze how departments and agencies in the UK civil service respond to requests for program changes from the House of Commons' Public Accounts Committee. The PAC is the oldest and, reputedly, most influential oversight committee in the UK (Staddon 2015; Dewar and Funnell 2016; Elston and Zhang 2023). Supported by the 800 staff of the National Audit Office (the NAO, the UK's "supreme audit institution"), the 14-strong committee of backbench MPs is often credited with "keeping many senior mandarins on their toes" (Rogers et al. 2019, 267) through televised hearings, prolific and often highly critical inquiry reports, and the salience of their findings in both parliament more widely and in the broadcast and print media.

Tasked with upholding probity and value for money in public expenditure, the PAC's inquiries into public administration have a wide and unfettered remit (although, strictly, the NAO opines on policy implementation, not policy objectives). Significantly, the committee also oversees the civil service "accounting officer" system, through which senior bureaucrats (rather than ministers) are personally held accountable to parliament for the regularity,

propriety, value for money, and feasibility of public expenditure within their departments and agencies (HM Treasury 2015). Indeed, during the whole of the 2010-2015 parliament, only one minister gave evidence before the committee (Hodge 2016). Over this same period, the PAC published 244 inquiry reports (far more than any other parliamentary committee), making on average 7 recommendations in each (max. 18, min. 1), to generate some 1,674 separate requests of the bureaucracy. After excluding recommendations to wholly independent organizations, like the BBC and Royal Household, 1,430 analyzable cases remain, directed toward 49 different departments and agencies (see Figure 2).

Government responds to each PAC report within 2-3 months of its publication, accepting or rejecting each request on behalf of each named bureaucracy. In cases of acceptance, a timeline for the work's completion may also be provided. Thereafter, the Treasury publishes periodic "progress reports" on outstanding commitments, so that the implementation of each unfinished assignment can be tracked until the bureaucracy itself (not the PAC, nor the NAO) regards the action as completed (see Elston and Zhang 2023). Hence, from this dataset we can measure three relevant dimensions of bureaucratic responsiveness – agreement to implement a program change, commitment to a timeframe, and the actual time until completion – for a wide range of departments and agencies, providing the opportunity to study the impact of both inter-organizational and longitudinal variation in slack.

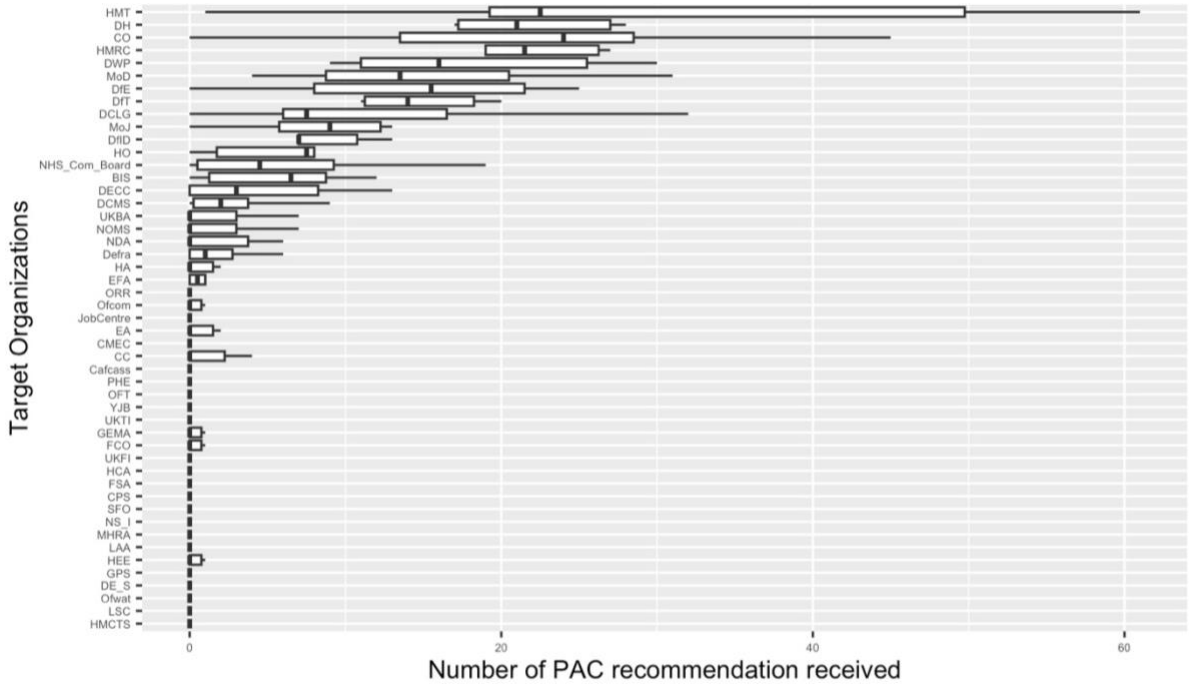

Figure 2. Distribution of PAC recommendations by government organization, 2010-2015. Note: Organizations are ranked by the mean number of recommendations received per year. A complete list of organizational acronyms is provided in Appendix I.

5. Data and empirical strategy

To test our hypotheses, we employ a combination of regression (at both the organizational [n=49] and recommendation [n=1,430] level) and survival analysis. We use a purpose-built dataset describing: each PAC request and government response during the 2010-15 parliament; progress during implementation up to 2020; and the attributes of each mentioned bureaucracy, including four time-varying measures of slack.

5.1 Dataset

5.1.1 Dependent variables

Using the PAC's 244 inquiry reports, we established a data frame in which each row corresponds to an individual committee request (clustered by the report from which it came) and each column records case attributes, beginning with the identity of the responsible organization.[5] Then, using the government reply to the committee, we record whether the department or agency fully agreed, partly agreed,[6] or disagreed with the request. For the organization-level analysis, these responses were coded as 3, 2 and 1, respectively, and then averaged within years to create ***acceptance scores***, where higher values indicate greater compliance with the committee.[7] For the recommendation-level analysis, the fully and partly agree categories were collapsed to leave an ***acceptance dummy***,[8] where "1" indicates consent to (some of) the requested changes and "0" indicates no action will be taken.

In addition, we recorded the bureaucracy's "target implementation date" for completing the agreed actions, from which we coded a ***timeline precision*** variable. Here, a higher score indicates a more precise commitment (e.g., day-month-year, month-year)[9] while a lower score indicates a vague or highly contingent timeline (e.g., season-year, year, or

[5] Where multiple organizations are named, we assigned a lead organization based on close reading of the text.

[6] Partly agreed also includes "welcomed" or "noted."

[7] The pooled acceptance rate aggregated from the acceptance dummy variable is used in a robustness check at the organization level.

[8] The three-point categorical acceptance variable used to calculate acceptance score is included in multinomial logistic regression at the recommendation level as robustness check.

[9] Organizations that immediately complete their assignment before even notifying the committee of their intention to do are also scored highly on this commitment variable.

"when legislative time allows"). Finally, switching from the initial response documents to the Treasury's 14 "progress reports" up to November 2020, we add to the dataset every update provided by the bureaucracy for every outstanding action, up to and including the date at which the assignment switches from being reported as "in progress" to "completed." This panel forms the basis of our survival analysis, as explained below.

5.1.2 Independent variables

Various measures have been used to estimate slack in business organizations, the most common being accounting ratios measuring liquidity and administrative costs (see Mount et al. 2024).[10] For the public sector, empirical studies of slack are rarer and there is no consensus on measurement. We therefore adopt a cautious approach by testing four different measures from three separate data sources, informed by prior public and private sector research.

Firstly, to capture the cash resources readily available to bureaucrats when taking on extra workload, we calculate the annual budget underspend in each organization. (*Over*spending is unlawful and extremely rare in our context.) This is the most conventional of our measures and is known as "budgetary slack" (Davila and Wouters 2005).[11] Where the underspend is low,

[10] Among the most common are the "current ratio" (current assets divided by current liabilities) to measure available slack, and administrative expenses divided by sales for recoverable slack.
[11] This measure is also closely related to Moulick and Taylor (2017) and Fan at al.'s (2020) "surplus fund balance" measure of slack, although their underspends are carried over from one financial year to the next whereas those in our dataset are not.

the organization has little capacity for extra work; where it is high – and so management *could* have incurred additional, pre-authorized expenditure – the organization is in possession of "available" slack proportionate to the size of the budget foregone. To compute this variable, we use budget documents issued biannually by HM Treasury toward the start and end of each April-March financial year, alongside outturn data published the following July by individual departments and agencies. To restrict our measure to the policymaking part of each organization and exclude, for example, welfare payments, grants to businesses or local government, and other non-commutable "program" costs, we include only "administrative" expenditure, which relates to the cost of running the department or agency (see HM Treasury 2011, 202). We calculate a continuous ***budgetary slack*** variable as the final administration budget minus the end-of-year expenditure outturn, scaled by that same year's initial budget. As is common in studies of slack (e.g., Wiersma 2017; Marlin and Geiger 2015), we lag this and our dependent variables by one year so that a response to the PAC in 2012 is matched with that bureaucracy's budgetary slack for 2011. This helps to exclude the possibility of reverse causality by ensuring strict temporal ordering of the decision-making process that we study.

Secondly, we also create a dummy variable, ***budgetary slack increase***, which measures growth (1) or not (0) in the administration budget during the financial year of the PAC's request compared with the previous year. This dummy echoes Bourgeois's (1981, 37) distinction between "slack gainers"

from "slack losers," and reflects the idea that decision-makers are more likely to know their organization's general slack trajectory rather than specific real-time position, and will use this general information as a shortcut or "cue" for decision purposes. Again, we restrict the measure to the administrative portion of government budgets. Stationary or shrinking budgets, year-on-year, are taken as indicating a reduction in slack, assuming that organizational output of comparable scale must be achieved in the present period as in the last, but with less input (after accounting for inflation). This is consistent with the literature on policy accumulation (Fernández-i-Marín et al. 2024a, 2024b; Adam et al. 2020; Knill, Steinbacher, and Steinebach 2021), but ignores the potential for productivity gains to compensate for budgetary loss, which represents the chief limitation of this measure.

Thirdly, we obtained for each department and most[12] agencies the number of (full-time equivalent) staff employed each year, and their seniority, using the annual Civil Service Statistics. From this, we specify a continuous ***overhead slack*** variable measuring the managerial cadre (in grades 6 and above) relative to total headcount. Many prior studies compare administrative to total resourcing (variously defined) in order to gauge how much "recoverable" slack is absorbed in the organizational structure (Cheng and Kesner 1997; Wiersma 2017). By focusing on the managerial component of the administrative workforce, we follow the logic developed in O'Toole and Meier (2010) and Melton and Meier (2017) that managers provide

[12] For agencies excluded from the Civil Service Statistics, we obtained data on headcount from each organization's annual financial statements, but grading data was generally unavailable.

organizations with slack capacity to the extent that, in the short term, they can be diverted from their routine tasks without significant detriment to current performance – at least when compared with the immediate negative impact of rationing frontline personnel whose routines are more tightly coupled to business-as-usual. This notion of "storing slack in administrative capacity" (O'Toole and Meier 2010, 345) develops Henry Mintzberg's (1983, 126) earlier observation that "there [is] a good deal of slack in … 'hierarchical expense'," and is consistent with Bourgeois's (1981, 34) suggestion of using administrative intensity as a proxy for organizational slack. Of course, some managerial tasks (like coordination of staff or the resolution of complex cases) have more immediate performance consequences. Moreover, in the long-term, a continuing backlog of routine managerial work (performance reviews, data analysis, planning, etc.) would be expected to damage performance. This is perhaps why O'Toole and Meier (2010, 345) refer to managerial capacity as only "*partial* slack." Still, as already noted, slack is typically conceived myopically in terms of excess resources with respect to the organization's "*immediate* production function" (McHugh and Cross 2021, 1). Again, we lag this variable against the government response to PAC requests by one year.

Finally, we use the annual Civil Service People Survey, which regularly achieves >350,000 responses from officials employed in >100 government organizations, to measure workforce perceptions of slack. In existing literature, survey measures typically ask managers to estimate budget

achievability based on the demands on the team and resources available (e.g., Nohria and Gulati 1997). Our related ***worker-reported slack*** variable measures the mean percentage of employees (not just managers) agreeing or strongly agreeing that they "have an acceptable workload" and "a good work-life balance" during the survey window (September-October each year). High workload and poor work-life balance imply that task demands closely match or even exceed available resources, indicating low slack in the employing organization, and vice-versa. Data availability mirrors that for our overhead slack variable.

Figure 3 summarizes our principal slack measures for the period 2010-15. Here and in all model specifications the three continuous variables are rescaled to the range [-1,1], to aid comparability. The median and interquartile ranges are shown, with dots indicating years with slack outside the interquartile range. Organizations are ranked by the mean of each slack variable. Overall, worker-reported slack tends to vary most across organizations, with a span of 1.75-point on the standardized scale. This is followed by budgetary slack (1.25-point span), and then by overhead slack (0.75-point span). Both budgetary and worker-reported slack also show considerable within-organization variation over time, whereas managerial staff tend to occupy a more consistent share of each organization's workforce.

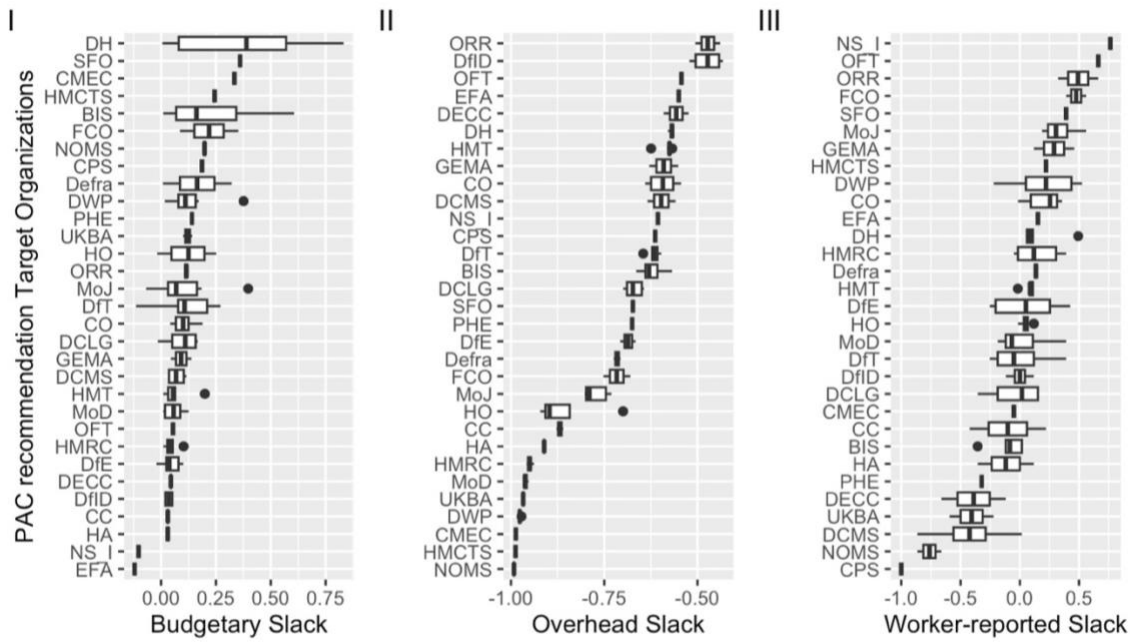

Figure 3. Organizations and slack, 2010-2015. Note: Slack variables are standardized to the range of -1 to 1. Appendix I provides a list of organizational acronyms.

5.1.3. Control variables

Because the challenge of planning and implementing the PAC's requests may vary by the type of policy change involved (Benton and Russell 2013), we include a manually-coded six-point categorical variable capturing the ***type of action*** required, adapting Benton and Russell's general coding scheme for the PAC's value-for-money remit (see Elston and Zhang 2023). In addition, because joint working between two or more organizations may increase bargaining, compromise and even free-riding during the agreement and execution processes, we include a dummy variable of ***collaboration requirement***. This takes a value of "1" if the PAC instructed the organization to work with external partners, and "0" if otherwise. Both variables were coded by the authors and three research assistants following detailed protocols and using a blind double-coding inter-coder reliability procedure (see Elston and

Zhang 2023). Finally, ***organization*** and ***calendar year*** control dummies are included in all regression models. And to allow us to compare the explanatory power of our slack variables against the more conventional measure of bureaucratic capacity, we also include ***organization size*** measured as its total headcount in full-time equivalent.

A detailed description of all variables is provided in Appendix II, along with descriptive statistics in Appendix III.

5.2 Empirical strategy

To test whether slack resources increase the chance of bureaucracies consenting to politically-requested changes (H1), we employ two strategies. We start with the unit of analysis as the organization-year, aggregating the base unit of our main dataset (the PAC request) to produce an annually pooled score of acceptance for each department and agency during 2010-15. This facilitates direct comparisons with existing studies of capacity and responsiveness (e.g., Drolc and Keiser 2020). We then disaggregate to the level of individual recommendations, using logistic regression to estimate the likelihood of an individual request being accepted (or not) by the relevant bureaucracy, now controlling for the properties of the individual recommendations (e.g. type of action) and so better isolating the effect of slack on bureaucratic compliance. We continue at this more granular level when testing the effect of slack on commitment to implement (H2), replacing the agree-disagree dummy with the timeline precision variable and using

both OLS and multinomial logit models. All these models include fixed effects by organization and calendar year. The two-way fixed effect guards against unknown sources of heterogeneity; for example, staff morale in particular bureaucracies, political events that happened in a year, or the economic trend. (Other factors that might affect propensity to accept or reject PAC recommendations, such as committee leadership and the political make-up of both the government and parliament, are also controlled for by our timeframe of 2010-15, during which there was a single chair of the PAC, a since head of the NAO, and only one prime minister and deputy, chancellor, home secretary and foreign secretary, and a general slowing in the rate of turnover in other ministerial positions (Sasse et al. 2020).)[13] Because the Breusch-Pagan test indicates that heteroskedasticity is present, the final columns in Tables 1, 2 and 3 replicate the full model with robust standard errors clustered by organization in parentheses (see Abadie et al. 2022).

To explore the effect of slack resources on timeliness of assignment completion (H3), we perform survival analysis. This technique has gained increasing attention in the social sciences for its unique strengths in understanding the timing of an event or the persistence of a status quo (Kokkonen and Sundell 2014; Landry, Lü, and Duan 2018). As noted, our dataset includes repeated observations on the progress of more than 1,000 accepted assignments until the point at which the bureaucracy reports

[13] Another relevant consideration to the selection of our time period is that HM Treasury only began to publish the progress reports required for our survival analysis for recommendations accepted from 2010 onwards (see Authors 2023).

completion. Hence, the "event" we try to predict is the conversion of a request from "still outstanding" to "completed."

One challenge in implementing the survival analysis is the issue of censoring. This arises when the event of interest is unobserved for some cases; for example, because it occurs before the observation period commences, known as *left* censoring, or after it ends, known as *right* censoring (Turkson, Ayiah-Mensah, and Nimoh 2021). Left censoring in our data involves immediate completion of the assignment before the government has even issued its initial response to the PAC; and right censoring arises, more rarely, when completion occurs *after* our dataset expires in November 2020. Both types of case are dropped from the survival analysis. We also have the problem of *interval* censoring, which occurs when the event is known to have occurred within a specific time interval (i.e., since publication of the previous and the present progress report), but the exact timepoint is unknown (see Elston and Zhang 2023). To accommodate interval censoring, we infer the completion data as a random variable occurring within the certain time range, following recent developments in biostatistics (Gómez et al. 2009; Rodrigues et al. 2018; Zhang and Sun 2010).

A second challenge is the inclusion of time-variant co-variates. As noted, organizational slack varies longitudinally as well as inter-organizationally. One option is simply to calculate a slope across multiple years and use this to predict the event of completion. However, following Therneau, Crowson, and

Atkinson (2024), a more robust solution is to further disaggregate our original one-row-one-case data frame so that every update for every accepted assignment occupies its own row. We then populate each row with time-varying organizational co-variants corresponding to the specific financial year in which that update was published (or the prior year, in the case of lagged variables). In this way, we retain maximum granularity and the model estimation becomes more reliable since co-variates are only used to predict events (or non-events) in consecutive periods, rather than assuming longer-range associations.

6. Results

6.1 Slack and agreement to new assignments

Table 1 reports the results of OLS regressions in which the dependent variable is the organization-level average acceptance score. Independent variables measuring budgetary, overhead and worker-reported slack are added separately in models (1) to (3), and then in combination in column (4) to compare effect sizes and significance. Finally, column (5) repeats the full model with robust standard errors clustered by organization. Consistent with Hypothesis 1, ***budgetary slack increase*** and ***worker-reported slack*** positively correlate with the acceptance score. Worker-reported slack has the largest effect, and its statistical significance holds across all models. Budgetary slack increase is significant in the full model (4), although it disappears when standard errors are clustered by organization in model (5). The negative effect of ***overhead slack*** was not hypothesized, although is not significant. All

results are robust when the acceptance score dependent variable is replaced with a *rate* of acceptance (i.e., the proportion of "agreed" or "partially agreed" responses among all responses by the organization in that year) (see Appendix IV Table A).

Table 1. Slack and acceptance of policy recommendation: department-level regression

	Dependent variable:				
	Acceptance Score				
	OLS				*coefficient test*
	(1)	(2)	(3)	(4)	(5)
Budgetary slack	0.08 (0.22)			0.20 (0.28)	0.20 (0.30)
Budgetary slack increase	0.13 (0.09)			0.19** (0.09)	0.19 (0.15)
Overhead Slack		-0.55 (1.42)		-0.46 (1.34)	-0.46 (1.27)
Worker-reported Slack			0.46** (0.20)	0.49** (0.20)	0.49*** (0.18)
Organization size	-1.05* (0.63)	-0.92 (0.64)	-0.64 (0.63)	-0.82 (0.63)	-0.82 (0.96)
Constant	1.76*** (0.55)	1.58 (1.09)	2.16*** (0.55)	1.58 (1.04)	1.58 (0.99)
Organization Fixed-effect	Yes	Yes	Yes	Yes	Yes
Year Fixed-effect	Yes	Yes	Yes	Yes	Yes
Observations	114	107	110	101	
Adjusted R^2	0.07	-0.02	0.08	0.11	
Note:					*p<0.1; **p<0.05; ***p<0.01

Next, Table 2 reports logistic regressions conducted at the recommendation level. We retain all covariates from Table 1, but add ***collaboration requirement*** and ***type of action*** controls. Now, ***budgetary slack***, ***budgetary slack increase***, and ***workforce-reported slack*** are all significantly and positively correlated with acceptance. The significance holds across all models. Overhead slack continues to have a consistent but unexpectedly negative impact on acceptance, although its significance disappears in model (10) where robust standard errors are clustered by organization. Unlike existing studies that equate bureaucratic capacity with the organization's

headcount, ***organization size*** is negatively related to responsiveness, although again loses significance in the robust standard-error model (10). Replacing the dummy agree-disagree dependent variable with a three-point categorical version in a multinomial logistic regression model produces similar results (see Appendix IV Table B.)

Table 2. Slack and acceptance of PAC recommendation: recommendation-level regression

	Dependent variable:				
	Acceptance dummy *logistic*				*coefficient test*
	(6)	(7)	(8)	(9)	(10)
Budgetary slack	1.43*** (0.55)			1.53*** (0.56)	1.53*** (0.52)
Budgetary slack increase	0.45** (0.18)			0.58*** (0.18)	0.58* (0.33)
Overhead slack		-7.11** (3.24)		-5.81* (3.33)	-5.81 (4.30)
Worker-reported slack			1.55*** (0.42)	1.89*** (0.43)	1.89*** (0.33)
Organization size	-3.14** (1.30)	-2.95** (1.31)	-2.34* (1.34)	-2.53* (1.36)	-2.53 (2.23)
Collaboration requirement	0.12 (0.26)	0.17 (0.25)	0.11 (0.25)	0.09 (0.26)	0.09 (0.20)
Analysis_research_data_type	0.53 (0.34)	0.61* (0.34)	0.70** (0.34)	0.56 (0.35)	0.56** (0.23)
Clarify_disclose_type	0.45 (0.34)	0.59* (0.34)	0.65* (0.34)	0.53 (0.35)	0.53** (0.25)
Guidance_control_type	0.58* (0.34)	0.69** (0.34)	0.74** (0.35)	0.65* (0.35)	0.65*** (0.18)
Internal_management_type	0.70* (0.38)	0.81** (0.38)	0.89** (0.38)	0.79** (0.39)	0.79** (0.34)
Not_actionable_type	-0.50 (0.42)	-0.37 (0.41)	-0.39 (0.42)	-0.56 (0.42)	-0.56 (0.44)
Constant	-2.55** (1.23)	-6.36*** (2.40)	-1.41 (1.26)	-5.85** (2.47)	-5.85** (2.98)
Organization Fixed-effect	Yes	Yes	Yes	Yes	Yes
Year Fixed-effect	Yes	Yes	Yes	Yes	Yes
Observations	1,375	1,333	1,338	1,313	
Akaike Inf. Crit.	1,466.82	1,469.19	1,457.91	1,419.71	
Note:					*p<0.1; **p<0.05; ***p<0.01

To help interpret Table 2, Figure 4 plots the marginal effect at the mean (MEM) of each slack variable, noting the average marginal effect (AME) at each x-axis label. Grey shadows depict the 95% confidence intervals. Commencing with AME, acceptance is shown to be 26% more likely for each unit increase in the bureaucracy's budgetary slack. This is significant at the

99.9% level. Acceptance is also 9% more likely where the organization receives a year-on-year increase in its administration budget, and 32% more likely with each additional unit of workforce-reported slack. All three results are highly significant. Overhead slack retains its negative and non-significant influence on acceptance.

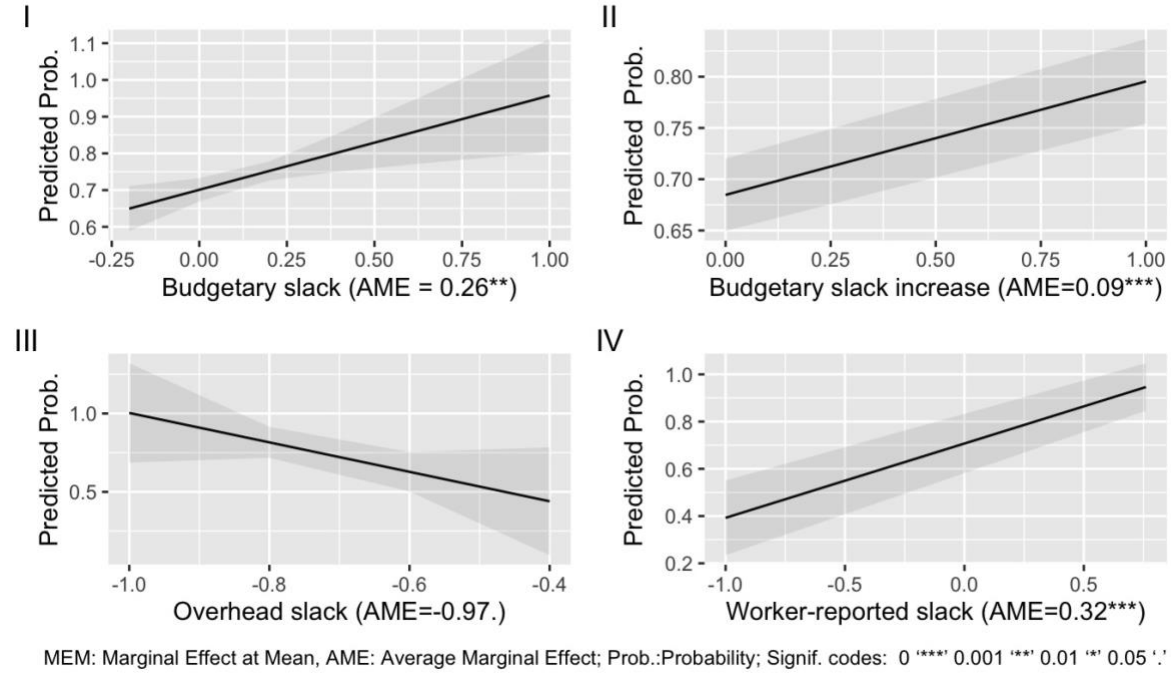

Figure 4. Marginal effect of slack variables in predicting PAC recommendation acceptance. Note: the plot is based on marginal effect at the mean (MEM). AME: average marginal effect. Signif. Codes: 0.0001 '***' 0.001 '**' 0.01 '*' 0.05 '.'

The magnitude of the effect of slack on responsiveness can also be gleaned from the MEM plots. According to Panel I of Figure 4, when holding all other variables constant at their mean values, increasing budgetary slack from 0 to 1 on the standardized scale (corresponding to increasing underspends from 0.6% to 71.1%) raises the likelihood of accepting the PAC's request from 70% (95% CI [0.67, 0.73]) to 96% (95% CI [0.80, 1.11]). Similarly, for the budgetary

slack dummy variable, organizations with constant or declining budgets have a 68% (95% CI [0.65, 0.72]) likelihood of acceptance, but that rises to 80% (95% CI [0.75, 0.84]) where there is year-on-year budgetary growth (see Panel II). And, most notably, when the standardized scale for worker-reported slack rises from -1 to 1 (corresponding to 45.5% and 75% of employees reporting acceptable workloads and work-life balance), the likelihood acceptance rises from 39% (95% CI [0.23, 0.55]) to 95% (95% CI [0.85, 1.07]) (see Panel IV). Conversely, when the standardized overhead slack variable is -0.8 (meaning 21% of employees are managers), the likelihood of acceptance is 82% (95% CI [0.72, 0.91]), *decreasing* to 44% when the standardized variable is -0.4 (and 57% of employees are managerial) (Panel III).

6.2 Slack and timeline precision

Moving to Hypothesis 2 and the effect of slack resources on bureaucratic commitment, we adopt the dependent variable of ***timeline precision*** as a continuous scale for which we fit OLS models.[14] The results, shown in Table 3, reveal that both measures of budgetary slack positively correlate with increased timeline precision. Statistical significance holds in all models, including in (15) where robust standard errors are clustered by organization. However, neither overhead slack nor workforce-reported slack, nor indeed a headcount measure of organizational capacity, predict timeline precision. As a robustness check, we reconstitute the precision measure as a six-point

[14] Timeline precision is a categorical variable. Instead of using ordered logit model, it is now a conventional in econometric and development economics literature to fit OLS models to ordered categorical dependent variable. For example, high-cited studies fit OLS regression to estimate dependent variables drawing on scale-based survey response to trust-related questions (Algan and Cahuc 2009; Nunn and Wantchekon 2011).

categorical variable, for which we fit multinomial logit models. These results, reported in Table 4, confirm our main findings. An organization with higher budgetary slack, or with a year-on-year increase in administration budget, is significantly more likely to commit to a precise timeline for completing its assignment compared to the baseline category of making no timeline commitment to the PAC. Moreover, these organizations are also more likely to have taken prompt action to complete the assignment by the time the government's formal acceptance of the committee's request was published (which become "left-censored" data in our survival analysis, below).

Table 3. Slack and planned implementation timeframe: recommendation-level regression

	Dependent variable:				
	timeline precision				
	OLS				*coefficient test*
	(16)	(17)	(18)	(19)	(20)
Budgetary slack	0.82*** (0.31)			0.93*** (0.33)	0.93** (0.44)
Budgetary slack Increase	0.43*** (0.11)			0.47*** (0.12)	0.47*** (0.15)
Overhead slack		-0.01 (0.58)		0.47 (0.59)	0.47 (0.70)
Worker-reported slack			-0.18 (0.27)	0.06 (0.27)	0.06 (0.39)
Organization size	-0.41 (0.80)	-0.13 (0.81)	-0.22 (0.82)	-0.42 (0.82)	-0.42 (1.07)
Collaboration required	-0.07 (0.15)	-0.06 (0.16)	-0.07 (0.15)	-0.08 (0.16)	-0.08 (0.14)
Analysis_research_data_type	0.05 (0.21)	0.16 (0.22)	0.15 (0.22)	0.09 (0.22)	0.09 (0.25)
Clarify_disclose_type	0.05 (0.21)	0.17 (0.22)	0.16 (0.22)	0.08 (0.22)	0.08 (0.24)
Guidance_control_type	0.06 (0.21)	0.15 (0.22)	0.15 (0.22)	0.08 (0.22)	0.08 (0.29)
Internal_management_type	0.01 (0.23)	0.12 (0.24)	0.11 (0.24)	0.04 (0.24)	0.04 (0.23)
Not_actionable_type	-0.14 (1.10)	-0.05 (1.12)	-0.04 (1.12)	-0.12 (1.12)	-0.12 (0.30)
Constant	0.16 (0.74)	0.74 (0.77)	0.67 (0.75)	-0.08 (0.79)	-0.08 (0.85)
Organization Fixed-effect	Yes	Yes	Yes	Yes	Yes
Year Fixed-effect	Yes	Yes	Yes	Yes	Yes
Observations	1,301	1,263	1,270	1,245	
Adjusted R^2	0.42	0.40	0.40	0.41	
Note:					*p<0.1; **p<0.05; ***p<0.01

Table 4 Slack and planned implementation timeframe: recommendation-level robustness check (multinomial logit model)

	Timeline precision				
	Subject to condition	Vague timeline	Standard timeline	Detailed timeline	Already implemented
Budgetary slack	-26.05 (46.33)	-1.98* (1.07)	-1.03 (0.91)	30.05** (13.02)	3.89*** (1.14)
Budgetary slack Increase	1.98 (9.93)	0.42 (0.37)	0.21 (0.30)	0.25 (0.70)	1.23*** (0.28)
Overhead slack	-7.18 (44.42)	-0.20 (1.74)	-1.42 (1.58)	7.00 (9.75)	1.35 (1.54)
Worker-reported slack	17.26 (30.97)	0.52 (1.02)	1.40* (0.77)	-2.40 (2.78)	0.62 (0.74)
Organization size	-5.21 (151.07)	-5.68* (2.95)	-0.09 (2.48)	26.36** (12.57)	-0.46 (2.43)
Collaboration requirement	-0.19 (1.16)	0.30 (0.39)	-0.11 (0.36)	0.39 (0.74)	-0.21 (0.35)
Analysis_research_data_type	9.51 (105.28)	0.43 (0.56)	0.75 (0.57)	0.39 (1.29)	0.19 (0.53)
Clarify_disclose_type	9.47 (105.28)	-0.12 (0.56)	0.60 (0.57)	1.47 (1.21)	0.08 (0.53)
Guidance_control_type	8.28 (105.28)	0.14 (0.56)	0.35 (0.58)	0.49 (1.29)	0.11 (0.53)
Internal_management_type	5.18 (105.41)	-0.15 (0.61)	0.38 (0.62)	0.88 (1.32)	-0.02 (0.57)
Not_actionable_type	-0.15*** (0.001)	-2.71 (135.77)	-3.72 (78.94)	-4.12*** (0.55)	-5.26 (107.56)
Constant	-24.30 (146.02)	-15.05*** (2.50)	-12.71*** (2.10)	-18.12 (77.47)	-19.31*** (2.07)
Organisation Fixed-effect	Yes	Yes	Yes	Yes	Yes
Year Fixed-effect	Yes	Yes	Yes	Yes	Yes
Observations	1301	1263	1270	1245	
Akaike Inf. Crit.	2,750.32	2,750.32	2,750.32	2,750.32	2,750.32

Note: *p<0.1; **p<0.05; ***p<0.01

6.3 Slack and assignment completion

Having explored the effect of slack resources on the bureaucracy's acceptance of, and commitment to, the PAC's requests, we conclude by exploiting the longitudinal elements of our data to track the implementation of these assignments over time. We begin by using time-invariant predictors, and then employ a time-variant Cox Proportion Hazards model.

6.3.1 Conventional survival analysis

Our initial dependent variable is ***time*** in days between the PAC issuing its request and the accepted assignment being reported as completed. We recreate our independent variables as dummies measuring whether the implementing organization experienced a decline in (budgetary, overhead, or worker-reported) slack (0), or not (1), between the financial year in which

implementation began and that when it was completed. We fit the Kaplan-Meier estimator to the data, and report the results in Figure 5. As this shows, departments and agencies with declining budgetary or overhead slack (curves in red) were *slower* in removing recommendations from the "surviving" group of still-outstanding assignments. These findings are also consistent with results reported in the Appendix Table C, where both budgetary slack increase and overhead slack increase are positively correlated with higher hazards ratio of completion. Hence, at a given instant in time, organizations that maintained or increased slack resources since the onset of implementation are more likely to complete the assignment than those experiencing a decline in slack.

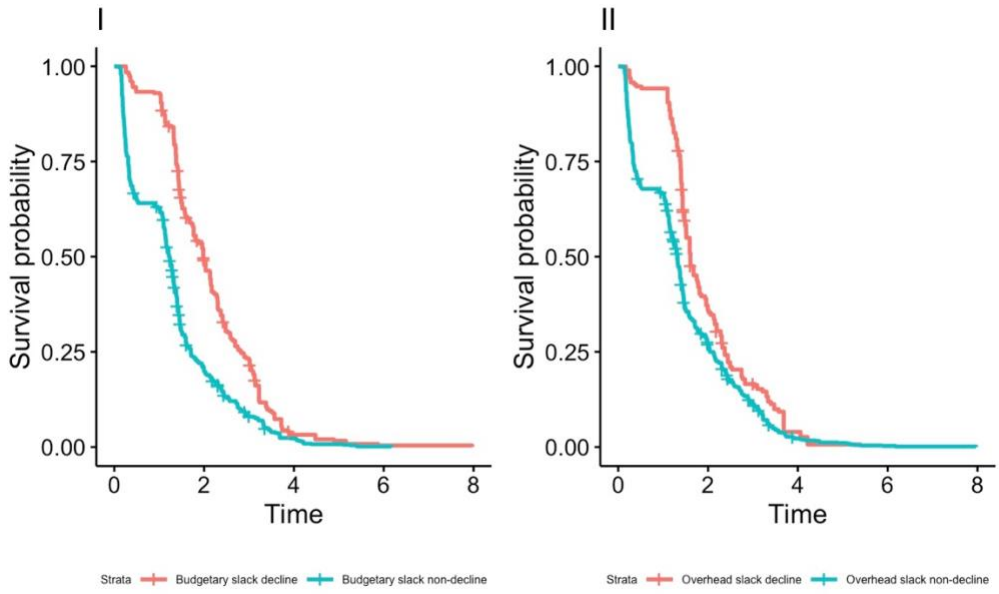

Figure 5. *Surviving* curve for assignment completion among organizations experiencing post-commitment decline vs growth in budgetary and overhead slack.

However, these models fail some critical assumption tests for survival analysis, including the proportional hazards assumption (as indicated by the slight

crossover between the green and red curves toward the bottom of Figure 5).[15] Hence, although fitting a time-invariant survival model to the conventional data structure strongly indicates that organizational slack aids assignment completion, more evidence is needed to regard the relationship as robust.

6.3.2 Time-variant Cox Proportion Hazards model

To address these concerns, we next conduct the time-variant Cox Proportion Hazards model (Therneau, Crowson, and Atkinson 2024). The dependent variable is formed from three elements: ***start*** and ***stop*** are the two time points defining a follow-up interval for each recommendation; and ***status*** is a dummy variable where "1" indicates completion during that interval, and "0" indicates that implementation is still in progress. Our independent variables revert to the form used in testing H1 and H2, above, although slack values are truncated at the 5% and 95% levels to remove the impact of outliers. Again, to keep the temporal order of the decision-making process strict, we lag each observational interval by one year, so that each is matched with the organization's slack data in the previous financial year. We also include all control variables used in the previous regressions, including ***organization*** fixed effects and ***year*** fixed effects. Furthermore, since each implementation process has multiple observations that are correlated with one another, a cluster variance ***recommendation ID*** is added to the model. For the 1,430

[15] These assumptions include the proportional hazards assumption and the residual linearity tests, both of which are explained in the next section.

PAC recommendations included in our dataset, we have 2,897 unique follow-up intervals. After removing left-censored cases and intervals with missing slack data, we are left with 1,772 analyzable follow-up episodes

We fit Cox Proportion Hazards model to this data. Table 5 presents the exponential coefficients (or hazards ratio) of covariates, in which values less than 1.0 indicate a negative relationship. Robust standard errors are reported in brackets next to the hazards ratios. In Model (21) to (23), we add budgetary, overhead and worker-reported slack separately, and include all in Model (24). As Table 5 indicates, these results show that both budgetary slack and budgetary slack increase have a positive and significant effect on the hazards ratio for the event of assignment completion. According to Model (24), at a given instant in time, the probability of assignment completion by an organization with one more unit of budgetary slack is 57% greater. Similarly, an organization experiencing year-on-year growth in its administration is 1.37 times more likely to fulfil its commitment to the PAC than one experiencing budget stasis or decline. Both results are significant at the 99% level. Moreover, an organization with one more unit of employees reporting an acceptable workload and work-life balance is 31% more likely to turn the status of implementation from "in progress" to "completed". This result is significant at the 95% level. Overhead slack regains its previous negative impact on responsiveness (see Table 2, above), but is only significant at the 90% level. Finally, while organization size has a positive and

significant impact on implementation in Model (21), it loses statistical significance in all the other models.

One possible caveat to this analysis is that, due to occasional reporting delays, a small proportion of intervals exceed 12 months (see Elston and Zhang 2023). This creates difficulties in matching updates with slack variables, particularly given our use of a one-year lag. Model (25) in Table 5 therefore removes all such cases where the gap between ***start*** and ***stop*** exceeds one year, and then fits the complete survival model to the remaining 1,554 intervals.[16] Both budgetary slack measures continue to have positive effect on assignment completion, though only budgetary slack increase remains highly significant. Overhead slack and worker-reported slack lose their significance in this smaller sample.

[16] The continuous variable, worker-reported slack, is also transformed into the "worker-reported slack dummy", with "1" representing the variable's value is at the higher stratum of the standardized range of -1 to 1 (i.e., worker-reported slack is great or equals to 0), and "0" otherwise. The dummy variable is then added to model (25) as a strata term to meet the proportional hazard assumption (Licht 2011; Kuitunen et al. 2021).

Table 5. Slack and implementation of PAC recommendation: time-variant survival analysis with extended Cox Proportion Hazards Model

	Dependent variable:				
	Hazards Ratio of Implementation Completion - exp(coef)				
	(21)	(22)	(23)	(24)	(25)
Budgetary slack	1.60*** (0.16)			1.57*** (0.16)	1.12 (0.17)
Budgetary slack increase	1.38*** (0.08)			1.37*** (0.08)	1.26*** (0.10)
Overhead slack		0.31* (0.63)		0.35* (0.59)	0.48 (0.58)
Worker-reported slack			1.30** (0.14)	1.31** (0.14)	0.89 (0.27)
Organization size	3.05** (0.73)	2.57 (0.75)	1.93 (0.76)	1.17 (0.83)	1.11 (0.95)
Collaboration requirement	0.90 (0.14)	0.90 (0.14)	0.90 (0.14)	0.92 (0.14)	0.87 (0.16)
Analysis_research_data_type	1.09 (0.20)	1.08 (0.20)	1.10 (0.20)	1.04 (0.20)	0.86 (0.22)
Clarify_disclose_type	1.26 (0.19)	1.24 (0.19)	1.25 (0.19)	1.22 (0.19)	0.96 (0.22)
Guidance_control_type	1.23 (0.20)	1.23 (0.20)	1.27 (0.20)	1.20 (0.20)	1.06 (0.22)
Internal_management_type	1.38* (0.21)	1.36 (0.21)	1.40* (0.21)	1.35 (0.21)	1.08 (0.24)
Not_actionable_type	1.12 (0.33)	1.11 (0.32)	1.12 (0.32)	1.10 (0.33)	1.02 (0.36)
Organization Fixed-effect	Yes	Yes	Yes	Yes	Yes
Year Fixed-effect	Yes	Yes	Yes	Yes	Yes
Observations	1,770	1,770	1,770	1,770	1,554
R^2	0.09	0.08	0.08	0.09	0.09
Max. Possible R^2	0.99	0.99	0.99	0.99	0.97
Log Likelihood	-4,105.08	-4,115.05	-4,115.26	-4,102.11	-2,722.93
Wald Test	3,954.36*** (df = 34)	3,854.20*** (df = 33)	3,859.99*** (df = 33)	3,950.86*** (df = 36)	4,547.33*** (df = 36)
LR Test	168.28*** (df = 34)	148.34*** (df = 33)	147.94*** (df = 33)	174.23*** (df = 36)	141.82*** (df = 36)
Score (Logrank) Test	169.16*** (df = 34)	150.28*** (df = 33)	150.21*** (df = 33)	177.08*** (df = 36)	138.55*** (df = 36)
Note:					*p<0.1; **p<0.05; ***p<0.01

6.3.3 Assumption tests

The Cox Proportion Hazards models assume that the relative hazard remains constant over time with different covariate levels, and that the relationship between the log hazard and each continuous covariate is linear (Hashim and Weiderpass 2019; Kuitunen et al. 2021). As Figure 6 shows, drawing on Schoenfeld tests of Model (25), the p-values for all independent variables are insignificant (p>0.05), indicating no correlation between the transformed survival time and the scaled Schoenfeld residuals. Hence, the proportional hazards assumption is not violated. In addition, plotting the Martingale residuals and those against continuous covariates is a common approach to detecting nonlinearity. As Figure 7 shows, for each numeric slack variable

(Panel I-III) and the full model (Panel IV), the fitted line with a lowess function (in red-solid line) is not obviously deviant from the linear baseline (in blue-dashed line). Hence, the linearity assumption of the Cox proportional hazards model is not a major concern.

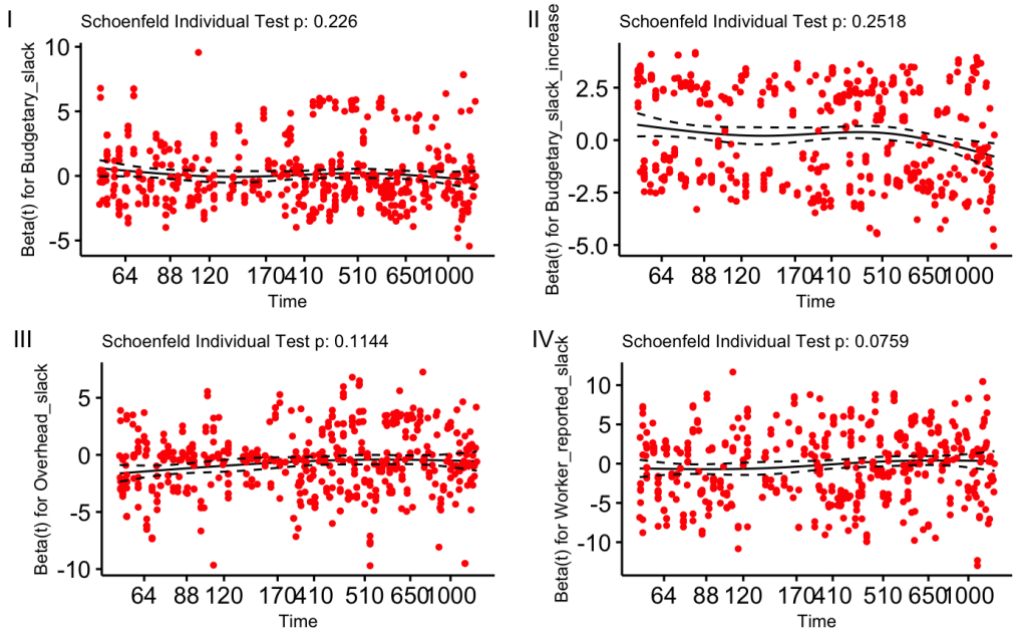

Figure 6. Schoenfeld residual plot for slack variables for the proportional hazards assumption tests

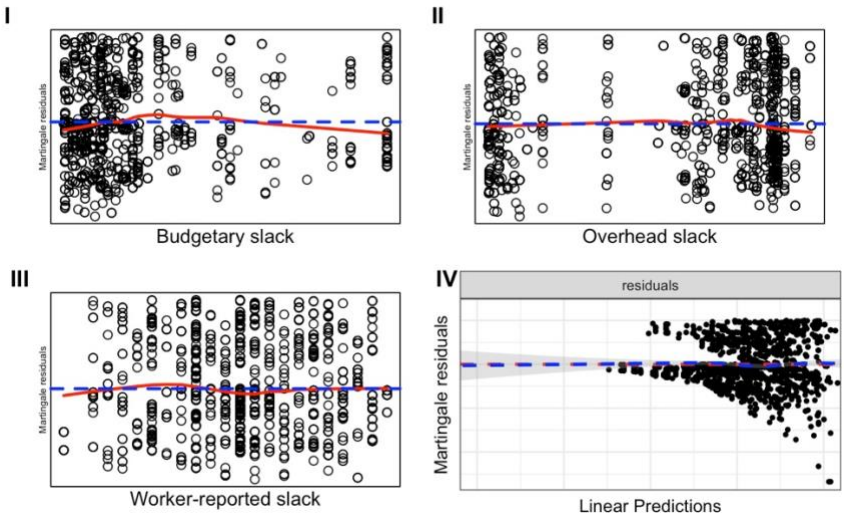

Figure 7. Martingale residual plots with a lowess smooth line for the linearity assumption test.

7. Discussion

To summarize, using our dataset of 1,430 legislative requests to 49 UK government bureaucracies between 2010 and 2015, we found: that both budgetary and worker-reported slack significantly increase the likelihood of bureaucrats agreeing to take on new assignments (Table 2; Figure 4); that budgetary slack also correlates with more precise timelines for delivering these commitments (Tables 3 and 4); and that both budgetary and worker-reported slack are associated with more rapid completion of assignments (Table 6, Figure 5). Our results thus support all hypotheses, except for the variable overhead slack. Budgetary and worker-reported slack also greatly outperform the conventional, whole-of-organization measure of capacity, with total headcount proving unstable in direction and typically falling short of statistical significance, including in the most robust models. Altogether, then, while these findings attest to the importance of organizational capacity in predicting the political control of bureaucracies, in line with several recent empirical studies from the US (Bolton, Potter, and Thrower 2016; Bolton and Thrower 2022; Drolc and Keiser 2020), they also indicate that it is slack resources specifically, rather than organizational capacity in general, that makes civil services more responsive to democratic overseers. This is consistent with expectations from management science, where slack has

long been regarded as enabling greater external attentiveness, willingness to experiment, and capacity for change.

According to theory, unspent budget should provide the greatest degree of responsiveness, being the most ready-to-go and fungible form of slack. As Wiersma (2017, 447) observes, "funds are a sine qua non for strategic action." And yet, while our two budgetary variables are indeed the most consistent predictors across the hypothesis tests, the perceptual measure of worker-reported slack has greatest explanatory power at the outset of the PAC accountability regime. This might indicate that workforce-reported slack is not only measuring the balance of workload-to-resources, but is also a proxy for staff morale or even turnover intent, to which senior managers pay close attention when determining their plans. Conversely, because overhead slack has already been "absorbed" into operations, this form of surplus must first be recovered before it can be redeployed, potentially weakening the effect on responsiveness. Indeed, our unstable and non-significant results for overhead slack may indicate reluctance or inability to divert senior civil servants away from their ordinary but urgent activities, such as briefing ministers and meeting deadlines from the finance ministry. And where, in our early analyses, overhead slack appears to *decrease* the chance of accepting PAC recommendations (Tables 1 and 2, but rarely achieving significance), this may indicate that more "top heavy" organizations suffer from greater

inertia and strategic discord, resulting in less propensity to implement new political initiatives.

7.1 Limitations

Our study has several limitations.

Firstly, although we assemble a ten-year panel using high-quality financial, personnel and survey data, each of our four measures of slack has strengths and weaknesses in the extent to which it accurately compares workload pressures against resources and does so without capturing other related but distinct constructs (such as staff morale in the survey measure). Developing and validating improved measures of available, recoverable and potential slack that are tailored to the public sector context is clearly a priority for future research.

Secondly, the dependent variable in our survival analysis considers only the speed of implementing the PAC's request, rather than the quality or extent of changes made. The completion of assignments is self-reported by individual bureaucracies, and although risk of future investigation should discourage egregious misrepresentation, some manipulation is possible but presently untestable. And whilst we classify key attributes of each PAC-issued recommendation, with current data we are unable to compute the magnitude of the change requested of the bureaucracy and, thus, what resourcing it requires. What is more, as in many applications of survival analysis, our tests were limited by censored data, which both trimmed the

dataset and required estimation of precise completion dates within observation intervals.

Finally, several sources of endogeneity may affect our results. The PAC may have approximate knowledge of the level of slack available in each bureaucracy, and may adjust its requests so as not to overload already-struggling ministries and agencies.[17] However this seems unlikely given the vast, cross-governmental remit of this committee and the enormous information requirements that would be involved in making such slack-contingent recommendations. Moreover, the appointment of the PAC chair from the official opposition (rather than the governing party) and the committee's reputation for "unforgiving" scrutiny of government are also reassuring in this respect. Alternatively, the commitments that each bureaucracy accumulates to its overseer may affect the availability of slack in future years. Like other empirical studies of slack in the management literature, at present we rely on lagged variables to control for this possibility, though this is arguably more suited to H1 and H2 than to the multi-year survival analysis used for H3.

8. Conclusion

[17] Indeed, Prior research suggests that larger delegations are made to bureaucracies perceived as more capable (Carpenter 2001; MacDonald and Franko 2007).

The arrival of agency theory into the political bureaucracy literature in the 1970s advanced scholarship into political-administrative relations markedly (Moe 2012; Brierley et al. 2023; Miller 2005). Wood (2010, 201) even credits agency theory with having "moved the field some distance toward the type of science practiced in other disciplines." Yet even among its most staunch proponents (which excludes many public management scholars (e.g., Pierre and Peters 2017; Waterman and Meier 1998)), the need to look beyond agency theory has latterly been conceded. Indeed, Moe (1984, 2012) has twice called upon political scientists to expand into more theoretically "eclectic" territory, cautioning that "the delegation literature has focused all its attention on the information problem and brushed capacity aside" (2012, 31).

Innovative research, beginning with Huber and McCarty (2004), has begun to address this imbalance (Bednar 2023; Bednar and Lewis 2024; Bolton, Potter, and Thrower 2016; Bolton and Thrower 2022; Boushey and McGrath 2017; McGrath 2013; Dasgupta and Kapur 2020; Drolc and Keiser 2020; Gailmard and Patty 2013; Hausman et al. 2023). And it is to this emerging literature that we have sought to contribute, not only by providing a rare quantitative analysis of bureaucratic responsiveness in a non-US and non-presidential context, but also by reconnecting political science with management theory. Specifically, we have sought a more authentic account of how bureaucracies with enduring policy commitments can be rendered more or

less responsive to democratic overseers based not on their organizational capacity in general, but on the presence or absence of slack resources.

We find strong empirical support for this argument. Budgetary and worker-reported slack significantly aid bureaucracies in consenting to political requests for change, committing to those assignments, and/or implementing them in a timely fashion. Future work should look to replicate these findings in other contexts and with similar or improved measures of slack, which remains an elusive concept to operationalize. More work is also needed on potential interactions between different subtypes of slack (Marlin and Geiger 2015). And qualitative research should elucidate the mechanisms by which surplus resources enable bureaucratic responsiveness, and the reasons for different effect sizes across slack subtypes.

Many theoretical opportunities are presented, too. As noted at the outset, the aim has not been to replace agency explanations, but to enhance them. Boehmke and Shipan's (2015, 371) argument that, "to fully understand political influence over agencies, we need to examine the *interaction* between preferences and capacity" (original emphasis), applies to bureaucracies as much as to the time-poor legislatures about which they were writing. One priority is to better understand the origins of organizational slack in government bureaucracies. For example, as Moulick and Taylor (2017) argue, recoverable slack is more easily "hidden" from overseers than available slack, meaning that it is more easily protected from top-down

budget cuts. And beyond the appropriations process, slack also depends on the fixity of the bureaucracy's current programs. If both principal and agent are willing to sacrifice performance on these, then a surplus can be created with which to fund new objectives. Indeed, this is consistent with Suzanne Mettler's (2016, 371) argument that, so vast has the "policyscape" of accumulated public policy commitments become over time, "policymakers have failed to maintain the majority of existing laws..." On the other hand, if principal and agent disagree about the value or necessity of maintaining prior commitments, then a second-order agency problem arises. Now, control is hindered not by disputes over the new policy direction, but rather by disagreement over how to free-up resources to invest in it. This seems especially likely at moments of political transition from one governing party to another, and in highly institutionalized bureaucracies with low staff turnover.

Most of all, this research agenda relies on new interdisciplinarity between political science and general management; for the ambition is, as Moe (2012, 34) argues, to re-engage with "the organizational aspects of bureaucracy [that] have gotten organized out of the formal theory."

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Appendix I Target Organization Acronyms

BIS	Department for Business, Innovation and Skills
Cafcass	Children and Family Court Advisory and Support Service
CC	Charities Commission
CMEC	Child Maintenance and Enforcement Commission
CO	Cabinet Office
CPS	Crown Prosecution Service
DCLG	Department for Communities and Local Government
DCMS	Department for Culture, Media and Sport
DE_S	Defence Equipment and Support
DECC	Department of Energy and Climate Change
Defra	Department for Environment, Food and Rural Affairs
DfE	Department for Education
DfID	Department for International Development
DfT	Department for Transport
DH	Department of Health
DWP	Department for Work and Pensions
EA	Environment Agency
EFA	Education Funding Agency
FCO	Foreign and Commonwealth Office
FSA	Food Standards Agency
GEMA	Gas and Electricity Markets Authority
GPS	Government Procurement Service
HA	Highways Agency
HCA	Homes and Communities Agency
HEE	Health Education England
HMCTS	HM Courts and Tribunals Service
HMRC	HM Revenue and Customs
HMT	HM Treasury
HO	Home Office
JobCentre	JobCentre Plus
LAA	Legal Aid Agency
LSC	Legal Services Commission
MHRA	Medicines and Healthcare products Regulatory Agency
MoD	Ministry of Defence
MoJ	Ministry of Justice
NDA	Nuclear Decommissioning Authority
NHS Com Board	NHS Commissioning Board
NOMS	National Offender Management Service
NS_I	National Savings and Investments
Ofcom	Office of Communications
OFT	Office of Fair Trading
Ofwat	Water Services Regulation Authority

ORR	Office of Rail Regulation
PHE	Public Health England
SFO	Serious Fraud Office
UKBA	UK Borders Agency
UKFI	UK Financial Investments
UKTI	UK Trade and Investment
YJB	Youth Justice Board

Appendix II List of variables

1. Dependent variable

Dependent variable	Hypothesis	Description
Acceptance score	H1	Government response "agree" -- score 3; "partly agree/ Considering further/ Noted/ Welcomed" -- score 2; "disagree" – score 1. This dependent variable is the department's pooled score on all PAC recommendations received during the year.
Acceptance dummy	H1	Binary variable. "1" denotes "agree" response; "0" denotes "partly agree/ Considering further/ Noted/ Welcomed/ disagree".
Timeline precision	H2	A hand-coded scale (1-6): "1" – no implementation date; "2" -- conditional timeline, often subject to the passing of another law external to the control of the target organization; "3" – less precise timeline, e.g., "2014", "Autumn 2011"; "4" – timeline with standard precision in the format of "month/ year"; "5" – timeline with high precision in which case the precise date is given; "6" – the implemented is already completed by the time the government responded to the recommendation.

2. Independent variables

Independent variable	Description
Budgetary slack	(Second budgetary estimate – end-of-year outturn)/ first budgetary estimate, all data from the year preceding the year when the target organization receives the recommendation.
Budgetary slack increase	Dummy variable. "1" means a budgetary increase comparing the current financial year to the previous one; "0" means otherwise.

Overhead slack	(Number of Grade6/7 staff + number senior management staff)/ Total FTE employees.
Worker-reported slack	(Percentage of employees agree to statements "I have an acceptable workload" + percentage agreeing to "I achieve a good balance between my work life and my private life")/2 (standardized).

3. Control variables

Control variables	**Description**
Organization size	Total FTE of the year
Collaboration requirement	Hand-coded dummy variable with "1" for collaboration required in implementation; otherwise "0".
Type of action	Hand-coded categorical variable capturing the six types of actions required by PAC recommendations, including "Analysis, research, data", Clarify and disclose", "Guidance and control", "Internal management", "contract management" and "not actionable".
Organization fixed effect	A group of 31 dummies to account for unobserved heterogeneity across departments
Calendar year fixed effect	A group of 6 dummies to account for unobserved heterogeneity across years

Appendix III Descriptive statistics[18]

Descriptive statistics

Statistic	N	Mean	St.Dev.	Min	Max
Acceptance dummy	1,313	0.73	0.44	0	1
Budgetary slack	1,313	0.13	0.17	-0.15	1.00
Budgetary slack increase	1,313	0.44	0.50	0	1
Overhead slack	1,313	-0.71	0.17	-0.99	-0.43
Worker-reported slack	1,313	0.08	0.25	-1.00	0.76
Organization size	1,313	-0.67	0.53	-1.00	1.00
Collaboration requirement	1,313	0.08	0.28	0	1
Analysis research data type	1,313	0.27	0.44	0	1
Clarify disclose type	1,313	0.27	0.44	0	1
Contract management type	1,313	0.05	0.21	0	1
Guidance control type	1,313	0.25	0.44	0	1
Internal management type	1,313	0.11	0.32	0	1
Not actionable type	1,313	0.05	0.22	0	1
Control_2010	1,313	0.01	0.12	0	1
Control_2011	1,313	0.24	0.43	0	1
Control_2012	1,313	0.18	0.38	0	1
Control_2013	1,313	0.21	0.41	0	1
Control_2014	1,313	0.22	0.41	0	1
Control_2015	1,313	0.14	0.35	0	1
BIS	1,313	0.03	0.16	0	1
CC	1,313	0.01	0.07	0	1
CMEC	1,313	0.01	0.07	0	1
CO	1,313	0.10	0.30	0	1
CPS	1,313	0.002	0.05	0	1
DCLG	1,313	0.05	0.23	0	1
DCMS	1,313	0.01	0.11	0	1
DECC	1,313	0.02	0.13	0	1
Defra	1,313	0.01	0.08	0	1
DfE	1,313	0.06	0.25	0	1
DfID	1,313	0.04	0.18	0	1
DfT	1,313	0.06	0.24	0	1
DH	1,313	0.10	0.31	0	1
DWP	1,313	0.08	0.28	0	1
EFA	1,313	0.01	0.07	0	1
FCO	1,313	0.003	0.06	0	1
GEMA	1,313	0.003	0.06	0	1
HA	1,313	0.01	0.08	0	1
HMCTS	1,313	0.001	0.03	0	1
HMRC	1,313	0.09	0.28	0	1
HMT	1,313	0.14	0.35	0	1
HO	1,313	0.03	0.18	0	1
MoD	1,313	0.07	0.26	0	1
MoJ	1,313	0.04	0.19	0	1
NOMS	1,313	0.01	0.09	0	1
NS_I	1,313	0.002	0.04	0	1
OFT	1,313	0.005	0.07	0	1
ORR	1,313	0.01	0.07	0	1
PHE	1,313	0.005	0.07	0	1
SFO	1,313	0.002	0.04	0	1
UKBA	1,313	0.01	0.09	0	1
Accept Score	130	2.67	0.38	1	3
Timeline Precision	1,313	3.16	2.00	1	6

[18] Based on a subset of 1,313 cases after removing all missing values in the three slack variables. This subset is used in the full model (9) for testing hypothesis 1 (see also Table 2 in the main paper).

Implementation completion.	1,554	0.38	0.49	0	1

Appendix IV Robustness Check

Table A Slack and acceptance of policy recommendation: organization-level robustness check

	Dependent variable:				
	Acceptance rate				
	OLS				*coefficient test*
	(1)	(2)	(3)	(4)	(5)
Budgetary slack	0.09 (0.15)			0.21 (0.19)	0.21 (0.18)
Budgetary slack increase	0.09 (0.06)			0.14** (0.06)	0.14 (0.09)
Overhead slack		-0.23 (0.97)		-0.18 (0.92)	-0.18 (0.72)
Worker-reporetd slack			0.29** (0.14)	0.32** (0.14)	0.32** (0.12)
Organization size	-0.63 (0.43)	-0.54 (0.44)	-0.37 (0.43)	-0.47 (0.43)	-0.47 (0.51)
Constant	0.03 (0.37)	0.02 (0.75)	0.30 (0.37)	-0.01 (0.72)	-0.01 (0.58)
Dept. FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Observations	114	107	110	101	
Adjusted R^2	0.16	0.03	0.09	0.13	
Note:					*p<0.1; **p<0.05; ***p<0.01

Table B Slack and acceptance: recommendation-level robustness check (multinomial logit model)

	Multinominal acceptance response	
	partly agree	fully disagree
Budgetary slack	-2.96*** (0.90)	1.43 (1.06)
Budgetary slack increase	-1.02*** (0.26)	-0.27 (0.25)
Overhead slack	2.92 (4.73)	9.63** (4.82)
Worker-reported slack	-2.06*** (0.60)	-2.07*** (0.69)
Organization size	7.52*** (2.30)	1.08 (2.08)
Collaboration requirement	-0.11 (0.36)	-0.22 (0.34)
Analysis_research_data_type	-0.19 (0.47)	-1.07** (0.46)
Clarify_disclose_type	-0.23 (0.47)	-0.88* (0.46)
Guidance_control_type	-0.36 (0.47)	-1.01** (0.46)
Internal_management_type	-0.90* (0.54)	-0.87* (0.50)
Not_actionable_type	1.41** (0.56)	-0.88 (0.65)
Constant	8.83** (3.73)	-8.98** (3.82)
Organization Fixed-effect	Yes	Yes
Year Fixed-effect	Yes	Yes
Akaike Inf. Crit.	1,772.23	1,772.23
Note:	*p<0.1; **p<0.05; ***p<0.01	

Table C. Slack and implementation of PAC recommendation: baseline models with Cox Proportion Hazards Model

	Dependent variable:			
	Hazards Ratio of Implementation Completion - exp(coef)			
	(1)	(2)	(3)	(4)
Budgetary slack increase	2.58*** (0.08)			2.77*** (0.08)
Overhead slack increase		1.97*** (0.10)		2.27*** (0.10)
Worker-reported slack increase			0.42 (1.10)	0.39 (1.10)
Organization size	446.30*** (0.78)	593.41*** (0.76)	274.56*** (0.76)	1,363.90*** (0.78)
Collaboration requirement	1.03 (0.11)	1.13 (0.12)	1.00 (0.12)	1.16 (0.12)
Analysis_research_data_type	0.93 (0.17)	0.78 (0.16)	0.78 (0.16)	0.95 (0.17)
Clarify_disclose_type	1.27 (0.16)	0.97 (0.16)	0.98 (0.16)	1.25 (0.16)
Guidance_control_type	1.19 (0.17)	0.94 (0.16)	0.95 (0.16)	1.18 (0.17)
Internal_management_type	1.44** (0.18)	1.06 (0.18)	1.05 (0.18)	1.44** (0.18)
Not_actionable_type	1.38 (0.23)	1.09 (0.23)	1.10 (0.23)	1.36 (0.23)
Organisation Fixed-effect	Yes	Yes	Yes	Yes
Year Fixed-effect	Yes	Yes	Yes	Yes
Observations	1,107	1,107	1,107	1,107
R^2	0.35	0.29	0.26	0.39
Max. Possible R^2	1.00	1.00	1.00	1.00
Log Likelihood	-6,107.61	-6,155.48	-6,178.75	-6,074.21
Wald Test	452.82*** (df = 42)	360.85*** (df = 42)	322.33*** (df = 42)	504.07*** (df = 44)
LR Test	480.48*** (df = 42)	384.73*** (df = 42)	338.20*** (df = 42)	547.28*** (df = 44)
Score (Logrank) Test	497.99*** (df = 42)	385.63*** (df = 42)	348.89*** (df = 42)	549.13*** (df = 44)
Note:				*p<0.1; **p<0.05; ***p<0.01