Does Privatising Provision Reduce Accountability for Public Services?

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Abstract

This paper shows how privatising service provision (shifting control rights and contractual obligations to providers) can: (1) demotivate the government from investigating and responding to public demands, by allowing the provider to holdup the government’s service adaptations; (2) demotivate the public from mobilising to pressure for service adaptations through an indirect holdup wherein the government pays an inflated adaptation price out of public funds. Strategic complementarity reinforces these effects and the accountability concern is further exacerbated when outsourcing contracts span an election, because opposition parties that make service quality commitments would then face an extreme inherited holdup.

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"[T]he key to reforming the public sector is not the profit motive, but democracy and accountability."\(^1\)

1 Introduction

Privatised provision is becoming increasingly common even for publicly funded services. In this paper, I investigate the theoretical basis of concerns that privatisation of provision will reduce political accountability for these services.\(^2\) It is not obvious that privatisation should matter, since politicians generally delegate provision tasks to other agents, even when provision is public. So the public are always forced to apply pressure indirectly: onto the political actors who in their turn must pressure the service providers. However, a concern, frequently raised in political debates, is that privatising provision may make it more difficult for the government to adapt service provision in response to problems or changing public demand. Furthermore, privatisation could demotivate the public from taking efforts to hold politicians accountable.

The recent experience of the British government with free school dinners offers a good illustration. In the aftermath of a series of critical television reports on school dinners by celebrity chef Jamie Oliver in early 2005, the British government rushed to quench mounting public discontent by committing to higher quality standards. However, state schools that outsource catering were unable to force their providers to meet these standards; Lawrence and Quarmby (2005) reported how schools “locked into 25-year contracts through private finance initiatives are finding that they cannot rid their menus of junk food despite the government’s pledge”. By contrast, state schools with publicly managed catering were able to quickly adapt to the public demand for healthier school dinners.\(^3\)

To analyse the adaptation flexibilities suggested by this example, I present a model of service provision that adds two novel features to the set-up studied in Hart, Shleifer and Vishny (1997), henceforth denoted HSV. In HSV (and other formal analyses), the public are passive bystanders and the government is not involved in adaptation.\(^4\) However, politicians

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\(^1\)David Hinchliffe, Chair, House of Commons Health Select Committee, in Pollock, Shaoul and Player (2001).

\(^2\)Political accountability remains crucial, because full public funding rules out the direct (market price) accountability of providers to individual consumers.

\(^3\)For most state schools, the contracts with catering companies are shorter (five years) but still problematic, because it is hard for activists to stay mobilised and maintain issue’s salience for long. E.g., in Islington, London, where a private company called Cambridge Education Authority (CEA) runs all the state schools, CEA signed 5-year contracts outsourcing provision of school dinners to a private caterer (Scolarest) and CEA’s schools have (so far) neither managed to negotiate an opt out from Scolarest, nor an improvement in Scolarest’s service quality.

\(^4\)Hart (2003) explains the existing focus as follows: “the idea that government ownership leads to more
must investigate public demands and ways to satisfy them if they are to be accountable. Furthermore, if the public want to hold their politicians accountable, the public must discover their own preferences, communicate them to the politicians, and mobilise to pressure for service improvements (e.g. public awareness actions increase the likelihood that voters take account of service quality when voting over the mayor’s reelection). So in my model: (1) the government (e.g. town mayor) exerts effort to understand and calculate how to respond to public demands; (2) the public – third parties from the contractual perspective – exert efforts to evaluate service quality, discover feasible alternatives and pressure for change.

I show that when the government cannot anticipate desirable service adaptations in its outsourcing contracts, it has to pay more for these adaptations under private than public provision. My main result is that this cost inflation demotivates the government and the public from exerting the efforts that generate accountability. I also show how politicians may be biased towards selecting the private over the public mode of provision, because privatisation reduces the public’s efforts to hold politicians accountable.

These results reveal a new mechanism by which privatisation may decrease service quality. Unlike existing theories, my accountability results can explain why privatisation might raise consumer prices. A number of papers suggest that privatisation can raise prices. For instance, privatisation of electricity utilities was widely predicted to lower consumer prices, but Kwoka (2002 and 2005) compares public and private provision of electricity in the U.S. and finds that “public ownership is associated with significantly lower [residential consumer] prices” as well as higher quality. HSV only predicts reduced quality (read higher prices) on privatisation when quality is not advance contractible (and cost-reduction efforts reduce quality), but price caps are advance contractible, so HSV and related theories predict that privatisation will lower costs and therefore prices. By contrast, the accountability mechanism can explain the observed higher prices: privatisation dissuades the public from mobilising to pressure the government to restrain consumer prices.

I illustrate my main contributions in the context of school dinner provision in a village school. A village mayor runs the local government. The mayor is too busy to manage catering directly so she pays a manager to provide the school dinners.\(^5\) In the case of public provision, the mayor retains control of the assets needed for catering and pays the manager to devote time to run the service according to her orders. By contrast, when the mayor opts for private provision, she gives the manager significant control rights and signs a long-term contract guaranteeing the manager a fixed payment in return for a well-defined catering service. As

entrepreneurship by bureaucrats seems less [plausible].”

\(^5\) The public pay for the service indirectly through taxation; the mayor spends the money on their behalf.
in HSV, privatising provision increases the manager’s incentive to invest to cut costs: under public provision, the mayor can hold up the manager by paying less after the manager cuts his cost, whereas the private contract fixes what the mayor must pay for the basic catering service. So privatisation can increase cost efficiency.

Unlike in HSV, the underlying problem with privatisation is that it often prevents the mayor from exploiting adaptation gains in the absence of the manager’s cooperation. For instance, if activists convince the mayor that healthier ingredients are crucial, the mayor cannot oblige the private manager to adapt the menus and the mayor (usually) cannot credibly pay an alternative manager to provide healthier food alongside the basic service from the incumbent manager, since this would waste economies of scope in catering (as well as much of the incumbent’s basic food service). By contrast, under public provision, the mayor can usually replace or sideline the incumbent catering manager for disobeying orders to adapt to healthier ingredients. So a private, but not a public, manager can hold up the mayor for a share of the mayor’s gain from adaptation. This holdup demotivates the mayor from attentively listening to public demands and working out how to satisfy them.

The private manager can also indirectly hold up the activists. Activist pressure raises the mayor’s adaptation benefit. The private manager therefore charges the mayor an inflated price for adaptation. Since the mayor pays using public money, this price inflation demotivates the public from participating in service evaluation and pressuring for service improvements. Privatisation therefore exacerbates the free-rider problem faced by the public in mobilising to improve public services.

These direct and indirect holdup effects are usually mutually reinforcing: the mayor has no incentive to investigate public concerns if the public do not mobilise enough to hold the mayor accountable for service quality; conversely, the public only benefit from mobilising if the mayor is receptive to pressure. Overall, there is a clear tradeoff between keeping catering in-house to raise dynamic accountability and outsourcing to raise the provider’s cost-cutting incentives.

The sharpness of this tradeoff depends on the difficulty of accessing alternative providers alongside a long-term contract. I therefore apply Ellman (2006) to suggest how contract design can limit the accountability problem and to predict where privatisation will be particularly harmful. For privatisation projects, such as build-and-operate public-private partnerships (PPPs), that require very long-term contracts, there is the added problem that the contracts...
will span an election. Then, if a candidate for mayor wins the election on a ticket committing to fix the service problem, this new mayor would inherit a particularly pernicious holdup, since her entire reputation for honesty would be at stake.

My model also permits a simple positive analysis of the privatisation decision. In section 5, I show that politicians are biased towards choosing privatisation in the sense that private provision is less likely when voters decide privatisation in a referendum. The reason is that privatisation reduces the public’s efforts to hold politicians accountable.

The paper is organised as follows. Section 2 presents the basic model of service provision. Section 3 solves the model for subgame-perfect equilibria when the provision mode is predetermined. Section 4 solves for the provision mode, first when chosen by the government and then when chosen by the people. Section 5 presents the public pressure version of the model. Section 6 discusses the results, presents alternative perspectives and applies the analysis to help understand specific case studies of privatised services. Section 7 concludes.

1.1 Related Literature

As noted above, the building block for my analysis of privatisation and residual control rights is HSV. Hart, Shleifer and Vishny identify a tradeoff between privatising to raise cost-cutting incentives and public ownership to increase quality investments. However, the mechanism by which privatisation reduces quality is very different. In HSV, the government makes no investment, but privatisation can lead to excessive incentives to cut cost because cost-cutting lowers quality in their model. Hart (2003) extends the analysis by studying the bundling of construction and service provision in PPPs, but retains the view that government ownership is unlikely to lead to more entrepreneurship. By contrast, I argue that politicians play an important role in generating change, even if their only role is to investigate public preferences and activism to discover which changes will help them win future elections.

HSV and other existing theories (including those based on multi-tasking) derive quality problems as a “negative externality” of the higher incentives generated by privatisation. My accountability explanation shares the low quality prediction, but the mechanism – accountability – is very different. Hence the unique ability to explain Kwoka’s (2002 and 2005) evidence as noted above.


8The politician’s bias may also be avoided when politicians compete on electoral platforms that define their commitment to the public/private governance mode.
There is a host of other related work on privatisation in the case of standard production. One important alternative perspective maintains that privatisation reduces government access to information (see e.g. Shapiro and Willig (1990) and Schmidt (1996)). My analysis can be consistent with this approach because if privatisation increases the risk of asymmetric information, it should increase the risk that asymmetric information arises and prevents the government and provider from agreeing on the terms of trade valuable for adaptation – the “undertrading problem”. The government is then less responsive to public demands and the public have less incentive to mobilise.⁹

My work is also linked to the literature on political economy (and influence). Bennedsen (2000) develops a common agency model where politicians adjust/distort their policies to earn contributions from lobbyists. The public are passive (at elections they are implicitly susceptible to persuasion by well-funded political parties), but the behaviour of the union lobby has some parallels with the activist public in my model, since Bennedsen shows that privatising control can demotivate lobbying by unions.¹¹

I consider two interpretations of the public’s role in service adaptation. In the first interpretation, the public participate by giving the mayor information and the mayor has a fixed electoral or ethical incentive to respond. In the second interpretation, the public apply pressure on the mayor. This second interpretation is founded on Besley and Burgess’s (2001 and 2002) approach to accountability: the government is more responsive if people are more aware of how government actions affect them. In Besley and Burgess’s work, the freedom of the press determines public awareness and hence government accountability. In my analysis, it is activist members of the public who determine awareness and accountability. For instance, activists can encourage, persuade and help newspapers to report on the public service issue.

⁹Another important perspective is that of Laffont and Tirole (1991) who show that privatisation introduces a common agency problem because of the new set of principals - the shareholders. My analysis effectively adds yet another set of principals - the voters - whose control is limited to voting in elections.

¹⁰In a sense, my results on public activism and participation capture the idea of Milgrom and Roberts (1988) that reducing the mayor’s discretion reduces the degree to which the public exert effort to influence the mayor’s choices. The difference is that influence is desirable in my model.

¹¹As in my setting, increasing governmental control rights makes it more worthwhile to apply pressure on the government. My analysis demonstrates, in a simple and direct way, this intuition for pressure and participation from the general public (not just organised lobbyists); I have unique equilibria and avoid Bennedsen’s (2000) assumption that shareholders and unionists can contract with the government but cannot negotiate with each other. On the other hand, Bennedsen (2000) also analyses a separate aspect of privatisation – the role of shareholders: privatising cash-flow rights (corporatisation) creates a shareholder lobby that counterbalances the union lobby.
2 The Model

This section presents a simple model of the choice between public and private modes of governance for a public service (such as park maintenance, road maintenance, garbage collection, care of the elderly, health care, transportation, water and education). I endogenise the accountability of politicians to changing public demands by adding a third party (the public) and allowing for variable contract length within the framework of HSV. So there are three actors: a government G (e.g. a mayor),\textsuperscript{12} a manager M and an action group A, representing aggregate public activism and participation in politics.

G uses public funds to organise service provision on the public’s behalf. G always delegates the service provision task to a manager (M), but can choose between public (“in-house”) provision and private provision (“outsourcing” to a private organisation). So M can be a public manager/employee or a private manager.\textsuperscript{13}

There are two crucial differences between public and private provision: privatisation formally delegates residual control and uses long-term performance contracts to delegate specific service obligations. So under public provision, G retains ownership and control, while under private provision, G and M sign a long-term contract committing G to pay for, and M to provide, a defined public service over a defined period (see $\alpha$ below); G also transfers to M sufficient residual rights of control to provide this service free of interference.\textsuperscript{14} The public/private distinction matters, because it affects what happens when G and M need to make unanticipated changes in their joint trade; over time, G and M may learn better ways to write contracts or satisfy a given contract.

At the start of their relationship, G and M can only negotiate a “basic” performance contract, $X$.\textsuperscript{15} I normalise the non-contingent transfer in $X$ to that which just compensates for standard costs of provision: $X$ generates (net) payoff flows of $b$ for G and $w(e)$ for M where $w(e)$ is M’s cost advantage (over a standard provider) from investing $e$ in specialising to G.

G and M should adapt this contract when public preferences change and when (with A’s help) they discover improved policies and technologies. I focus on G and A’s efforts in making

\textsuperscript{12}In the case of decentralised service provision, G would be a mayor or local government, and in the case of directly elected public agencies, G would be the elected head.

\textsuperscript{13}Note that payment is not privatised here (service funding is always public) and I follow HSV in studying privatisation with manager owned firms.

\textsuperscript{14}The transfer of residual control rights from G to M may be temporary and timed to coincide with the duration of the performance contract (as in a concession). In the public case (employment), G typically covers all input costs and compensates M’s exclusive labour dedication; see Ellman (1999) and Levin and Tadelis (2006).

\textsuperscript{15}The focal investments, $e$, $i$ and $j$, are not contractible and nor are their payoff implications $w(e)$ and $v(i,j)$.
adaptation possible, since M’s incentive to exert adaptation efforts would not vary with the governance structures analysed. As elected delegate of the public, it is G’s job to pressure M to satisfy changes in effective public demand: G can exert effort $i$ to discover what the public want and how to satisfy their demands. The public can also participate: A exerts effort $j$ in investigations to discover socially valuable adaptations and in political participation (or communication) to ensure that G understands public demands. Efforts $i$ and $j$ combine to increase the expected increase in social value from implementing the best service adaptation that becomes feasible. (Note that best is defined from G and M’s bilateral perspective since A is not directly involved in negotiation.) I denote the corresponding adapted contract by $Z$, again with the non-contingent transfer set to just compensate the standard costs of provision. For simplicity, I assume that (while specific to G) $e$ also helps M satisfy $Z$, so M’s payoff from enforcement of contract $Z$ throughout the trading period is again $w(e)$. G’s payoff from $Z$ is therefore $b + v(i, j)$ where $v \geq 0$.

$v$ is increasing in $i$ and $j$, because $i$ and $j$ increase public welfare and G internalises fraction $g$ of public welfare: $g \leq 1$ represents G’s benevolence (public-service orientation) and/or G’s electoral motivation to gain public approval.\(^{16}\) Similarly, A internalises a fixed fraction $a \leq 1$ of public welfare; typically $a < 1$, because the public face a free-rider problem in pressuring G to improve public services.\(^{17}\) So payoffs from $X$ are $b$ for G, $\frac{1}{g} b$ for the public, $\frac{a}{g} b$ for A, $w(e)$ for M; payoffs from $Z$ are $v(i, j)$ for G, $\frac{1}{g} v(i, j)$ for the public, $\frac{a}{g} v(i, j)$ for A and $w(e)$ for M.

It is also important for G to be accountable to public demands for reducing taxation. I assume a shadow value $\lambda$ of public funds; $\lambda > 1$ because of tax distortions; to simplify notation, I work with parameter $l = \frac{\lambda}{g} (G’s marginal payoff cost of using public funds). I normalise time discounting to zero, so enforcement of contract $Z$ with G paying up-front transfers $t_0$ and subsequent transfers $t$ gives G, A and M’s overall payoffs as:\(^{18}\)

$$
\begin{align*}
 u_G & = b + v(i, j) - l(t_0 + t) - i \\
 u_A & = \frac{a}{g} (b + v(i, j) - l(t_0 + t)) - j \\
 u_M & = t_0 + t + w(e) - e
\end{align*}
$$

\(^{16}\)Section 5 treats the public pressure interpretation of $j$, endogenising G’s concern for public benefits.

\(^{17}\)E.g. $a = \frac{1}{N}$ if effective mobilisation $j$ equals the sum $\sum_{n=1}^{N} j_n$ of $N$ individual efforts $j_n$ simultaneously chosen by a homogeneous and uncoordinated public. Section 7 discusses heterogeneity and special interest lobbies.

\(^{18}\)If instead contract $X$ were enforced, the $v(i, j)$ term is removed, but G and M could engage in alternative trades as well (see below). If no contract were enforced, $b + v(i, j)$ and $w(e)$ disappear, but again G and M may engage in alternative trades.
The following regularity assumptions simplify by guaranteeing sufficiency of first-order conditions.

**Assumption 1** \( w''(e) < 0 < w'(e) \) \( \forall e \geq 0 \) and \( \lim_{e \to 0^+} w'(e) = \infty, \lim_{e \to \infty} w'(e) = 0 \).

**Assumption 2** \( v(i, j) \) is negative semi-definite and \( \lim_{i \to 0^+} v_i(i, j) = \lim_{j \to 0^+} v_j(i, j) = \infty \),
\( \lim_{i \to \infty} v_i(i, j) = \lim_{j \to \infty} v_j(i, j) = 0, \forall i, j \geq 0 \).

I assume information is symmetric and M and G negotiate a Pareto efficient (symmetric) Nash bargain,\(^{19}\) so \( Z \) is enforced in equilibrium, but privatisation and contract length matter because they affect default outcomes in bargaining and hence the equilibrium choices of \( i, j, e \).

I capture these effects in a simple four-stage model and then relate to the arbitrary finite horizon setting of Ellman (2006). I write ‘fixing \( \alpha \)’ to denote commitment to enforcement of contract \( X \) for fraction \( \alpha \) of stage 3 trading; no contract is enforced on the remainder and I denote this by the “null” contract \( \Phi \).\(^{20}\)**

**Timing:**

Stage 0: G, M negotiate over stage 3 contracts \( \{\Phi, X\} \), fixing \( \alpha \) and transfer \( t_0 \).
Stage 1: G, A, M sink their investments \( i, j, e \).
Stage 2: G, M negotiate over stage 3 contracts \( \{\Phi, X, Z\} \) and additional transfer \( t \).
Stage 3: G, M trade (jointly or with their market alternatives).

The up-front transfer \( t_0 \) cannot depend on observed investments, so it plays no role in determining investment efficiency; the subsequent transfer \( t \), negotiated on top of contract \( Z \) at stage 2, depends on the stage 2 default payoffs which in turn depend on the governance mode. If G and M do not sign a long-term contract (i.e. agree at stage 0, to enforce \( X \) at stage 3), then in default of an agreement at stage 2, M would switch to its best alternative activity, generating an alternative payoff of \( t_0 + 0 \) (a normalisation) and G would switch to trading with a substitute \( M' \) of M who provides the basic or adapted service at the standard cost – M’s cost plus \( w(e) \).\(^{21}\) So G’s payoff from switching to \( M' \) is \( b + v(i, j) - l \cdot t_0 \).\(^{22}\)

On the other hand, if G and M commit to \( X \) at stage 0, they cannot switch to alternative trades. They might still engage in “side-trades”: M’s side-trading returns are independent

\(^{19}\)Generalising (e.g. to allow asymmetry) and formulating non-cooperative extensive-form games is straightforward.

\(^{20}\)P and A may trade in stage 1, but I leave implicit the contract that enforces this trade.

\(^{21}\)If M has a prior cost advantage or sunk contractible relationship-specific investments (in addition to the optional relationship-specific investment \( e \)) then \( w(0) > 0 \). Implicitly, either competition is such that G need only compensate M’s costs or the standard cost involves a mark-up.

\(^{22}\)I assume \( b_0 > 0 \) so this always exceeds G’s payoff from doing nothing; i.e. G credibly replaces or sidelines an uncooperative public manager M.
of $e, i, j$, so I normalise M's side-trade value to 0, generating a default payoff of $t_0 + w(e)$; more interestingly, G could pay a substitute provider $M'$ to provide the service adaptation alongside the basic public service provided by M. Unfortunately, this market access by G is often ineffective: (1) the long-term contract may directly restrict this market access (e.g. private caterers usually demand exclusive territory rights) or transfer control rights from G that are needed for adaptations; (2) G cannot credibly duplicate the basic service by buying the adapted service from $M'$ if the additional value from adaptation is not high enough; (3) even when it is technologically feasible to have $M'$ provide the adaptation alone, to do so wastes the economies of scope that accrue when a single party provides and coordinates both basic and adaptation services. To capture G’s reduced market access, I assume side-trading only increases G’s payoff from the basic contract $b - lt_0$ (at transfer price $t_0$) by $(1 - k) v(i, j)$, where $k \in (0, 1]$. I refer to $1 - k$ as the “side-compatibility” of the adaptation investment with the basic service contract; side-compatibility is full if $k = 0$ and zero if $k = 1$.23

2.1 Effort under public provision

Under public provision, M has to be continually motivated to implement the basic trade so, in default of renegotiation with M, G would turn to an alternative manager $M'$ who implements the adapted service. In this default, G exploits $i$ and $j$ but cannot exploit M’s specific investment $e$.24 G’s default payoff is

$$b - lt_0 + v(i, j)$$

M’s default payoff is simply $t_0$.25 So G’s maximal gain from renegotiation is $l \cdot w(e)$. G’s actual renegotiation gain is therefore $\frac{lw(e)}{2}$ and M gains $\frac{w(e)}{2}$. To solve for the subgame perfect equilibrium, I add the default payoffs to each party’s renegotiation gain. G chooses $i$ to maximise

$$b + v(i, j) - lt_0 + \frac{l \cdot w(e)}{2} - i$$

and M chooses $e$ to maximise

$$w_0 + \frac{w(e)}{2} - e$$

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23 Ellman (2006) endogenises $k$; section 6 below discusses relevant examples.

24 My assumption that $e$ is fully specific to M as well as to G is valid when M has specific knowledge or $e$ is a human capital investment, but does not allow for the possibility that public provision might permit G to appropriate some of the returns on M’s investment $e$ by exploiting M’s ideas and asset-specific investments without M’s cooperation (c.f. HSV). This would increase the holdup of $e$ under public provision.

25 These are the payoffs in default of renegotiation throughout the whole of stage 3. Ellman (2006) proves that for payoff structures that are stationary during stage 3, the game with ongoing renegotiation is equivalent to the game with renegotiation at stage 2 alone.
Since adaptations have an externality on A, A chooses j to optimally influence the outcome: j maximises
\[ \frac{a}{g} \left( b + v(i, j) - lt_0 + \frac{l \cdot w(e)}{2} \right) - j \tag{3} \]
The efforts sunk at the investment stage (stage 1) are therefore characterised by the first-order conditions,
\[ v_i(i, j) = 1 \quad w'(e) = 2 \quad \frac{a}{g} v_j(i, j) = 1 \quad \text{(FOCpublic)} \]

### 2.2 Effort under private provision

Under the long-term contract used for privatisation, in default of renegotiation, G can only appropriate a fraction \( 1 - k \) of the adaptation return \( v(i, j) \) for the duration of the contract. So if the contract has length \( \alpha \), G’s default payoff is
\[ b - lt_0 + (\alpha (1 - k) + (1 - \alpha)) v(i, j) \]
\[ = b - lt_0 + (1 - \alpha k) v(i, j) \]
Meanwhile, the contract, while it lasts, protects M’s cost-reduction efforts: the contract forces G to pay a fixed price for the basic service and M appropriates the full cost reduction \( w(e) \) over fraction \( \alpha \) of stage 3; M’s default payoff under privatisation is
\[ t_0 + \alpha \cdot w(e) \]
G’s maximal gain from renegotiation is therefore \( l (1 - \alpha) w(e) + \alpha k \cdot v(i, j) \). G and M’s respective renegotiation gain equal \( \frac{1}{2} \) and \( \frac{1}{2l} \) of this sum. So G chooses \( i \) to maximise
\[ b - lt_0 + \left( 1 - \frac{\alpha k}{2} \right) v(i, j) + \frac{l (1 - \alpha)}{2} w(e) - i \]
\[ = t_0 + \frac{1 + \alpha}{2} w(e) + \frac{\alpha k v(i, j)}{2l} - e \tag{4} \]
and M chooses \( e \) to maximise
\[ \frac{a}{g} \left( b - lt_0 + \left( 1 - \frac{\alpha k}{2} \right) v(i, j) + \frac{l (1 - \alpha)}{2} w(e) \right) - j \]
\[ = t_0 + \frac{1 + \alpha}{2} w(e) + \frac{\alpha k v(i, j)}{2l} - e \tag{5} \]
Again A responds to the externalities by choosing \( j \) to maximise
\[ \frac{a}{g} \left( b - lt_0 + \left( 1 - \frac{\alpha k}{2} \right) v(i, j) + \frac{l (1 - \alpha)}{2} w(e) \right) - j \]
This generates the first-order conditions
\[ v_i(i, j) = \frac{2}{2 - \alpha k} \quad w'(e) = \frac{2}{1 + \alpha} \quad \frac{a}{g} v_j(i, j) = \frac{2}{2 - \alpha k} \quad \text{(FOCprivate,\( \alpha \))} \]

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Notice that, by ruling out permanent transfer of control rights, I have ensured that public provision is equivalent to setting $\alpha = 0$. If instead, privatisation included a transfer of specific assets from G to M, public provision would generate higher adaptation incentives than private provision even at $\alpha = 0$, because M could then hold up the asset-specific component of $i$ and $j$ even after the contract expires. So raising $\alpha$ could be reinterpreted as a shift in control rights to M. (G rarely transfers ownership of unique assets to M, since a common goal of privatisation is to create competition among alternative providers, but some specific assets are often privatised instead of temporarily transferred by concession.) Also employment contracts often impose increased obligations on managers (under public provision, G buys M’s time by restricting M’s alternative activities in stage 1 – see Ellman (1999) and Levin and Tadelis (2005)). This again reinforces my accountability results. A further contrast, increasing the likelihood of the public mode (‘corner solution’ $\alpha = 0$) is that the public mode of provision avoids the transaction costs of designing a reasonable private contract – see Bajari and Tadelis (2003).

3 Accountability comparisons

The above two sets of first-order conditions demonstrate how privatisation increases M’s incentives to cut cost from half of $w'(e)$ in (FOCpublic) to the higher fraction $\frac{1+\alpha}{2}$ of $w'(e)$ in (FOCprivate,$\alpha$), but at the same time decreases G’s incentives to support adaptations down from the full marginal incentive $v_i(i,j)$ to the fraction $\frac{2-\alpha k}{2}$ of $v_i(i,j)$. Privatisation also decreases A’s incentives to work for adaptations (see 3.2 below on this indirect holdup) from the full margin $\frac{2}{a} v_j(i,j)$ down to the fraction $\frac{2-\alpha k}{2}$ of $\frac{2}{a} v_j(i,j)$. Furthermore, when $i$ and $j$ are strategic complements, privatisation’s negative effects on $i$ and $j$ are mutually reinforcing as I show in subsection 3.3. To clarify the accountability interpretations of these effects, I describe in turn the cases where A takes no action, where G takes no action and then the common case where A and G’s efforts are strategic complements.

3.1 Government attentiveness

To isolate the effect of privatisation on G’s incentives, I first analyse the case where $v = v(i)$, independent of $j$. I interpret $v(i)$ as a measure of G’s success in identifying adaptations that are valued by the public. So $i$ represents G’s efforts to pay attention to public concerns about service quality. These efforts enable G to discover adaptations that are valued by the public and likely to be salient at the time of G’s re-election. For instance, when there is a public
demand for a concrete change, \( i \) raises the probability that \( G \) recognises that the demand is serious (enough to affect \( G \)'s reelection) and/or \( i \) raises the probability that \( G \) works out how to satisfy public demands.\footnote{Notice that I plausibly assume \( G \) does nothing when unsure what adjustments are demanded. My model would need a minor change if \( G \)'s prior beliefs induce \( G \) to make the adaptation when only able to access the prior. \( G \)'s investigation efforts would then reduce the probability that \( G \) responds to the public demand for adaptation. However, in this case, it is easy to show that \( G \) would investigate more rather than less under privatisation - the reason is that \( G \)'s investigations would then reduce exposure to holdup by \( M \). So privatisation still reduces accountability.} So \( v' (i) \) can be interpreted as a measure of \( G \)'s responsiveness to public demand - how likely it is that \( G \) manages to at least placate the general public. The more attentive \( G \) is, the more likely \( G \) can and will respond.

Under public provision, \( G \)'s effort \( i \) is determined by the first order condition, \( v' (i) = 1 \) (as shown in equation (FOCpublic)). \( M \) is unable to hold up \( G \), because investment \( i \) is general and \( G \) can therefore exploit \( i \) by replacing or sidelining an uncooperative \( M \). In contrast, under private provision, \( M \) can hold up \( G \), because \( i \) is an adaptation investment and the greater the basic contract's duration \( \alpha \), the longer \( G \) must wait before able to access effective market alternatives. \( G \)'s incentive is thereby reduced by the fraction \( 1 - \frac{\alpha}{\beta} \) as shown in equation (FOCprivate,\( \alpha \)). Accordingly, \( i^{public} > i^{private, \alpha} \) for any contract of length \( \alpha > 0 \) and privatisation reduces \( G \)'s attentiveness by more, the greater is \( \alpha \) (since \( 1 - \frac{\alpha}{\beta} \) falls with \( \alpha \)). Since the social return on \( i \) is given by \( \frac{1}{\gamma} v (i) \) and \( g < 1 \), public provision also generates under-attentiveness. So private provision, by exacerbating this problem, is clearly harmful to accountability. The following proposition records these points along with the, now well-known, advantage of privatisation - namely, that long-term contracting increases \( M \)'s incentive \((\frac{1+\alpha}{\beta} w' (e))\) to cut provision costs.

**Proposition 1** For a fixed level of public pressure \( j \) or for \( v \) independent of \( j \), government attentiveness and equilibrium responsiveness to public demand are higher, but cost efficiency is lower, when the service is publicly provided than when the service-provider is private. Increasing the contract length \( \alpha \) of a private provider augments these differences. \( e^{public} < e^{private} (\alpha) \), \( i^{public} > i^{private} (\alpha) \), \( \forall \alpha > 0 \) and \( \frac{de^{private} (\alpha)}{d\alpha} > 0 \), \( \frac{di^{private} (\alpha)}{d\alpha} < 0 \).

In sum, privatisation requires long-term contracts and transfer of control rights to protect \( M \)'s investments \( e \) in cost reduction from \( G \)'s market threats, but these long-term contracts and reduced control rights reduce \( G \)'s access to market alternatives that protect \( G \)'s adaptation investments. So privatisation reduces \( G \)'s holdup of \( M \)'s self-investments (in cost-reduction), but increases holdup of \( G \)'s adaptation investments at the hands of the private provider. The message of this subsection is that privatisation encourages \( M \)'s cost reduction but demotivates
G from working to understand and satisfy changing public demand. Proposition 1 demonstrates the tradeoff in section 4 between privatising to raise cost-efficiency and keeping provision public to raise accountability.

This result is directly relevant for situations where public pressure is essentially independent of government attentiveness and of service privatisation. For instance, where voters are passive except during elections or A is an action group whose members have a fixed time and budget constraint. However, in general the public, or at least some of its members, play an important role in generating political accountability as I explain next.

3.2 Public mobilisation

The holdup of G by M derived in the previous subsection hurts A because adaptations have a positive externality on A. In this subsection, I explain how the public/private choice determines whether M can also exert an indirect hold up on A.

The indirect holdup is implicit in A’s first-order conditions – private provision reduces A’s adaptation incentives by the fraction \( \frac{2}{\alpha k} \) – but I first describe the mechanics of the problem to clarify why I call this an indirect holdup. A invests effort \( j \) to pressure G to make an adaptation. This raises G’s value from adapting. Under private provision, G relies on M to implement the adaptation, so M can demand a share of G’s benefit. Because G transfers utility to M using public funds, A suffers when M holds up G. Since A is the investor, the real holdup is perpetrated by M against A, but it is indirect since A cannot negotiate with M. The basic intuition is that A only gains from pressuring its agent, G, if G can respond; while M allows G to respond in return for a payoff, when M demands a share of G’s adaptation return, this has a negative externality on A because G pays up using public funds.

Under public provision, G can force M to implement the adaptation at actual cost, so A evades the indirect holdup and A’s incentives to apply pressure are higher than under private provision. So again public provision has a clear advantage in terms of inducing accountability. The following proposition records this result and repeats the tradeoff of public accountability against privatisation’s cost-efficiency.  

Proposition 2 If \( v \) is independent of \( i \) or the level of government attentiveness \( i \) is fixed, both public mobilisation and the government’s equilibrium responsiveness to public demand for service adaptation are higher when the service is publicly provided than when

\[ 27 \text{Strictly-speaking, I should say cost-reduction rather than efficiency, but in section 4 I prove that the incentives for } e, i, j \text{ are never too high so increasing incentives raises efficiency and the statement is valid, albeit premature.} \]
the service provider is private. Furthermore, mobilisation decreases with the length of contract $\alpha$ used to motivate the private provider. There is a tradeoff between privatisation with a long-term service contract which raises cost efficiency and public provision which leads to greater mobilisation and political accountability. Mathematically, $e_{\text{public}} < e_{\text{private}}(\alpha), j_{\text{public}} > j_{\text{private}}(\alpha), \forall \alpha > 0$ and $\frac{de_{\text{private}}(\alpha)}{d\alpha} > 0, \frac{dj_{\text{private}}(\alpha)}{d\alpha} < 0$.

The formal derivation is exactly as for the previous subsection, except that A’s incentives are scaled up by the multiplicative factor $\frac{a}{g}$ in both the public and private modes. As in the previous subsection, privatisation reduces the cost of the basic service by protecting cost-reduction investments, but it raises the equilibrium costs of service adaptation. This reduces the public’s incentive to mobilise to pressure for adaptations. The new message is that privatisation exacerbates the problem of motivating the public to impose accountability on the government.

3.3 Strategic complementarity in accountability

Investments $i$ and $j$ are often strategic complements: the greater is G’s attentiveness, the more sense it makes for A to investigate and communicate public preferences and to apply pressure on G; conversely, the more active is A, the more G can gain from being attentive to A and to service issues. In this subsection, I show how strategic complementarity between $i$ and $j$ exacerbates the problem of privatisation, by analysing the mutual reinforcing knock-on effects of privatisation’s direct effects on $i$ and $j$. Even though $i$ and $j$ are chosen simultaneously, my assumptions ensure that equilibria are unique, and it is straightforward to prove that the effects identified in propositions 1 and 2 continue to hold, with an increase in the advantages from public provision.

**Proposition 3** If public pressure and government attentives are strategic complements – i.e. $v_{i,j}(i,j) > 0$ – then: (i) $e_{\text{public}} < e_{\text{private}}(\alpha), j_{\text{public}} > j_{\text{private}}(\alpha), \forall \alpha > 0, \frac{de_{\text{private}}(\alpha)}{d\alpha} > 0, \frac{dj_{\text{private}}(\alpha)}{d\alpha} < 0$; (ii) $v_{ij}$ raises $e_{\text{public}} - i_{\text{private}}(\alpha)$ and $j_{\text{public}} - j_{\text{private}}(\alpha)$ but has no effect on $e_{\text{private}}(\alpha) - e_{\text{public}}$.

There are two reasons why $v_{i,j} > 0$ might hold. First, communication is a two-sided activity: G must exert effort to listen to the demands of A (e.g. by inviting public participation and conducting surveys) or at least to monitor their political significance (in the case of public pressure on a reluctant government). So some degree of complementarity is always present and it is common to assume complementarity over the full range of relevant efforts (see e.g. Dewatripont and Tirole, 2005). Second, G’s awareness of public preferences and public pressure only leads to adaptations if G knows how to satisfy these demands, so G’s efforts in monitoring service provision and alternative provision options complement A’s efforts to communicate and apply pressure.
Because of these complementarities, the timing of play is important. A sequential set-up in which the public move first (and the government observe this before moving) is plausible if one interprets the government’s main receptiveness choice as one over effort to work out how to satisfy the mobilised public’s demands. Having the public move second is relevant if, e.g., the government organises public meetings about service preferences and the public respond by supplying effort to actively participate in these meetings. The simultaneous setup that I treat here is relevant if the public cannot observe government efforts and the government must exert effort to discover the effectiveness of a mobilisation. The sequential time orderings reduce the likelihood of multiple equilibria and shift the effort levels, but do not interfere with the qualitative nature of my results.

4 The privatisation decision

The previous section solved for the implications of the public and private provision alternatives. In this section, I analyse the choice between these alternatives in two cases: first, when the government decides the provision mode and second, when voters decide. Note that voters decide if the private/public decision is made through a referendum. Voter preferences are also particularly influential when political parties are able to make electoral commitments over their plans to privatise or nationalise/municipalise. While costs of switching between private and public modes of provision (say from expertise and organisational capital that build up in support of the current provision mode) may generate a strong status quo bias not captured here, these costs make it all the more important to be able to predict the long-run comparative levels of social welfare under the alternative provision modes. This section helps to answer this question, because the endogenous level of accountability for adaptations is a key component of long-run service quality.

If both the markets for employee managers and service contractors are perfectly competitive at stage 0, the negotiation over $t_0$ (M’s salary if a public employee and contract price if private) ensures that M’s average equilibrium payoff equals M’s market opportunity cost which I denote by $r$. So the respective values of $t_0$ in the public and private cases are determined by equating the expressions for $u_M^{\text{public}}$ and $u_M^{\text{private}}$ from equations 2 and 5 with $r$. Substituting for $t_0$ into equations 1 and 4, respectively, reveals that G’s payoff is given by the bilateral surplus with M evaluated at the subgame-perfect levels of $(e, i, j)$:

\[
\begin{align*}
    u_G^{\text{private},\alpha} &= b + v(i, j) - l(r + e - w(e)) - i \text{ at } (e, i, j) \text{ satisfying FOC}_{\text{private},\alpha} \\
    u_G^{\text{public}} &= b + v(i, j) - l(r + e - w(e)) - i \text{ at } (e, i, j) \text{ satisfying FOC}_{\text{public}}
\end{align*}
\]
Whenever G chooses the private mode of governance, G chooses the contract length $\alpha$ that maximises $u_{G}^{\text{private},\alpha}$. As explained in section 3 (indented text), I have set up the model so that public provision is represented by the corner solution in which it is optimal for G to set $\alpha = 0$. This permits almost direct application of the results from proposition 4a of Ellman (2006): increasing $l$ is equivalent to raising the “importance” of self-investment $e$, so from G and M’s perspective, the optimal contract length increases with $l$. In particular, there exists $\hat{l}$ such that it is optimal to set $\alpha = 0$, i.e. to adopt the public provision mode, for all $l > \hat{l}$. (Since this cut-off is determined by G’s preference, I write $\hat{l}^G$.) To simplify, I assume $w''(e)w'(e) < 4(w''(e))^2$ and the same for $v$ with respect to $i$ and $j$ – these are sufficient conditions for all the problems of (G and A and the public) optimising over $\alpha$ to be regular.\(^{29}\)

**Proposition 4** If the government places sufficient weight on the quality of the public service relative to the cost of public funds, the government prefers public to private provision:

$$\exists \hat{l}^G: l < \hat{l}^G \Rightarrow u_{G}^{\text{public}} \geq \sup_{\alpha} u_{G}^{\text{private},\alpha}$$

This result is intuitive. From G and M’s perspective, $i$ and $e$ should be such that $w'(e) = 1$ and $v_i(i,j) = 1$ and the higher is $j$, the better. So they are concerned about underinvestment in $e$, $i$ and $j$. Privatisation raises $e$ towards the optimum level, but exacerbates the under-investment in $i$ and $j$ since it reduces G’s ability to appropriate the returns from improving service quality.

## 5 Public pressure and accountability

In the introduction, I presented two leading interpretations of the accountability mechanism. In the first interpretation, accountability is enhanced by discovery and communication of adaptation alternatives. In the second interpretation, accountability is increased by pressure that increases G’s sensitivity to public concerns. In this section, I first show how the pressure and communication interpretations can be consistent with my payoff assumptions. I then explain why public pressure tends to decrease G’s payoff and derive the implications of this adjustment in the model.

\(^{29}\)The proof of proposition 4 reveals one minor complication for applying the proofs from Ellman (2005): since $j$ is chosen by a third party (A), the costs of $j$ are neglected by G and M; this changes the form of the optimand, but the benefit through $j$ from increasing $\alpha$ ($v_j(i,j)j'(\alpha) > 0$) is independent of $l$, so the proposition remains valid. (One could generate more general results about G’s, A’s and society’s, preferred value $\hat{\alpha}$, but instead I focus on the public versus private choice.)
When $i$ and $j$ represent pressure and communication, the degree to which $G$ internalises public welfare becomes endogenous. The correlation between $G$ and $A$’s payoffs is, in general, more complicated in this case. For instance, publicity that affects $G$’s value of an adaptation, need not have any effect on the public’s value of that adaptation. Nonetheless, publicity raises the likelihood that the adaptation will be implemented by $G$ and $M$ in equilibrium. It is as if adaptations that are not sufficiently politically salient to be attractive to $G$ had not been discovered. So publicity investments have a similar effect to participatory investments that help discover useful adaptations. I illustrate how $G$ and $A$’s payoffs may be proportional with the case of a single possible service adjustment, such as fixing a problem in the public service that becomes apparent over time. Suppose that $j$ raises the probability $q(j)$ that the service adaptation is as politically salient as the basic service value. For instance, the majority of the public might observe the adaptation decision before voting with probability $q(j)$ and otherwise not observe it at all, whereas the basic service value and the use of public funds (captured by the public surplus/deficit) are always politically salient (so adaptations are never performed when non-salient). In this case, $G$ implements the adaptation with probability $q(j)$. If $G$’s electoral concerns (see section 5) lead $G$ to internalise the fraction $g$ of the public value from the basic service and to internalise, when politically salient, the same fraction of the public value $S$ from adaptation, then $G$’s maximal expected gain from the adaptations that $G$ finds attractive to implement is $gSq(j)$. $A$’s gain from implementation of the adaptation is $AS$ – independent of whether $j$ succeeds in creating political salience – but since adaptations are only implemented when salience is high, $A$’s expected gain is given by $ASq(j)$. In this special case, $G$ and $A$’s expected payoffs remain exactly proportional in the ratio $g/A$.\footnote{This example is readily extended. E.g. $G$ is only sufficiently aware of public pressure and how to respond with probability $q(i)$, then the probability of an adaption in equilibrium is $q(i)q(j)$. Again $G$ and $A$’s expected gains remain proportional.} $\footnote{I believe this special case is representative, but it helps to see how it can go wrong. Suppose $v$ only depends on $j$ and $A$ is able to choose $j$ to make a valued adaptation just politically salient enough for $G$ to implement it – i.e. $A$ can choose $j$ so that $v(j)$ is just above 0. In this case, the impact of $M$’s indirect holdup would be trivial and the private/public choice would have no effect on $j$. However, in general, $A$’s efforts to pressure $G$ usually have stochastic success, as in the example just given. Furthermore, even in a deterministic setting, if $A$ wants to pressure for many changes, $G$’s benefit from inframarginal adaptations will generally be significantly positive when $G$’s benefit for marginal adaptations is approximately zero. Finally, if $v$ depends on $G$’s efforts $i$ as well as on $j$, then $G$ only chooses $i > 0$, if there is a possibility of $v$ significantly exceeding 0. So the holdup problem is sure to be present. The exact relationship between $G$ and $A$’s payoffs may vary, but since $A$ only pushes for adaptations that $A$ values and $G$ only implements adaptations that $G$ values, correlation in value of equilibrium adaptations will occur quite generally. What may change are the other effects of $i$ and $j.$}$
as helping good politicians and increasing incentives). The simplest motivation for this claim is that an uninformed public cannot distinguish and therefore vote against bad politicians, so a public pressure campaign that informs the public lowers a bad politician’s chances of success. Bad politicians in the above setting are those that never make valuable adaptations, so the claim suggests that public pressure \( j \) will reduce G’s payoff in the contingency where G fails to make the adaptation. To capture this effect, I assume \( j \) lowers G’s payoff by \( y(j) \geq 0 \) where \( y'(j) > 0 \) \( \forall j \geq 0 \). Since the public benefit from holding G more accountable, public welfare and A’s own payoff do not include the subtracted term \(-y(j)\); in fact, they may gain an additional benefit from \( j \).

G and A’s returns on \( j \) are no longer exactly proportional. This does not change the holdup results (which only depend on G and A’s benefits from equilibrium adaptations and losses from public transfers to M), but it has a significant effect on G’s preferences for privatisation relative to the public’s preferences. If \( v_j(i,j) - y'(j) > 0 \) then G benefits from higher \( j \) in equilibrium and G is more likely to choose public provision than when \( j \) is fixed. On the other hand, if \( v_j(i,j) - y'(j) < 0 \), then raising \( \alpha \) benefits G by improving the bilateral efficiency (from G and M’s perspective) of \( i \), but it hurts G by inducing a higher \( j \) from A. In this second case, the likelihood that G privatises increases beyond that suggested in proposition 4, because G seeks to reduce A’s motivation to monitor and apply pressure. In order to demonstrate this idea, I substitute \( y(j) \) by \( Jy(j) \) and characterise the effect of varying \( J \) - a measure of the significance of this effect of \( j \):

**Proposition 5** If A’s pressure \( j \) has a direct negative effect on G’s rents of size \( Jy(j) \) - then increases in \( J \) make G more likely to privatise. Formally, \( \frac{dG}{dJ} < 0 \).

This proposition reflects how G may use privatisation as a way to escape accountability pressures (even when G’s marginal cost \( l \) of public funds is relatively low).

The utilitarian measure of social welfare is given by

\[
\frac{1}{g} (b + v(i,j) - l(r + e - w(e))) + r - i - j
\]

Notice that the socially optimal levels of \( i \) and \( j \) satisfy \( v_i(i,j) = v_j(i,j) = g \), so given that \( g, a < 1 \), public provision and, a fortiori, private provision always generate underinvestment in \( i \) and \( j \). This implies that from a social perspective, there is always a clear tradeoff: privatisation raises \( e \) towards the first-best level but exacerbates the underinvestment in \( i \) and \( j \). Since the public are not fully homogeneous, this measure of social welfare may not determine the outcome of a vote over the privatisation decision: G and M, and perhaps even A, may have negligible weight in the referendum. Assuming there is no difficulty in inducing
political participation (and hence no value for allowing G to extract rents from adaptations) and assuming the referendum outcome coincides with the preference of a median voter who is not a member of A, the referendum decision would maximise the above expression without the subtracted the effort costs \(- (i + j)\). So the median voter (MV) would maximise

\[
b + v(i, j) - l(r + e - w(e))
\]

Increases in the importance \(l\) of cost efficiency again raise the relative benefit of privatisation, and there exists a cut-off value at which privatisation becomes optimal for the median voter.\footnote{For simplicity, I treat the case where the referendum fixes the precise value of \(\alpha\) in the case of opting for private provision. Notice that the concern is again to avoid underinvestment: the social first-best has \(W'(e) = 1\) as for M and G’s bilateral optimum; the social first-best demands a higher level of \(i\) (\(v_i(i,j) = g > 1\)) and it demands \(v_j(i,j) = g\) which is also higher than the highest possible outcome (given that \(a < 1\)). If the median voter neglects the costs \(i\) and \(j\), this raises (to infinity) the levels of \(i\) and \(j\) preferred by the median voter, making it even more obvious that the problem is to avoid underinvestment, and not overinvestment.} It is intuitive that this cut-off \(\hat{l}_{MV}\) exceeds the cut-off \(\hat{l}_G\) that would be dictated when G controls the decision, because the advantage of public provision is in inducing more adaptation investments \(i\) and \(j\) and this advantage is greater for the median voter who, in contrast to G, neglects G’s cost \(i\) (that mitigates the advantage of public provision from G’s perspective). Notice that even if the median voter cared about \(i\), say to ensure that good politicians are willing to participate, this voter would place a lower weight on \(i\) relative to \(v\) than does G, because \(\frac{1}{g} > 1\) and usually by a large difference.

**Proposition 6** When the public decide whether to privatise service provision or to engage public providers, public provision is more likely than it is when the government controls this governance choice. In particular, the public value privatisation only when the importance of non-contractible service quality improvements is very low and the need to restrain public expenditure is very large, whereas incumbent governments opt for privatisation sooner (i.e. at a lower relative cost of public expenditure). Formally, \(\hat{l}_{MV} > \hat{l}_G\).

This result is sensitive to the assumption that the median voter does not internalise A’s cost of effort \(j\). In the opposite situation, for instance where the median voter is a member of A, the relative tendency to privatise is ambiguous: G neglects the increase in costs \(j\) from public provision, but G overweights the increase in costs \(i\) associated with public provision. One can imagine a setting in which G values a socially excessive level of public scrutiny and is therefore unwilling to privatise when private provision is socially optimal. For instance, public scrutiny may enhance G’s incumbency advantage of being familiar to voters. However,
as noted above in the motivation for subtracting a factor $-J(j)$ from $G$, it is probably more common for governments to prefer to control their publicity rather than be actively monitored by voters. In this case, the general public (and even A) for whom the equilibrium incentives on $j$ are always too low, will certainly have a stronger aversion to private provision than does $G$.

6 Discussion

6.1 Infeasible and undesirable accountability

Pragmatists may point out that all my arguments are invalid or inverted in situations where public pressure is infeasible or undesirable.\footnote{In my theory, public provision maximises dynamic accountability, because the government can always force a public provider to adapt to changing demand: the government can replace or at least sideline an incumbent public manager who disobeys orders to adapt the service. Public management is much less effective when rigidly bureaucratic, but my theory suggests increasing bureaucratic accountability instead of privatising.} Acknowledging these problems helps to refine the theory’s empirical predictions and policy recommendations. First, in settings where public pressure possibilities are remote, the accountability benefits of public provision may be small and with partial market pricing to buttress private provision, privatisation may be preferred by many. Consistent with this, Jacobson and Tarr (1995) point out that in the U.S., water supply tends to be privatised when the recipient public are subdivided by political boundaries. However, since democratic accountability builds up over time, public provision’s tendency to induce public activism may have vital long-run benefits in settings where democratic pressure is initially limited.

Second, accountability can reduce welfare if the public are sufficiently myopic or manipulated by strong interest groups. For instance, economists have long argued that central bankers should be immunised against myopic electoral pressures and more recently, Maskin and Tirole (2004) have analysed the problem of “pandering” when public servants are elected (“politicians”) rather than appointed (like a judge). (They study information problems rather than moral hazard.\footnote{The “public choice” school argues that public management leads to a bureaucratic interest group that interferes with accountability, but privatised provision also generates interest groups. Accountability is harmful when politicised actors pander to a myopic public (see Maskin and Tirole (2005)), but unlike central banking, the fundamental problem in public service provision is contract incompleteness, not time inconsistency. Democratic accountability is needed, because services must be adapted to unanticipated changes in public demand.}) Bennedsen’s (2000) lobbying model and Milrom and Roberts’ (1988) influence cost model point to related concerns. In my initial model, there is no risk of A taking excessive efforts, because A’s goals are fully aligned with other members of the public. However, when
A is replaced by a special interest lobby, G might divert attention onto selected public services that benefit those interests. This creates a risk that G and A’s efforts reduce social welfare. Privatisation might then be advantageous by reducing the risk of over-politicising the public service.\textsuperscript{35}

6.2 Problems with public accountability - bureaucracy

It is possible for accountability to be lower under public provision if the mayor has difficulty monitoring and controlling public servants who are self-interested. However, these accountability problems if bureaucrats can be forced to be more responsive to politicians (what Adams and Hess (2000) call “de-Sir-Humphreying” the civil service). [To complete.] Here I focus on the case where $v$ only depends on $j$.\textsuperscript{36}

6.3 Direct democracy

My analysis suggests unusual questions, such as what would happen if the public could vote directly to select a firm to provide services under a long-term contract, and perhaps also vote directly to oust the firm if activists manage to collect enough signatures of discontent? Given that the public benefits are dispersed across many people, monitoring possible providers and writing effective contracts tends to require specialised agents, such as the mayor or a service agency head, but asking this question can illuminate related design questions. The mayor is only useful if effectively monitored by the public. Is it easier to monitor the mayor than the service provider? Would application on private firms of the restrictions imposed on the mayor and other public servants to prevent expropriation render the private firms non-viable? (see Reiner (199X) for background discussion).

6.4 Access to information

The cost of getting information or verifiable evidence about service quality can be a major barrier to activist pressure. Since public organisations are often governed by laws that guaran-

\textsuperscript{35}When $i$ and $j$ reduce the salience of other political decisions, there is a risk of creating an imbalance in accountability. On the other hand, enhancing $e$ may not always be advantageous either. Privatisation could then be damaging by over-motivating $e$. For instance, if M’s investments in cost-cutting reduce G’s payoff from the basic service contract, there is a risk that long-term contracting leads to excessive investment by M – see HSV or Ellman (2005) who categorises this as a negative cross effect.

\textsuperscript{36}Furthermore, it may be possible to make the heads of service providing agencies directly accountable to the public by having the public elect these heads. This step towards direct democracy has been studied by Besley and Coate (2003) among others.
tee greater public access to information, privatisation may decrease accountability by simply restricting access to information. From a theoretical perspective, it is not obvious why transparency cannot be imposed as a condition for eligibility of private providers in public service contract competitions. One possibility is that the appropriate governance structure will take time to create. Certainly, private service providers work hard to argue that their legal obligations to their shareholders and their competitive pressures require that they maintain most of the standard privacy rights of private firms. Another possibility is that information disclosure cannot be forced by contract. The mayor needs to monitor and pressure for transparency. If, as argued above, private provision shifts most responsibilities onto the provider, then the mayor may more often manage to excuse herself for not forcing information disclosure, say by pleading ignorance.

6.5 Asymmetric information between politicians and managers

6.6 Endogenising the government’s preference function

In a companion paper, I analyse voting explicitly. Voters study the incumbent mayor’s performance in order to predict their expected payoffs from reelecting this mayor. This permits foundations for the assumptions about the government’s payoff function used in this paper. There, I consider two possibilities. One is to assume that voters are retrospective as in Ferejohn (1974). The other is to allow for forward-looking voters in a rational choice setting where G’s only goal is to take ego rents $R$ from holding office. This approach allows me to analyse a “responsibility shifting” effect of privatisation.

6.7 Contract length, design and inherited holdups

Ellman (2006) identifies a tradeoff between lengthening performance contracts to better motivate cost-cutting investments by the provider and shortening the contracts to reduce holdup of adaptation investments. Here, I extend this result by analysing the possibility that an incumbent government is replaced by an opposition party, before the incumbent’s performance contract with a private provider has come to an end.

Analysis of the electoral competition reveals a particularly worrying effect of contracts that span across elections. Accountability is much enhanced when opposition parties can make

\footnote{Is it plausible that without these rights, the mayor could hold them up or competing firms could expropriate their ideas? If so, the benefits of privatisation would be lost, but the need for firms to have such strong privacy protections is much disputed. It would also help to compare carefully the restrictions placed on public providers with those imposed on private but not-for-profit providers.}
specific policy commitments – see Austen-Smith and Banks (1989 and 2005). For instance, the public are more likely to oust an incumbent mayor for failing to fix a service problem (such as water quality falling below a recognised standard) when the opposition mayor has credibly committed to fix the problem. Unfortunately, if the service is managed by a private provider under a performance contract that spans the electoral cycle, this mayor suffers from a particularly pernicious holdup problem: if she wins after committing to solve the service problem, the service provider can hold her up over the entire value of her reputation for keeping promises. If voters anticipate the tax implications of this “inherited holdup”, such commitments are less attractive to voters as well as opposition parties. Privatisation therefore reduces the likelihood that opposition mayors make firm policy commitments to improve service quality. This concern is particularly significant in Public-Private Partnerships (PPPs) where the private service provider is also responsible for building the facilities to be used (see Hart (2003)), because the private party usually then needs a contract in excess of five years to properly exploit its non-contractible sunk cost investments. [add formal model here]

In conclusion, for settings where effective privatisation requires contracts that exceed the four or five year term limit on governments, my analysis suggests that privatisation is particularly damaging - at least if political accountability is important.

6.8 Applications to selected public services

7 Conclusion

Critics have claimed that under privatisation, the government will wash its hands of service problems and quality will decline. This paper demonstrates that there may be a rigorous foundation to less extreme versions of this concern. The blunt version of this pessimistic view - maintaining that people will not hold the government responsible for policy outcomes because privatisation places control in the hands of a private company - is incomplete. The government’s role (as holder of the purse-strings) remains critical under privatisation. In particular, the government can choose to which private company to delegate (just as it may control which civil servant is in charge of the relevant public agency under public provision) and even during a given provider’s contractual term, the government can at least negotiate (offering to pay additional costs if need be). 38 A more refined version of the argument therefore had to explain why, under privatisation, the government might be held less responsible and/or

38 The government can also regulate to some degree. Regulation is necessarily limited, because the extreme case of unlimited regulation - where the government retains full residual control rights - is effectively public provision.
why pressuring the government should be less effective.

Privatisation of public services transfers control rights and contractual obligations to providers. I showed that, while improving cost reduction incentives, privatisation may decrease accountability and responsiveness of government to public concerns about service quality. I endogenised public mobilisations that can make government accountable for service quality. Political accountability induces the incumbent government to adapt services to meet public demand, but under privatisation, the provider can hold up the government by charging an inflated price for service adaptation. This holdup has an externality on the public, because the government pays using public funds. The holdup therefore reduces the public’s incentive to mobilise to apply pressure on the government. The holdup also directly demotivates the government from exerting effort to evaluate public demands and their electoral implications. Finally, public mobilisation and government receptiveness are often complementary, making the two effects mutually reinforcing.

My theory can explain the evidence that privatisation sometimes lowers service quality, and the mechanism is very different to alternative explanations, which identify a “negative externality of incentives” (on non-contractible quality) – for instance, HSV argue that privatisation reduces service quality by raising incentives to reduce cost. Those explanations cannot explain why consumers might, as in Kwoka’s (2000) dataset, benefit from lower unit prices when a service is publicly managed. By contrast, my accountability mechanism can explain this: privatisation dissuades the public from mobilising to pressure the government to restrain consumer prices.

My analysis has a number of policy implications. In particular, if privatisation is pursued, then the creation of credible cost-measurement agencies (to allow cost-plus contracting), formation of relational contracts (while at odds with the anti-corruption strategy of requiring selection of the lowest bidder), adoption of dual suppliers, subsidisation of incumbent challengers and the use of shorter contracts (at least not spanning elections to escape the inherited holdup problem) offer partial but imperfect ways to reduce the accountability problem. Interestingly, recent suggestions to require private providers to exceed a minimal satisfaction rating in consumer surveys effectively represent a small step towards direct democracy where people’s votes select the service provider. Further work could investigate the use of not-for-profit restrictions and direct election of the public servants controlling service provision.

In sum, the main contributions of this paper are to identify settings in which privatisation is particularly damaging to political accountability and to indicate how privatisation could be designed to limit the interference with accountability.
8 References


### Appendix

#### Proof of proposition 3

The first-order condition for $e$ is unchanged so proposition 1 gives the result for $e$. The first-order conditions for $i$ and $j$ can be written as $Dv(i(\alpha),j(\alpha)) = \frac{2}{\pi - \alpha} \left( \frac{1}{\alpha} \right)$. Differentiating this identity with respect to $\alpha$,

$$D^2 v(i(\alpha),j(\alpha)) \left( \begin{array}{c} \frac{di}{d\alpha} \\ \frac{dj}{d\alpha} \end{array} \right) = \frac{2k}{(2-ak)^2} \left( \begin{array}{c} 1 \\ \frac{1}{\alpha} \end{array} \right)$$

so

$$\left( \begin{array}{c} \frac{di}{d\alpha} \\ \frac{dj}{d\alpha} \end{array} \right) = \frac{2k}{(2-ak)^2} \frac{1}{\Delta} \left( \begin{array}{ccc} v_{jj}(i(\alpha),j(\alpha)) & -v_{ij}(i(\alpha),j(\alpha)) \\ -v_{ij}(i(\alpha),j(\alpha)) & v_{ii}(i(\alpha),j(\alpha)) \end{array} \right) \left( \begin{array}{c} 1 \\ \frac{1}{\alpha} \end{array} \right)$$

where $\Delta = v_{ii}(i(\alpha),j(\alpha)) v_{jj}(i(\alpha),j(\alpha)) - (v_{ij}(i(\alpha),j(\alpha)))^2 > 0$ by assumption 2. Assumption 2 implies that both $i$ and $j$ decrease with $\alpha$. Furthermore, the rate of decrease is increasing in $v_{ij}$ as claimed.