When to Unbundle Policy Authority*

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Abstract

We develop a model to analyze the effects of complexity of policy areas on the desirability of bundling or unbundling policy-making authority. We find that bundling can increase political accountability when the complexities of bundled policy areas are sufficiently high and decrease it when the complexity is sufficiently asymmetric. When bundling is beneficial, its robust incentive advantage comes from the possibility of sustaining in equilibrium a mechanism that makes greater investment into policy in multiple issue areas a form of insurance purchase for the office holder. The insurance mechanism that gives the edge to bundling persists both with and without transparent policy-making, in the presence or absence of influence by special interests, and at different spillover levels across policy areas.

1 Introduction

Political accountability hinges on the ability of political principals to make their attitudes about the policy choices made on their behalf matter for how those choices are made. In the context of electoral representation, this is typically understood to presuppose an opportunity for voters to let their reflection on the performance of the public officials representing them determine whether those officials are to be returned to office or replaced, which, in turn would police the choices of the officials in anticipation of the voters' responses. But unless moments of accountability are so frequent as to render the idea of representation meaningless, the democratic ideal, and the idea of accountable representation more generally, run into a key structural problem: the number of policy choices representatives make, as a rule, exceeds the number of opportunities available to political principals to hold the representatives to account. As Manin et al. (1999) put it in the context of electoral accountability, "Elections are inherently a blunt instrument of control: voters have only one decision to make with regard to the entire package of government policies... One cannot control a thousand targets with one instrument."

At the level of institutional design, the one policy/one vote intuition points in favor of "unbundling" policy authority as an institutional arrangement that allows for finer tailoring of incentives to the agents and lowers the bite of the agency problems, including the susceptibility to capture by special interests (Besley and Coate, 2003; Berry and Gersen, 2008). This intuition is behind the institutional reforms, dating back at least to the Progressive era's critique of democratic governance in the U.S., which have sought to unbundle policy authority at different levels of government and have given rise to considerable variation in the bundles of authority held by different elected officials at the state and local levels. While in some jurisdictions voters elect a single executive charged with administering a bundle of policies across issue dimensions, in others, they elect several officials, each for a distinct sub-

set of the policy area.[1] To take one of the starkest examples of this variation: the Governor is the single elected state-level executive in Maine and New Hampshire, but is one of nine in South Carolina and Washington; the average across all states is over a half of that range.[2]

In the context of electoral representation, the trend, at least in the U.S., is generally in favor of unbundling policy authority, and the idea has received support in recent discussions of constitutional design (Besley and Coate, 2003; Marshall, 2006; Berry and Gersen, 2008; Gersen, 2010). Outside of the electoral context, we see many examples of the attempts to unbundle policy authority as well, but the general trend is less clear, suggesting that where jurisdictional boundaries are more malleable, the desirability of (un)bundling policy authority may be perceived as more contingent. The authority granted to individual members of government cabinets often expands and narrows across time and with different office holders;[3] the policy authority over a given area may be assigned to an existing or to a newly created agency (Ting, 2002; O'Connell, 2006; Biber, 2009).[4]

The strong intuition behind the one policy/one vote idea and the empirical ubiquity of practices of bundling and unbundling policy authority suggest the value of considering the robustness of that intuition in strategic political agency settings.[5] Does it hold universally

[1]Following Berry and Gersen (2008), we refer, throughout, to the relevant institutions as *bundling* and *unbundling*.

[2]Separately elected positions in various states include the Governor and Lieutenant Governor, Attorney General, Secretary of State, Secretary of the Treasury, Comptroller General, Agriculture Commissioner, Insurance Commissioner, Superintendent of Education, and others.

[3]In many parliamentary democracies, this phenomenon is the rule, rather than the exception; major authority domain reshuffles in the UK and Israeli government cabinets after their respective 2015 parliamentary elections provide recent examples. A related phenomenon can be observed in presidential democracies, such as the U.S., where the office of the President often usurps from and, less often, returns policy control over particular issue areas to cabinet members. Some of the best known examples here include the appointment of policy "tzars" within the office of the President, with ultimate control over, e.g., the drug policy, bailout of the auto industry, the prosecution of foreign policy with respect to Afghanistan and Pakistan, etc.

[4]The cases in point include the accretion of authority over policy areas by the U.S. Food and Drug Administration; the separation of the border control and immigration services in the U.S. following the re-organization of the U.S. Immigration and Naturalization Service; and the creation of the U.S. Fish and Wildlife Service alongside the U.S. Forest Service.

[5]Yet, despite that ubiquity, and the burgeoning political economy scholarship on accountability, the incentive effects associated with (un-)bundled authority have, with few exceptions we discuss in Section 2, received little attention.

across the settings with distinct policy-making environments? If not, where does it break down and why?

We develop a career-concerns model of political accountability that focuses on the implications of a feature of policy-making environments that we believe is particularly relevant for analyzing the welfare consequences of policy (un-)bundling: *complexity* of distinct policy areas. Policy area complexity affects the likelihood of successes or failures in the corresponding areas: a decline in the high schoolers' performance on standardized tests in the state; a reversal in the growth in the city's murder rate; a successful implementation of a healthcare reform that meets the goal articulated by the government leader; a military incursion that stamps out an insurgency; a major terrorist attack; an advent of economic recession; city pollution levels reaching levels hazardous to residents' health, etc. The prior likelihood of these successes or failures may depend on how hard it is to find the "right type" of office holder with an authority over the corresponding policy area: an area for which the right type is hard to find is, in expectation, less likely to see successes than an area for which finding the right type is easy. It may also depend on the specific details of the policy setting facing the office holder: some problems are just harder – less likely to yield a success – than others, even if you have the right type.[6]

One of the primary contributions of our analysis is in showing how these "technological" aspects of policy area complexity affect strategic incentives and ultimately accountability of multi-task political agency. The one policy area/one vote intuition is right when complexity is sufficiently asymmetric across different policy areas (high for some, while low for others) assigned to the incumbent. But that intuition is wrong when complexity is relatively high across those policy areas. A key (partial) intuition is that when that is the case, political

[6]These two aspects of task complexity correspond to two prominent interpretations of this concept in the existing literature, originating in the seminal discussion in March and Simon (1958) and further developed in the subsequent literature on political economy of organizations and firms, e.g., Campbell (1988); Garicano and Wu (2012).

principals will especially value retention rules that keep incumbents in office for evidence of successes in some areas while forgiving their failures in others. This helps sustain incentives for greater investment by office-holders as a form of insurance purchase: because the success in some policy areas may compensate for the failure in others, it encourages the office holders to "buy-up" their chances by striving harder in multiple mutually compensating policy areas – indeed, harder than they would if they had authority over a single policy area. In short, when policy complexity is sufficiently high, bundling authority across policy areas can give the political principals greater effective power over, and so greater accountability from, their agents.

These conclusions highlight the second key contribution of our analysis: characterizing and exploring the boundaries of the "insurance mechanism" operative in agency choices in multi-task political economy settings. The one policy/one vote intuition behind unbundling is intact when the complexities of the distinct policy areas are substantially different – under those conditions, investing into more than one policy area is suboptimal for the agents. But when the complexities of the bundled areas are relatively high, the insurance mechanism in favor of bundling those areas kicks in, and remains robust in several extensions and variations of our model: with greater transparency of the policy-making environment, in the presence of special-interest lobbying, and allowing for the possibility of spillovers across tasks.

2 Connection to the Literature

The model we analyze contributes to the tradition of game-theoretic studies of political accountability pioneered by Barro (1973) and Ferejohn (1986). Within that tradition, our analysis relates to several overlapping literatures: on incentives of politicians with career concerns, on political accountability in settings with multi-task, on policy capture by special interests, and on the effects of transparency.

Following the classic career concerns set-up (Holmström, 1999), we analyze the environment with symmetric uncertainty about agents' type.[7] We model a policy outcome technology with type-effort complementarities, which generates multiple equilibria with distinct levels of welfare (Dewatripont, Jewitt and Tirole, 1999; Ashworth, Bueno de Mesquita and Friedenberg, Forthcoming).

The literature on multitask incentives in political economy settings includes, inter alia Bueno de Mesquita (2007); Bueno de Mesquita and Landa (2015); Le Bihan (Forthcoming); Besley and Coate (2003) and Ashworth and Bueno de Mesquita (2015). Of these models, Besley and Coate (2003) and Ashworth and Bueno de Mesquita (2015) focus on welfare properties of (un-)bundling and are closest to our model.[8]

Besley and Coate (2003) consider a citizen-candidate model and show that under bundling, regulatory issues are more likely to be captured by stakeholder interests than under unbundling. As in the Besley and Coate model, unbundling in our model may better protect the Principal from the influence of interest groups. However, we show that this conclusion, and the broader intuitive argument in favor of unbundling it captures, do not generalize as one might have expected. First, even in the case of action observability and full policy control bundling may give the Principal a higher welfare than unbundling, due to the improved capacity to select high competence agents under bundling. Second, the intuitive argument in favor of unbundling is not robust to the considerations of task complexity. As our analysis makes clear, when the task complexities on both dimensions are moderate, bundling may

[7]Political accountability models of politicians with career concerns include Alt and Lassen (2006); Ashworth and Bueno de Mesquita (2006, 2008); Lohmann (1998); Persson and Tabellini (2000). The alternative approach to modeling the effects of payoff-relevant type heterogeneity is with signaling (asymmetric uncertainty) models, such as Ashworth and Shotts (2010); Besley (2006); Canes-Wrone, Herron and Shotts (2001); Daley and Snowberg (2011); Fox and Stephenson (2011); Fox and Shotts (2009); Gordon and Landa (2009); Maskin and Tirole (2004).

[8]More distantly related are Ting (2002), which studies the allocation of tasks to bureaucratic agencies in a pure moral hazard contract-theoretic framework, and Bueno de Mesquita and Landa (2015), which analyzes the time-inconsistency facing the principal in a dynamic oversight setting, also in a pure moral hazard setting.

dominate unbundling in both incentives and selection under the moderate retention rule.[9]

Ashworth and Bueno de Mesquita (2015) also study the welfare consequences of (un-)bundling and find the advantage of unbundling to be limited, but focus on a different source of exogenous variation than we do: in how politician competence is correlated across tasks and in how voters value each task. The comparison of our models shows different underlying mechanisms and points to the relevance of the distinct exogenous dimensions analyzed in these models: our prediction of the improvement in selection due to higher effort will require high enough competence correlation across tasks, and their prediction of higher effort under bundling will need sufficiently symmetric tasks complexity. But the comparison also suggests a robust synthetic conclusion with which our respective results are broadly coherent: bundling is most attractive when the policy areas are sufficiently symmetric with respect to the underlying parameters; sufficiently great asymmetries exacerbate agency problems under bundling, lowering its relative appeal.

In the extensions of our baseline model, we consider a version of a policy-buying framework developed by Grossman and Helpman (2001), and a version of a career-concerns accountability setting with action-transparency. While the formal literature on policy capture is extensive (e.g. Grossman and Helpman, 2001; Gordon and Hafer, 2007; Snyder and Ting, 2008; Acemoglu, Egorov and Sonin, 2013), it has, with the exception of Besley and Coate (2003) not focused on incentives due to multi-task, and the robustness of policy-making against capture under institutional environments varying the extent of policy authority bundling. Similarly, the focus of the formal literature on transparency has been on the single-task models of political agency, and in particular, on signaling, rather than on sym-

[9]Hatfield and Padro i Miquel (2006) reach a conclusion about the lower power of incentives under bundling – reinforcing the Besley and Coate view – albeit in a setting with an explicit effort choice by the agents, additive policy outcome production technology, and modeling costs of effort as substitutes under bundling but not under unbundling. We are agnostic about the assumptions on the interactions between costs. Holding fixed the cost of effort technology across the two institutions would generate in their setting results consistent with those we present in this paper.

metric uncertainty, models (cf. Canes-Wrone, Herron and Shotts, 2001; Maskin and Tirole, 2004; Prat, 2005; Besley, 2006; Fox, 2007; Ashworth and Shotts, 2010; Fox and Van Weelden, 2012).[10]

3 The Model

We model an interaction between a Principal[11] and one or two Agents.[12] There are two tasks, a_1, and a_2. We consider two institutions. In the first one, called *bundling*, a single Agent (denoted A) is responsible for both tasks.[13] In the second institution, which we call *unbundling*, there are two Agents (denoted A_1 and A_2 respectively) each responsible for one of the two tasks. On each of these two tasks the responsible Agent can choose whether to exert effort. We denote $a_i = 0$ the choice of the Agent not to exert effort on task $i = 1, 2$, and $a_i = 1$ the choice to exert effort.[14]

The outcome on task i, $o_i \in \{s, f\}$, where s stands for *success* and f for *failure*, depends stochastically on the effort choice a_i and on the competence of the Agent responsible for task i.[15] Specifically, we assume that each Agent can be of one of two types $\theta \in \{\theta_L, \theta_H\}$ with $Pr(\theta = \theta_H) = \pi \in (0, 1)$. If the Agent chooses to exert effort on task i, i.e. chooses

[10]Studies that consider effects of transparency in multi-task settings include Le Bihan (Forthcoming), who, unlike in the present paper, is concerned with the transparency of outcomes, rather than actions, and Bueno de Mesquita and Landa (2015), who study the effect of transparency on the time inconsistency of incentives to agents in a moral-hazard environment.

[11]Depending on the application the Principal may be thought of as the electorate, a Prime Minister or a President.

[12]In an extension below, we introduce another actor, an interest group seeking to effect a policy opposed to the Principal's preferences.

[13]Throughout, we refer to the Agent being responsible for a policy task, field or area interchangeably.

[14]The graft-choice model of agency in which the amount of the budget not spent on graft enters as an input into the policy success function instead of effort level, as in the present model, generates equivalent results.

[15]We show the robustness of our results to assuming effort continuity in the Appendix. The empirical plausibility of the assumption of binary-valued outcomes rests on two considerations. First, the outcomes of some – though, of course, not all – important policy tasks are clearly discrete. But second, even with respect to continuous-valued policy outcomes, political principals, especially voters, are often operating with little knowledge, are relatively insensitive to details of policy outcomes, and rely on categorical evaluations supplied by others, e.g., candidates' political campaigns (see e.g. Carpini and Keeter, 1997).

$a_i = 1$, then the probability of success is e_i^L if the Agent is of low competence θ_L, and e_i^H if the Agent is of high competence θ_H with $0 \leq e_i^L < e_i^H \leq 1$. Further, if the Agent chooses not to exert any effort, then the probability of success is 0 independent of his type.

We adopt a career concerns framework and assume that the competence of each Agent is not observed by any of the actors ex ante. The distribution of types is commonly known, however. It follows that the ex ante probability of success from choosing $a_i = 1$ is $\pi e_i^H + (1 - \pi)e_i^L =: e_i$. We interpret e_i as representing the complexity of the task. It is immediate that the lower e_i, the less control the Agent has over success or failure on policy task i.[16] Note that in this setting there is complementarity between effort and competence in the sense that the Principal learns more about the competence of the Agent when the Agent exerts effort than when he does not. Indeed, if the Agent does not exert effort the outcome will be failure independent of the type of the Agent and will thus be uninformative about the type of the Agent.

Unless noted otherwise, we assume that the Principal observes the outcome of the Agent(s)'s actions on each task but not the actions themselves. This assumption is particularly plausible in the applications of the model to the agency relationship between the voters and the elected executives, where it is consistent with the standard empirical descriptions of limited knowledge of incumbents' choices by the voters. In some of the other applications we noted in the introduction – where the Principal is the head of government – action observability (transparency) may, perhaps, be more plausible. With those applications in mind, we also consider, in Subsection 6.1, the robustness of our main results to the possibility of the actions taken by the Agent being transparent to the Principal.

Upon observing the outcomes o_1 and o_2, the Principal makes her retention decision(s). Under bundling, the Principal chooses whether to retain the single Agent, whereas under unbundling, the Principal chooses whether to retain each Agent A_i separately. If the Princi-

[16] We comment further on the interpretation of task complexity below.

pal dismisses an Agent, then the replacement is of high competence with probability π. To summarize, the order of play is as follows:

1. Under bundling the Agent chooses to exert effort or not on each task i, i.e. the Agent chooses $(a_1, a_2) \in \{(0,0),(0,1),(1,0),(1,1)\}$. Under unbundling, each Agent A_i chooses whether to exert effort on task i, i.e. chooses $a_i \in \{0,1\}$.

2. Nature chooses the competence $\theta \in \{\theta_L, \theta_H\}$ of each Agent and the outcomes $o_i \in \{s, f\}, i = 1, 2$.

3. The Principal observes the outcomes o_1 and o_2 and subsequently chooses whether to retain the Agent under bundling and each Agent A_i separately under unbundling.

The Principal prefers success on each task and receives payoff $u_P(o_i = s) > 0$ from success on task i and zero from failure. The Principal receives an additional payoff of $R > 0$ for each task i for retaining an Agent of high competence.[17] As a consequence, the Principal only retains an Agent if the Principal believes, upon observing the policy outcome(s), that this Agent is of type θ_H with probability superior or equal to π.[18]

Agents value retention and prefer to avoid effort. More specifically: under bundling, the Agent receives an additional payoff of $B > 0$ when retained and a payoff of zero when dismissed from office. Similarly, under unbundling, each Agent A_i receives an additional payoff of B_i when retained and a payoff of zero when dismissed. In the interest of comparison and to focus on the institutional effects, we assume throughout that $B_1 + B_2 = B$.[19] Let $k > 0$ be the cost to the Agent of choosing to exert effort, i.e. $a_i = 1$. The costs are additively

[17] This additional payoff may be thought of as the value added to the Principal of having in office a high type, which, in a more general model may be derived from an explicitly modeled continuation game.

[18] Thus, we abstract away from the possibility of primitive heterogeneous valuation of tasks by the Principal, as in Ashworth and Bueno de Mesquita (2015); the differences in the Principal's responsiveness to tasks in our model are induced entirely by the expectations of the Agent(s)'s choices.

[19] To keep the presentation simple, we assume that the pair (B_1, B_2) is exogenous. As the discussion below makes clear, however, our results are robust to assuming that the Principal allocates the values of holding office B_1 and B_2 optimally under unbundling.

separable, i.e. the Agent incurs cost $2k$ under bundling when choosing to exert effort on both tasks, i.e. $(a_1 = 1, a_2 = 1)$.[20]

It is immediate from the definition of e_i that low complexity of task i may naturally correspond to two distinct possibilities:

(a) both e_i^L and e_i^H are high; or

(b) e_i^H is high while e_i^L is low, and π is high.

Similarly, high complexity of task i naturally corresponds to

(a) both e_i^L and e_i^H are low; or

(b) e_i^H is high while e_i^L is low, and π is low.

Corresponding to options (a), task complexity may be thought of a function of "objective task characteristics": the task is hard for everyone or easy for everyone, and while the performer's competence is relevant to success, the outcome is driven primarily by the features of the task itself. In contrast, the options (b) correspond to the account of complexity in which the success is, in the first place, a function of the "interaction between task and person characteristics"; a high complexity task is one in which the high competence agent may do considerably better than the low competence agent, but the high competence agents are hard to come by. As an example, consider the tasks facing the tax collecting agency and the education department in a Western industrialized country – tasks or policies that are, in a number of jurisdictions assigned to independently elected officials. A moderately competent head of the tax collecting agency is likely to have a high probability of success (assuming that success is conventionally measured). In contrast, highly competent education chiefs have been known to do significantly better than average, but are notoriously hard to identify.

[20] In section 6.3, we extend the model to settings with interactions between tasks. The general thrust of the results goes through so long as the substitution between tasks is not too strong.

4 Analyzing the Model

We restrict attention to pure strategy Perfect Bayesian equilibria. Before proceeding, note first that there always exists an equilibrium in which no effort is exerted on either task, and the Principal uses any retention rule that does not condition on the observed outcomes. When the Agent(s) make(s) such a choice, the outcome, which is always $(o_1 = f, o_2 = f)$, is completely uninformative of the type(s) of the Agent(s), and, correspondingly, the Principal cannot update on her prior. This equilibrium persists under both bundling and unbundling. As such, it is not relevant for evaluating the consequences of institutional variation.[21]

4.1 Bundling

We begin our analysis of the equilibrium behavior in the baseline model of bundling by defining distinct retention rules for the Principal that play a central role in our analysis. We will say that the Principal uses the *strict retention rule* when she retains the Agent if, and only if, he is successful on both tasks. We will say that the Principal uses the *moderate retention rule* when she retains the Agent if, and only if, he is successful on at least one task. We will also sometimes use the language of a i^{th}*-task retention rule* to refer to the rule whereby the Agent is retained if, and only if, the outcome is success on the i^{th}-task (regardless of the outcome on the other task).

The following proposition specifies parameter values for which the Agent can be incentivized, in equilibrium, to exert effort (1) on both tasks, (2) on only one of the two tasks, or (3) on neither task. The proposition also specifies the retention behavior that is used in equilibrium by the Principal to incentivize these effort choices.[22]

Proposition 1. *On the equilibrium path of play under bundling:*

[21] It is also fragile, since the off-path events of $o_i = s$ are informative of the Agent's competence, and the sequentially rational Principal will need to update accordingly.

[22] A full derivation of equilibrium behavior can be found in the Appendix.

1. *The Agent chooses to exert effort on both tasks if, and only if, either*

   (a) *the complexity of each task is sufficiently low,* $e_i \geq \frac{2k}{e_j B}$, *and the Principal's estimation of the Agent's competence decreases unless the outcome is success on both tasks,* $e_i^H(1-e_j^H) \leq e_i^L(1-e_j^L)$ *for all* $i = 1, 2$*; or*

   (b) *the complexity of each task is moderate,* $1 - \frac{k}{e_j B} \geq e_i \geq \frac{k}{(1-e_j)B}$, *and the Principal's estimation of the Agent's competence increases when the outcome is success on at least one task,* $e_i^H(1-e_j^H) \geq e_i^L(1-e_j^L)$ *for all* $i = 1, 2$.

   In case (a), the Principal adopts the strict retention rule, in case (b), the moderate retention rule.

2. *The Agent chooses to exert effort on a single task* i *when the complexity of that task is sufficiently low,* $e_i \geq k/B$, *and the Principal adopts the* i^{th}*-task retention rule.*[23]

3. *The Agent chooses to exert no effort on either task when the complexity of each task is sufficiently high,* $e_i < k/B$ *for all* $i = 1, 2$, *independent of the Principal's retention rule.*

[24]

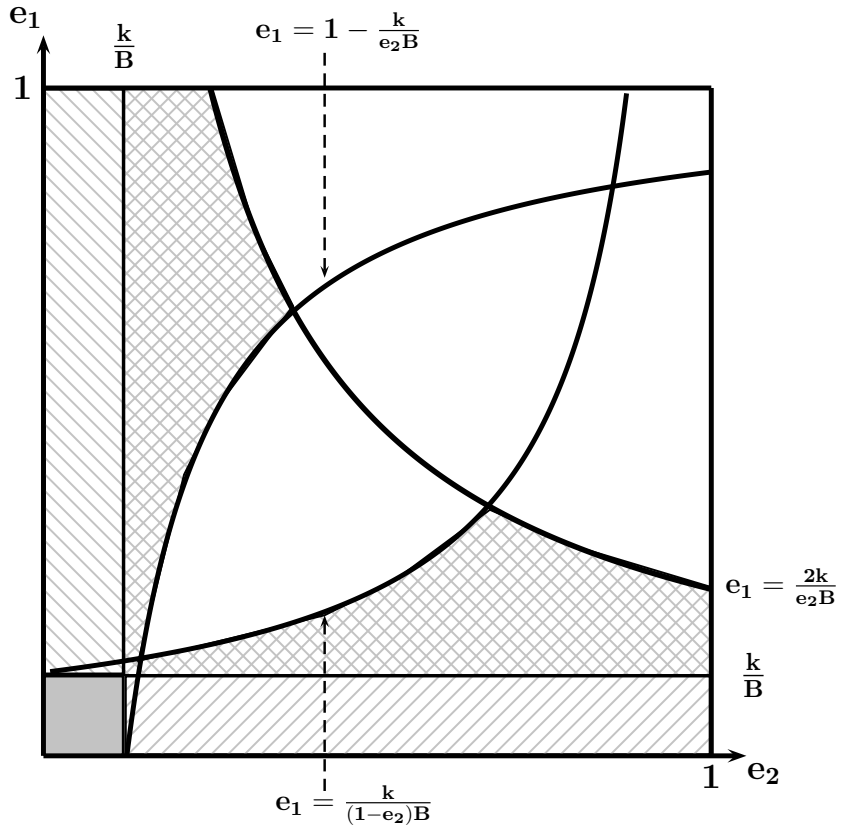
We call an equilibrium in which the Agent exerts effort on both tasks and the Principal uses the strict retention rule *a strict incentives equilibrium* (Part 1. (a) of Proposition 1), and in which the Principal uses the moderate retention rule *a moderate incentives equilibrium* (Part 1. (b) of Proposition 1).

[23]It is important to note that, if $e_i < e_j$ the equilibrium with i^{th}-task retention rule is fragile. Indeed, if the Agent deviates to $(a_i = 0, a_j = 1)$ the Principal should be updating favorably on the Agent's type upon observing $o_j = s$ making the deviation profitable. However, the robustness of the i^{th}-task equilibrium is easily assured if we assume that $a_j = 0$ generates $o_j = s$ with arbitrary small probability of success $\epsilon > 0$. Moreover, the question of the equilibrium status of the i^{th}-task action profile when $e_i < e_j$ is irrelevant for our purposes as none of the substantive results discussed in the paper depend on it.

[24]The proof for this, as well as all subsequent, results can be found in the supplemental Appendix.

Figure 1 below provides a graphic illustration of the characterization in Proposition 1. For given values of the cost of effort k, and the value of holding office B, this figure shows the highest level of effort by the Agent that can be sustained in equilibrium under bundling as a function of the probabilities of success e_1, and e_2, setting $B = 1$, $k = .125$. (Recall that e_1 and e_2 are compound probabilities, with $e_i := \pi e_i^H + (1 - \pi)e_i^L$ for all $i = 1, 2$. As specified in Proposition 1 above, additional restrictions on e_i^H, e_i^L, $i = 1, 2$, need to be satisfied to sustain an equilibrium in which the Agent exerts effort on both tasks. Although these restrictions are not depicted in the figure, Lemma A. 3 in the Appendix shows that, for any value of $(e_1, e_2) \in (0, 1)^2$, there exists an infinity of e_i^H, e_i^L, $i = 1, 2$, and π that satisfy those restrictions. Similar caveats apply to other figures in the (e_1, e_2) space shown below.)

Figure 1: Highest Level of Effort Sustainable on the Equilibrium Path of Play under Bundling



Regions of the figure and the highest equilibrium-consistent levels of effort at the corresponding pairs of (e_1, e_2):

- $(\mathbf{a_1 = 0, a_2 = 0})$
- $(\mathbf{a_1 = 1, a_2 = 0})$
- $(\mathbf{a_1 = 1, a_2 = 1})$
- $(\mathbf{a_1 = 0, a_2 = 1})$
- $(\mathbf{a_1 = 1, a_2 = 0})$ or $(\mathbf{a_1 = 0, a_2 = 1})$

Several aspects of this characterization are worthy of particular note. First, while the equilibrium profile that yields the Agent's investment into effort on both tasks is unique for any parameter vector (except on a non-generic set), there are two distinct strategies, each consistent with equilibrium play, that may support that investment – albeit for different values of the probabilities of success e_1 and e_2. In the first of these, the Principal uses the strict retention rule, and in the second, the moderate retention rule.

The moderate retention rule is effective at incentivizing effort on both dimensions when

the probabilities of success e_1 and e_2 take on intermediate values. Their lower bounds of that intermediate range are lower than the lower bounds sustaining high effort under the strict rule. The reason is intuitive: switching to the moderate rule increases the expected utility to the Agent of trying and sometimes failing: relative to the strict rule, the expected utility of exerting effort on both tasks increases from e_1e_2B-2k to $(e_1e_2+e_1(1-e_2)+(1-e_1)e_2)B-2k$, while the expected utility of exerting effort only on task i increases from $-k$ to e_iB-k. Consequently, the moderate retention rule can incentivize the Agent to exert effort on both tasks for probabilities of success which would be too low under the strict retention rule.

For intermediate values of the probabilities of success, then, the moderate retention rule provides a kind of insurance for the Agent. Exerting effort on task j on top of exerting effort on task i, gives the Agent "a second chance" at being retained. When failure on task i is not unlikely, and the chances of being successful on task j are real, the Agent has incentives to pay the cost of effort to get this second chance.

However, the moderate rule provides inferior incentives when complexity of at least one of the tasks drops sufficiently far (i.e., if either e_1 or e_2 is sufficiently high). Indeed, for the Agent to best-respond to the moderate retention rule by exerting effort on both tasks rather than on a single one, it must be the case that

$$(e_1e_2 + e_1(1-e_2) + (1-e_1)e_2)B - 2k \geq e_iB - k \tag{1}$$

for all $i = 1, 2$, or, equivalently,

$$e_j(1-e_i)B - k \geq 0 \tag{2}$$

for all $i = 1, 2, j \neq i$. The expression in the left-hand side of (2) represents the expected additional benefit of exerting effort on both tasks rather than on task i alone. If the probability of success e_i is very high, the inequality (2) does not hold, signifying that the Agent can be

fairly certain of the successful outcome on task i, and so of being retained by the Principal independent of the outcome on task j. In this case, the moderate retention rule cannot incentivize the Agent to exert effort on both tasks (the Agent has no interest in insuring), but a strict rule can. Similarly, to sustain the effort on both tasks with the moderate rule, the probabilities of success e_1 and e_2 cannot be too low either, as then the inequality (2) fails again.

Second, note that if Agent type heterogeneity had no effect on the post-election utility of the Principal, the parameter ranges sustaining the equilibrium investment into both tasks under the strict and under the moderate incentives would overlap. However, if, as in our model, the Principal has a preference over the type of Agent in office, this is no longer the case (except on a non-generic set) because the Principal's beliefs about the incumbent that sustain these equilibrium-consistent strategies are, in fact opposite. The strict retention rule is sequentially rational only if the moderate retention rule is not. The converse is also true.

Third, the Principal will consider task outcomes to be relevant to her update on the Agent only if she expects the Agent to choose effort on those tasks, and the condition under which the single-effort equilibrium exists, namely $e_i \geq B/k$, is consistent with the conditions that need to be satisfied to sustain either one of the two equilibria in which the Agent exerts effort on both tasks. The Principal may, thus, be "trapped" in the equilibrium in which the Agent exerts effort on only one task, while there exists, for the same parameter values, an equilibrium in which the Agent exerts effort on both tasks and in which the Principal's welfare is, correspondingly, higher.[25]

[25]For the idea of "accountability traps," see Landa (2010) and Ashworth, Bueno de Mesquita and Friedenberg (Forthcoming).

4.2 Unbundling

If the Principal expects Agent A_i to exert effort with positive probability, then, in equilibrium, given that success is a signal of high competence and failure a signal of low competence, she should retain upon observing success and dismiss upon observing failure. The incentive effects are maximized with the same rule. The expected payoff to Agent A_i of choosing to exert effort, is, then, $e_iB_i - k$, and so the strategy profile under which Agent A_i chooses to exert effort and is retained if, and only if, the Principal observes success on task i is consistent with equilibrium play if, and only if, $e_iB_i - k \geq 0$.

It follows that given values of the cost of effort k and the overall value of holding office B, there exists a feasible pair (B_1, B_2) such that both Agents exert effort if, and only if, $e_1 \geq \frac{e_2 k}{e_2 B - k}$.

5 Comparing Institutions

We first consider what institution does best with respect to the selection of agents. We say that *selection is better under the institution I than under the institution I'* if, in expectation, the equilibrium retention choices under the institution I lead to the selection of higher types than under the institution I'. The threats to selection may come from both the institution, which may fail to generate enough information about the Agent(s), and the retention rule used by the Principal, which may create incentives that discourage revelation of information about the Agent's type or use that information inefficiently. The following result provides the comparison between bundling and unbundling with respect to selection:

Proposition 2. *1. If effort is positive and (weakly) higher under bundling, selection is strictly better under bundling.*

2. If effort is higher under unbundling, selection may be better under bundling or un-

bundling, depending on the values of e_i^H, e_i^L, $i = 1, 2$.

Proposition 2 implies that both institutions can be optimal, ex ante, in terms of selection. But it also points to an asymmetry in favor of bundling when the effort level is positive and equal or higher under bundling. The intuition behind this result is simple. Under both institutions, if effort is exerted on task i, but not on task j, the Principal receives information about the competence, and therefore future performance, of the Agent who exerted effort on task i. However, the Principal can make better use of that information under bundling, because under unbundling she receives no information about the Agent $A_{j\neq i}$ who is assigned to task j, whereas under bundling she does, since the same Agent is assigned to both tasks. If, under both institutions, effort is exerted on both tasks, the Principal receives two informative signals about the overall competence of the Agent under bundling, but only one signal for each Agent A_i under unbundling, again making bundling more informative. Thus, if the level of effort is positive and task-by-task weakly higher under bundling, the resulting outcome vector is more informative about the overall competence of the office-holder(s), and that allows the Principal to select more competent Agents under bundling.

When the effort level is strictly higher under unbundling, the institutional comparison generates a tradeoff. Suppose under unbundling, both Agents exert effort, while under bundling, the Agent only exerts effort on task j (in, for example, j^{th}-task retention rule equilibrium). Then, the Principal receives two informative signals under unbundling, but only one informative signal o_j under bundling. However, the signal o_j is informative about the competence of the Agent on both dimensions under bundling, while each signal o_i is only informative about the competence of Agent A_i on task i under unbundling. Depending on the parameter values e_i^H, e_i^L, $i = 1, 2$, bundling or unbundling may be better at selecting competent Agents.

We next study under what institution the Principal is able to induce the Agent(s) to choose higher levels of effort. It is straightforward to see that, for any parameter values

e_i, k, and B, such that an equilibrium exists in which the Agent exerts effort only on task i under bundling, there exists a feasible pair (B_1, B_2) for which such an effort allocation is also sustained in equilibrium under unbundling. The more interesting, and less straightforward, question concerns the ability to sustain effort investment into both tasks. Let $\mathcal{X}$ be the set of all vectors $x := (e_1^H, e_1^L, e_2^H, e_2^L, \pi, k, B)$ admissible in the model. We say that institution I has a *weak incentive advantage* over institution I' on $x \in \mathcal{X}$ if, for x, there exists an equilibrium in which effort is exerted on both tasks under I', there also exists an equilibrium in which effort is exerted on both tasks under I. We say that I has a *strict incentive advantage* over I' on x if the converse statement does not hold.

To state the result comparing bundling and unbundling with respect to incentives they generate, we define the sets of parameter values that sustain the distinct types of equilibrium behavioral profiles under bundling. Let $\mathcal{M} \subset \mathcal{X}$ be the set of all vectors $x = (e_1^H, e_1^L, e_2^H, e_2^L, \pi, k, B) \in \mathcal{X}$ such that there is an equilibrium under bundling in which the Agent exerts effort on both tasks and the Principal retains using the moderate retention rule.[26] Similarly, define $\mathcal{S} \subset \mathcal{X}$ as the set of all vectors $x \in \mathcal{X}$ for which, with no transparency, there is an equilibrium under bundling in which the Agent exerts effort on both tasks and the Principal retains using the strict retention rule. Finally, let $\mathcal{U} \subset \mathcal{X}$ be the set of all vectors x such that there exists a feasible allocation (B_1, B_2) for which in equilibrium under unbundling, each Agent exerts effort on their respective task $i = 1, 2$, and the Principal retains the Agent if, and only if, there is success on his task.

We have the following result:

Proposition 3. *1. There exists $M \subset \mathcal{M}$, $M \neq \emptyset$, such that $M \cap \mathcal{U} = \emptyset$ and bundling has a strict incentive advantage over unbundling if, and only if, $x \in M$.*

2. There exists $U \subset \mathcal{U}$, $U \neq \emptyset$ such that $U \cap \mathcal{M} = \emptyset$, $U \cap \mathcal{S} = \emptyset$, and unbundling has a

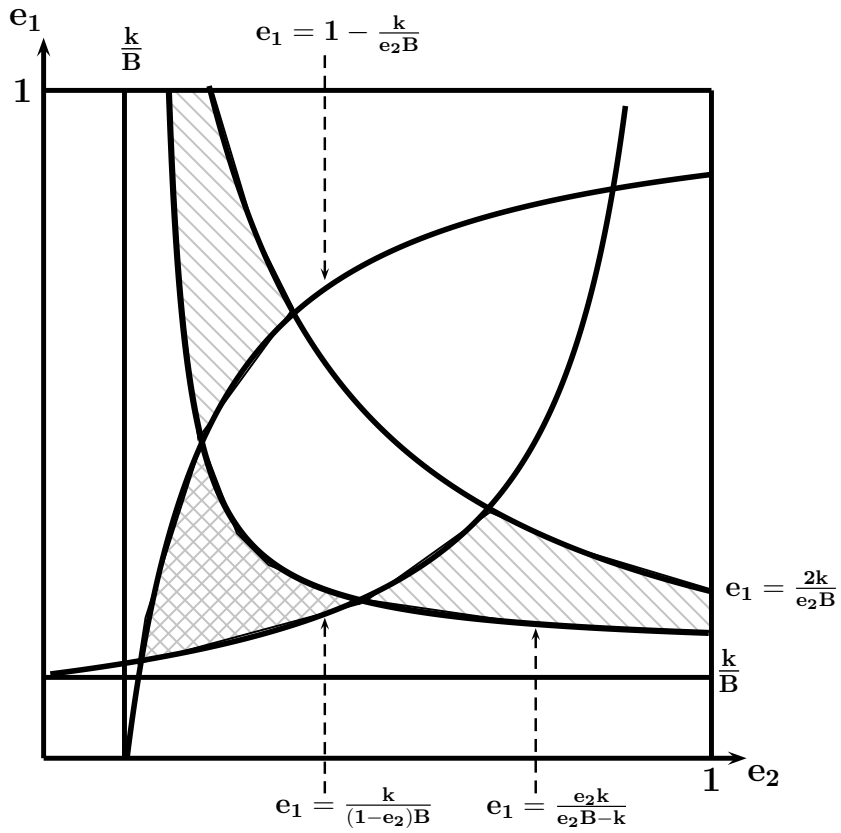
[26] We give a precise statement of the conditions that define $\mathcal{M}$ and similar sets to be defined below, in the Appendix.

strict incentive advantage over bundling if, and only if, $x \in U$.

Proposition 3 states that there are parameter values such that effort on both tasks can be sustained under bundling, but not under unbundling, and vice versa, underscoring the rich incentive dynamics in the relationship between the Principal and the Agent(s) discussed above. But it also suggests that, despite the fact that either institution can be superior when it comes to incentives, we can say something systematic about the conditions under which we should expect one institutional ordering rather than the other. First, bundling supersedes unbundling in terms of incentives only for parameter values under which the moderate retention rule is used in equilibrium under bundling. And second, when the reverse ordering is true, we must be on the parameter range on which neither the strict nor the moderate incentives rules can be supported in equilibrium – that is, where the complexity of policy areas is sufficiently asymmetric.

Figure 2 shows areas of the probabilities of success e_1 and e_2 space for which each of the two institutions has an edge in terms of incentives for inducing highest effort. Combining Propositions 2 and 3, it is clear that the highest levels of accountability, as measured by the maximally effective incentives and selection, occur under bundling and precisely on the range which supports the moderate incentives equilibrium.

Figure 2: Comparison of Highest Effort



Regions for which $(a_1 = 1, a_2 = 1)$ can be sustained in equilibrium under one institution but not the other as a function of (e_1, e_2):

strict incentive advantage of unbundling

strict incentive advantage of bundling

6 Robustness

6.1 Transparency of Actions

So far, we have assumed that the Principal does not observe the effort choices of the Agent. We refer to it as the case with "no transparency." We consider next the implications of having the Principal observe the actions a_1, a_2, chosen by the Agent(s) ("transparency") and show that the mechanism through which bundling comes to dominate unbundling still operates under transparency of actions. To state the result compactly, let $\mathcal{M}^T \subset \mathcal{X}$ include

all vectors $x \in \mathcal{X}$ for which, under transparency, there is an equilibrium under bundling in which the Agent exerts effort on both tasks and the Principal retains the Agent using the moderate retention rule. Finally, we will say that a strict incentive advantage of the institution I over institution I' increases if the set of model parameters $X \subset \mathcal{X}$ on which I has a strict incentive advantage over I' before the change is a proper subset of the set of model parameters $\hat{X} \subset \mathcal{X}$ for which I has a strict incentive advantage over I' after the change.

We have the following result:

Proposition 4. *1.* $\mathcal{M} = \mathcal{M}^T$.

2. While transparency never decreases and may increase the strict incentive advantage of unbundling, if bundling has a strict incentive advantage with no transparency (i.e. under the moderate retention rule) it will also with transparency.

Transparency does not affect the positive effort equilibrium under unbundling: even when the Principal observes that the Agent exerted effort, the Principal retains the Agent if, and only if, the outcome is success, as she wants to retain a high competence Agent and, as before, success is a signal of high competence and failure a signal of low competence. Consequently, the range of parameter values that sustain an equilibrium in which both Agents exert effort is not altered by transparency of actions.

However, transparency does affect the equilibrium play under bundling. Under transparency, if the Agent exerts effort only on task j, then the Principal, observing the Agent's actions, will assess the competence of the Agent only through the outcome on task j; principals' expectations of investment into both tasks that made it possible to sustain the strict incentives equilibria are simply irrelevant. Transparency essentially gives the Agent, as the first mover, the power to choose the effort allocation which maximizes his expected utility conditional on the retention rule this effort allocation induces, and, in so doing, improves

the Agent's expected welfare.

As an implication, transparency makes it impossible for the Principal to enforce the strict retention rule. Under that rule, the Agent investing into effort on both tasks receives an expected payoff of $e_1e_2B - 2k$. If the Agent deviates to exerting effort solely on task i, the Principal, observing these effort choices, will retain the Agent if, and only if, the outcome o_i is success. Consequently, by deviating to $(a_i = 1, a_j = 0)$, the Agent increases his expected payoff to $e_iB - k > e_1e_2B - 2k$. To put the consequence in stark terms, transparency makes it impossible to incentivize the Agent to exert effort on both tasks when the probabilities of success e_1 and e_2 are both sufficiently high, i.e. when the agency problem seems ex ante to be the least problematic! Consequently, there exists a range of parameter values such that, for those values, under transparency, effort is sustained on both tasks under unbundling but not under bundling (strict incentive advantage of unbundling), whereas under no transparency effort on both tasks could be sustained under both institutions (and so neither institution has a strict incentive advantage).

Against the background of these equilibrium effects of transparency, Proposition 4 is particularly striking. While transparency has an effect on the strict incentives equilibria, it has no effect on the boundaries of the moderate incentives equilibrium (part 1 of Proposition 4), and consequently, given Proposition 3, part 2 of Proposition 4 follows as well. To see why, recall that exerting effort on both tasks is a best-response to the moderate retention rule if, and only if,

$$(e_1e_2 + e_1(1 - e_2) + (1 - e_1)e_2)B - 2k \geq e_iB - k \geq 0 \tag{3}$$

for all $i = 1, 2$. Notice that the right-hand side of the first inequality in (3) is also the expected utility of deviating to choosing effort solely on the i^{th} task under transparency. If the Agent exerts effort only on task i, then the Principal, observing the Agent's actions, will assess the

competence of the Agent only through the outcome on task i, retaining if, and only if, the outcome o_i is success. Thus, when the moderate retention rule and effort on both tasks are mutual best responses, that effort allocation, given the sequential rationality of the Principal, is the allocation that maximizes the Agent's expected utility. In other words, for any vector $x \in \mathcal{X}$ for which, with no transparency, there exists a moderate incentives equilibrium in which the Agent exerts effort on both tasks, there also exists such an equilibrium with transparency. Combined with Proposition 3 and the fact that transparency does not affect the positive effort equilibrium under unbundling, this implies that (1) there exists a non-empty set of vectors $x \in \mathcal{X}$ for which, with transparency, bundling has a strict incentive advantage over unbundling; and (2) for any such vector, effort on both tasks is sustained via the moderate retention rule under bundling.

6.2 Influence of Special Interests

We next consider an extension of our model in which an Interest Group (IG) is seeking to influence the policy outcome with respect to the policy dimension relevant to it. We show that IG's presence can reverse the comparison in terms of incentives in either direction, creating an incentive advantage for an institution where it did not exit before or eliminating it where it was present without IG. Contrary to received wisdom (cf. Besley and Coate, 2003; Berry and Gersen, 2008), the case for unbundling as a better shield for the Principal against the power of special interests is far from water-tight; bundling, again, does better when policy tasks are relatively complex and the Principal uses the moderate retention rule.

To formalize the extension, suppose that, before the Agent responsible for task a_1 chooses whether to exert effort, IG can offer the Agent a utility transfer, which we will refer to as "bribe" $b \geq 0$, in exchange for no effort on task 1. We follow Grossman and Helpman (2001) and others in modeling IG's utility transfer as an action contract with the payment conditional on a specified, observed, policy decision of the Agent. Thus, if the Agent accepts

the bribe b, he does not exert effort on task 1, i.e. $a_1 = 0$. If, however, the Agent rejects the bribe, he is free to choose $a_1 = 0$ or $a_1 = 1$.

IG has policy preferences opposed to those of the Principal and receives a payoff of $u_{IG} \geq 0$ when the outcome on dimension a_1 is failure and a payoff of zero when it is success.[27] Moreover, IG has disutility $-b$ when paying a bribe b to the Agent. Throughout, we assume that IG's resource constraint does not bind and study the level of the bribe that IG would have to pay to the Agent in order to get the Agent to implement $a_1 = 0$ and whether, given u_{IG}, IG chooses to pay that bribe to the Agent.[28] We assume that the value of failure to IG, u_{IG}, is drawn from an arbitrary distribution function $F(\cdot)$ with full support on $\mathbb{R}_+$. We further assume that the Principal knows the distribution $F(\cdot)$ but not the realization u_{IG}.

We provide a full characterization of the equilibria in this expanded model in the Appendix. For the purposes of our analysis, we focus on the following result:

Proposition 5. *When the presence of IG makes a difference for the Agent's choice,*

1. *it can create a strict incentive advantage of bundling over unbundling and vice versa;*

2. *if it creates a strict incentive advantage of bundling, it is for $x \in \mathcal{M}$.*

The first part of this proposition says, in essence, that neither institution has a particularly strong claim on being more robust against the capture by special interests than the other. Each can create incentives that can make it more attractive from that standpoint to political principals. Recalling that a key argument in favor of unbundling has been precisely on the grounds of its relative proofness against capture, the implication of this result is that the case for unbundling is weaker than it might have at first appeared.

[27] The environment we analyzed in Section 4 is, thus, a special case of this expanded model; in that special case, $u_{IG} = 0$, and thus IG does not try to influence policy.

[28] Note that u_{IG} determines an upper bound on the willingness of IG to pay a bribe to the Agent. To be sure, IG certainly would not want to pay a bribe $b > u_{IG}$. As such, introducing an exogenous resource constraint on the ability of IG to pay a bribe would not alter the thrust of the results nor yield additional insights.

The second part of the proposition suggests that the circumstances for the relative appeal of bundling that we have highlighted above – namely, policy tasks being relatively complex and the Principal using the moderate retention rule – are precisely the circumstances under which bundling does particularly well relative to unbundling against the possibility of capture.

To see the intuition behind this proposition, note that the presence or absence of an incentive advantage for a given institution depends in this setting on the size of the bribe that IG would need to offer to obtain a policy change (policy failure). IG offers a bribe to the Agent only if the value of failure, u_{IG}, is sufficiently high to warrant paying the bribe. When the bribe is lower under institution I than under institution I', there are values of failure to IG for which IG decides not to bribe the Agent under institution I' yet chooses to bribe the Agent under institution I generating a strict incentive advantage for institution I'.

Given that IG prefers failure to success on task 1 and does not care about task 2, it has an incentive to influence the Agent's choice if, and only if, in the absence of IG, the Agent exerts effort on task 1. To convince the Agent who would otherwise exert effort on task 1 not to do it after all, IG needs to offer the Agent a bribe that compensates the Agent for the expected utility loss from that change. The level of that utility loss depends on the retention rule used by the Principal and the parameter values.

Intuitively, the bribe that IG needs to pay to contract no effort on task 1 is increasing in the probability of success e_1 and in the value of holding office B (B_1 under unbundling), and decreasing in the cost of effort k. Somewhat less intuitively, under bundling, the level of the bribe may also depend on the probability of success e_2, and, depending on the retention rule used by the Principal, the relationship can be either positive or negative. Suppose that in the absence of IG influence, the Agent exerts effort on both tasks in equilibrium. In such a case, the expected benefit to the Agent of exerting effort on task 1 depends on the probability of success on task 2, and correspondingly the bribe does too. Under strict incentives, as

e_2 increases, the expected utility to the Agent of exerting effort on both tasks increases as well, and the compensation needs to increase correspondingly. Under moderate incentives, however, as e_2 increases, the expected benefit of exerting effort on task 1 on top of task 2 decreases because the Agent is less in need of insuring, and so IG can convince the Agent not to exert effort on task 1 with a smaller bribe. (And conversely, if e_2 goes down, then the value for the Agent of purchase the insurance goes up, driving up the price that IG will need to pay under bundling relative to unbundling.) An important implication of this is that there are conditions for which, as the probability of success e_2 increases, IG is more or less likely to bribe the Agent under bundling, while the incidence of bribing under unbundling stays fixed for a fixed (B_1, B_2) vector.[29]

We show in the Appendix that the implications of this fact for the institutional comparison turn on the relationship between e_2, k, and B. In particular, if $e_2 < \sqrt{k}/\sqrt{B}$, then for any $x \in \mathcal{M} \cap \mathcal{U}$, and for any (B_1, B_2) that sustains effort on task 2 under unbundling, the level of the bribe is higher under bundling. However, if $e_2 > \sqrt{k}/\sqrt{B}$, then there exists (B_1, B_2) such that A_2 exerts effort on task 2 and the level of the bribe to secure no effort on task 1 is higher under unbundling. In other terms, for all $x \in \mathcal{M} \cap \mathcal{U}$, if $e_2 < \sqrt{k}/\sqrt{B}$ (respectively $e_2 > \sqrt{k}/\sqrt{B}$) there exist values of policy failure to IG such that bundling (respectively unbundling) has a strict incentive advantage over unbundling (bundling).

6.3 Interactions between Tasks

In the versions of the model studied thus far, we have assumed that the two tasks are independent. In this subsection, we show that our key conclusions about when accountability under bundling is better and when it is worse hold qualitatively as long as the tasks are not strong substitutes; when they are, unbundling provides better incentives than bundling. To

[29] If the (B_1, B_2) vector is chosen optimally from the point of view of the Principal, the incidence of bribing under unbundling may change when e_2 increases, but the institutional comparison in Proposition 5 is not affected.

study the effect of the interaction between tasks, we will assume that the cost of exerting effort on task $i = 1, 2$, is $k > 0$ if no effort is exerted on task $j \neq i$, but γk if effort is exerted on task $j \neq i$. The cost of exerting effort on both tasks under bundling, will, consequently, become $2\gamma k$. We impose the restriction that exerting effort on both tasks is more costly than exerting effort on a single task, i.e. we assume $2\gamma k > k$, or equivalently $\gamma > 1/2$. If $\gamma \in (1/2, 1)$, we say that tasks are complement: exerting effort on task $i = 1, 2$, reduces the cost of effort on task $j \neq i$. If $\gamma > 1$, tasks are substitutes: exerting effort on task $i = 1, 2$, increases the cost of effort on task $j \neq i$.

We have the following result:

Proposition 6. *1. If $\gamma \in (\frac{1}{2}, \frac{B}{8k} + \frac{1}{2})$, then there exist vectors of parameters $(e_1^H, e_1^L, e_2^H, e_2^L, \pi)$ for which bundling has a strict incentive advantage over unbundling and the Principal uses the moderate retention rule.*

2. If $\gamma \in (\frac{B}{8k} + \frac{1}{2}, \frac{B}{2k})$ then there exist vectors of parameters $(e_1^H, e_1^L, e_2^H, e_2^L, \pi)$ for which unbundling has a strict incentive advantage over bundling, but no vectors $(e_1^H, e_1^L, e_2^H, e_2^L, \pi)$ for which bundling has a strict incentive advantage.

Part 1 of Proposition 6 states that bundling can have a strict incentive advantage over unbundling, which will occur under the moderate retention rule even when the two tasks are substitutes. When the value of holding office is high relative to the cost of effort, i.e. $B > 4k$, we have $\frac{B}{8k} + \frac{1}{2} > 1$ and bundling may dominate unbundling in terms of incentives even if $\gamma > 1$. This shows that the argument in favor of bundling is robust to the possibility of interactions between tasks. Part 2 of Proposition 6 states that the tasks cannot be strong substitutes, however: if $\gamma > \frac{B}{8k} + \frac{1}{2}$, bundling can never generate a strict incentive advantage over unbundling.

The intuition behind this result is simple. Under the moderate retention rule, conditional on exerting effort on task i, the Agent chooses to exert effort on task j, only if the insurance

benefit of doing so, namely $e_j(1-e_i)B$, exceeds the cost γk of exerting effort on task j. When γ is very high, exerting effort only on task i still provides the Agent with a chance at retention and moreover reduces the cost of effort on task i from γk to k. The single Agent thus coordinates her effort choices to avoid having to pay the costs of exerting effort on both tasks when tasks are strong substitutes. Under unbundling such a coordination is unavailable. Each Agent A_i has no other choice but to exert effort on task i in order to be retained. Consequently, effort on both tasks can be sustained under unbundling for levels of substitutability γ for which the single Agent under bundling would choose to exert effort on only one task rather than on both.

7 Conclusion

As democratic theorists have historically emphasized, how much control political principals have over their representatives turns on the principals' access to the accountability levers and the scope of authority exercised by the representatives. The question of whether to bundle or unbundle political authority is, from this perspective, a first-order concern in establishing accountability, and the variation in the empirical patterns of bundled authority across jurisdictions and levels of governance is a measure of political principals' attempts to move the representation closer to their ideal (as well as, arguably, of their agents' attempts to resist it). The contribution of this paper is to show how considerations of policy area complexity may and should affect the relative appeal of distinct institutional possibilities related to that variation. Although the details we provide suggest a nuanced relationship, a key normative institutional implication we emphasized is that political accountability is improved by bundling policy fields when the complexity of those fields is relatively symmetric and improved by unbundling when the complexity is sufficiently asymmetric.

We conclude with highlighting another implication. So long as the empirical evaluation

of the relative benefits of (un)bundling remains nascent there may be value in remaining cautious about interpreting many instances of apparent success or failure of accountability. A case in point is economic voting. At the heart of the economic voting paradigm is the idea that voters hold elected officials accountable by reelecting them for good, and dismissing them for bad, economic performance. Forty years of research on economic voting have established, however, that citizens fall far short of systematically rewarding or punishing the incumbent official for the performance of the economy (see Anderson, 2007; Kayser, 2014; Paldam, 1991). Our analysis suggests, however, that, even when the economy is perceived by the voters to be the most important issue, this evidence may not imply voters' inattention to the economy or be a sign of failure of democratic accountability. To assess adequately whether the electorate is effectively exercising accountability levers, we must condition the voter's response vis-à-vis the economy on the incumbent's performance in other policy areas as well as on the relative complexities of these areas. Indeed, our results show that an attentive electorate that cares foremost about the economy may be justified in supporting the incumbent when the economic performance appears poor and opposing him when the performance is good, because of the performance on other dimensions. Empirical evaluation of such possibilities should become the next frontier of understanding voting behavior in settings with bundled policy authority.

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