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Public private partnerships in Britain: Interpreting recent experience

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Public Private Partnerships in Britain: Interpreting Recent Experience

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ABSTRACT

Britain was in the forefront of utilising Public-Private Partnerships (PPP) and contracting out from the 1980s. The British experience of increasing disenchantment with private finance and outsourcing in recent years is therefore of considerable interest. Private contractors have not proved invariably better at managing government services than direct government supply. Nearly complete measurement of the service is highly desirable if the supply is to be successfully contracted out or provided by a PPP. Though potentially beneficial for controlling project whole life costs, bundling different stages of supply boosts the size of the contract, which in turn reduces the number of potential competitors and the intensity of competition for the contract. Credible risk transfer continues to be challenging. H M Treasury project appraisal in some respects was biased in favour of private finance projects and yardstick competition between procurement routes remains underutilised. Private finance has been shown an expensive way of massaging the national debt-gdp ratio, although less than 10% of government investment is at stake. On the other hand, considerable experience has been obtained in controlling whole life project costs with other, simpler, procurement routes.

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Public Private Partnerships in Britain: Interpreting Recent Experience*

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A public-private partnership (PPP) can be defined as an arrangement between a public authority and a private partner to provide a public infrastructure project or service under a long-term contract (European Investment Bank n.d.). It is a specific form of government procurement contract. The process of outsourcing or contracting out service operations, such as cleaning, catering and refuse collection, undertaken in support of a continuing government responsibility, gives rise to a PPP. Privatisation by contrast does not intrinsically involve a partnership or relationship with government, once the transaction – the sale of public assets to the private sector - is completed. A distinctive and controversial form of PPP is the Private Finance Initiative that uses private, rather than public, capital to fulfil the contract.

Britain was in the forefront of extending the role of the private sector in procurement and project management, from the introduction of competitive tendering in the 1980s (Blondal 2005; Chou and Pramudawardhani 2015)). To exclude financing proposals mainly intended to evade expenditure controls Britain introduced the 'Ryrie Rules' in 1981. These rules required that a project should be privately financed only if this was more cost effective than public financing and that it should still be counted against the public body's capital budget. However, in 1986 a new Dartford motorway river crossing project was approved, overriding the rules, which were formally abolished in 1989 (Spackman 2002), Abolishing the Rules alone was insufficient to release a large flow of PFI projects. This had to wait until the measures of the 1997 Labour government.

The virtues of state versus private ownership and of state relations to industry are once more back on the policy agenda, thanks to poor performance of private sector contractors. This chapter therefore examines the proper role of the private sector in the delivery of public services and compares this with British current practice, particularly focusing on Public Private Partnership and the recent abandonment of the Private Finance Initiative. The following section summarises some of the recent shortcomings of contractors to the British government. Then the various

* Earlier drafts have benefitted from the comments of Anna Grosman, Madoc Batcup, Mike Wright and Eurfyl ap Gwilym but they are not responsible for remaining errors and omissions.

procurement routes, the positioning of Public Private Partnerships and the somewhat turbulent recent history of the institutions that have been responsible for state procurement and projects are outlined. A discussion follows of the roles of incentives and risk in procurement before the predictions of principal-agent theory for the management of incentives and risks in government buying are explained. The next section notes that contracts must often be incomplete, requiring monitoring and enforcement and shows that these transactions costs influence the appropriate way to provide the various governmental services. How these contracts are allocated to the private sector influences whether they are good value for money. The organisation of competition together with the appraisal method and the time profile of costs and revenues can be critical in deciding the procurement route as well. The British approach to these arrangements is assessed in the remaining sections.

Recent British Private Contractor Turmoil

Signs of perhaps an unintended policy reversal were detectable in 2001. The UK government was obliged in effect to renationalise Railtrack, the owner of the railway track and stations, by creating Network Rail to take it over. With the advent of the 2008 financial crisis, UK industrial policy reverted to the approach of 'picking losers' for state ownership (Royal Bank of Scotland, Northern Rock) but this time coupled with a strong desire to sell them off as soon as possible, at a loss if necessary.

Then the collapse of Carillion in January 2018, the UK's second-largest construction company, triggered concern over the possible disruption to the many government contracts held by the firm. Carillion employed 20,000 in the UK and more staff abroad. It was the second largest supplier of maintenance services to Network Rail, maintaining 50,000 homes for the Ministry of Defence, managing nearly 900 schools, and highways and prisons, as well as participating in a consortium that holds a contract to build part of the forthcoming HS2 high speed railway line. HS2 itself promised to be a less than shining example of government procurement from the private sector, even before the Carillion debacle. A government-owned company, HS2 Ltd was created to manage the scheme. As early as 2013 around 100% cost overrun from 2012 was being projected, for a project of questionable social value (Webb 2013). A Parliamentary Select Committee observed that the expected cost of construction per mile of HS2 was up to nine times higher than the cost of constructing high speed lines in France (House of Lords 2017-19).

Another illustration of failing contractors is one of the largest companies in the world, the private security business G4S. This operates in over 150 countries, and employing 657,000 people, has played a major role in delivering State services. But

the failure of G4S to manage security at the 2012 London Olympics, such that the armed forces had to be called out to do the job, did not enhance the reputation of private enterprise in public service. Nor did the riot at Birmingham prison in 2016 and the eventual transfer of the prison management from G4S back to the State in 2018.

Capita with 70,000 employees delivers services to local government, central government, education, transport, health, as well as to private sector life and pensions, insurance. In June 2014 at least five of eight Liverpool NHS Trusts that had contracted their payroll and recruitment to Capita in 2012 were withdrawing because of concerns about the quality of the service provided (HSJ 2014). The latest worry is Capita's operation of an expensive Army recruitment contract where far fewer than the needed personnel have been found (Corfield 2018).

The US company Concentrix were contracted by HMRC in May 2014 to check for possible fraud and error in tax credit claims. This was the first time a private company had been delegated so much responsibility for monitoring UK benefit claims. In 2016 HMRC terminated the contract because of the flawed decision-making process that led to thousands of claimants having their tax credits unfairly stopped. While Concentrix and HMRC targeted "strike rates" of benefits being removed, 90% of those decisions were overturned on initial appeal, yet in many cases people lost benefits for months, being forced to borrow money and use food banks to survive (House of Commons 2016).

Rehabilitation rates achieved by the Community Rehabilitation Companies contracted by the Ministry of Justice have been disappointing (House of Commons 2018). One of the largest such companies is Sodexo Justice Services. Another is Serco that in July 2019 was fined £19.2 million for over-charging the Ministry of Justice for electronic tagging services, including charging for some offenders who were dead. A House of Commons committee found that the payment by results mechanism provided insufficient incentives for providers to reduce reoffending. The Committee also noted that probation staff morale had been reduced to an all-time low. In May 2019 it was announced that the National Probation Service would take over responsibility for all offender management.

During the unravelling of British state ownership and production, these large companies built up substantial businesses supplying outsourced state services. However, driven by their controversial performance, the 'Great Recession' of 2008 and slow economic recovery, the opposition Labour Party is proposing a nationalisation programme (Labour Party 2018). This would reverse several

privatisations and outsourcings, the keystones of industrial policy for decades before the crisis.

Government Procurement Routes

Outsourcing, according to the Organisation for Economic Co-operation and Development's (OECD) definition includes the goods and services bought by government (from the private sector) either for its own consumption or for delivery directly to the end user. It does not include capital works, such as building new roads.

Road building might be undertaken in a public-private partnership (PPP) With this type of contract, the private partner bears significant risks and management responsibilities. The public authority makes performance-based payments to the private partner for the provision of the service (such as for the availability of hospital services) or grants the private partner a right to generate revenues from the provision of the service (such as tolls from bridge users). Private finance is usually, but not necessarily, involved in a PPP; hence in this paper a distinction is drawn between Private Finance Initiatives (PFI) and PPP. Railways constitute a PPP, with the private sector financing rolling stock and most of the train services operated by subsidiaries of foreign railway companies, but the payment of public subsidies and state ownership of the railway track.

On this definition PPP is a specific form of state procurement, though how specific depends on how long is 'long term' and what counts as 'significant' risk and management responsibilities. In 2018 in Britain there were 1032 PPP projects valued at 160 bn euros (EPEC European Investment Bank). The largest numbers were in education (327) and healthcare (296) but the highest value of PPPs were in transport. HMRC's biggest supplier, Capgemini, accounts for a third of its published procurement buying (the highest proportion that any department spends with a single supplier). This is due to Capgemini's lead role in the government's largest IT contract.

Defining procurement as both outsourcing and PPPs, procurement accounts for about one in every three pounds that the public sector spends (Davies et al. 2018). On defence, and public order and safety (including prisons), the proportion of UK procurement spending was around double the OECD average in 2015 (thanks to greater British contracting out and privatisation). Procurement comprises around 30% of public sector resource spending but around three quarters of public sector capital expenditure.

Up to a fifth of procurement spending now goes on 28 ‘strategic suppliers’ such as BT, Capita, G4S, Microsoft, Serco and Vodafone (Carillion was a strategic supplier until January 2018). These strategic suppliers are winning an increasing amount of government business but not necessarily profitably (Davies et al 2018). The three biggest recipients of government spending - Capita, Carillion and Amey - all experienced financial difficulties in recent years.

Even with UK state supplied services such as defence or the National Heath Service, governments must deal with private sector contractors. British primary health care is, and has always been, mainly provided by privately employed medical General Practitioners, while private companies have traditionally developed weapons systems for government. So even with government operation and service provision, purchasing can be conducted more, or less, efficiently.

A key government decision is what should be supplied to the public. Another is whether the state should utilise the private sector in the provision of services that the government has determined should be supplied, often without charge at the point of supply. A third is how should the private sector be involved? Should it own, and the government rent, the physical assets necessary for the supply? Should it be confined to constructing the assets? Is it desirable that the private sector ‘bundle’ processes such as design, build, finance, operate and maintain in the provision of public services? These last three questions are central to public-private partnerships (PPPs).

PPPs can cover all types of collaboration between the public and private sectors to deliver policies, services and infrastructure. Where delivery of public services involves private sector investment in infrastructure, the most common form of PPP has been the Private Finance Initiative (PFI). PFI involves the government renting a service on behalf of the public rather than buying, operating and owning the assets for such a service. The decision to opt for PFI is more complex than to ‘make or buy?’ since both ‘contracting out’ and PFI involve ‘buying’ by the government. rather than ‘making’. Contracting out is the private sector supply of a service for which the public sector retains a responsibility. But Private Finance has been distinctive in integrating the supply of the public service that is managed by the private sector, for example designing, building, financing, and operating an asset, such as a hospital, that is used to deliver a public service. The choice for the public sector, in many cases, is whether to ‘rent’ or to ‘buy’ the assets necessary for service provision; should the National Health Service own the hospital or simply hire hospital services?

Alternative procurement routes include those where the public authority owns the new asset. ‘Design and Build’, for instance is where a single private contractor is responsible for both the design and construction of the asset. If this is a long term contract then it can be classified as a PPP. When operating costs of the assets are significant, ‘Prime Contracting’ may be more appropriate, where one contractor co-ordinates and manages all activities through the design and construction period to ensure the asset is fit for purpose and meets predicted whole life costs (Public Accounts Committee 2003).

The choice of procurement route has implications for risk allocation, management and incentives. State or private owners are residual claimants of income (positive or negative) associated with the owned asset. Owners bear both the risks of liabilities arising from the use of the asset and the rewards of the net revenue generated. However, downside risk can be restricted; limited liability caps the obligations of company owners to the value of the registered capital. The risks and rewards of ownership can create incentives. Hence PPP and PFI may transfer ownership risks and rewards to the private sector that owns, operates and finances the assets generating the service. A justification for such a risk transfer is that the private sector is better able to manage them. They are also usually supposed to have other efficiency advantages for PFI to be preferred to conventional procurement.

Accounting procedures should correctly identify potential risks and rewards. After 2009, public sector organisations switched from Generally Accepted Accounting Principles to International Financial Reporting Standards (IFRS) for their financial accounts. IFRS uses the stricter criterion of ultimate control, rather than risks and rewards, to determine the balance sheet to which a private finance project is allocated. Hence, the change to IFRS reduced the incentive to design projects solely for off-balance sheet finance, and so escape certain budgetary controls. This accounting trick conceals the fact that, for instance, the payment of a bridge toll revenue to private financiers, instead of to government, is as much a commitment for the taxpayer as government payments to the operator of a privately financed bridge with no toll. A PFI hospital that is a debt of the private sector does not appear on the government’s balance sheet if the accounting is accommodating. Restraining the government’s debt/GDP ratio improves the international financial standing of the State. Among EU member states, the UK had the third highest proportion (1.8%) of off-balance sheet private finance projects as a percentage of GDP, behind only Portugal and Hungary (Atkins et al 2017). Given the magnitude of the total debt/GDP ratio, for the UK the gain from off-balance sheet financing was therefore only marginal. Even so, for over half of EU member states, the comparable figure for off-balance sheet private finance was much less, under 0.1%.

Despite the low interest rates in the years after the 2008 financial crisis subsided, the volume of PFI/PPP schemes declined, with less opportunity or appetite for experiment, in view of the continuing budget deficits and the changed accounting treatment of PFI projects. Previously abundant sources of private finance dried up. Partly to remedy this deficiency the British government in 2012 proposed a new style PFI, labelled PF2 (H M Treasury 2012). The principal innovation was to introduce a (small) proportion of state equity capital into the project, supposedly to increase transparency, rather than to lower the *de facto* cost of finance. Previously, 'commercial confidentiality' tended to restrict the information that government was able to acquire about its own contracts. There are currently over 700 operational PFI and PF2 deals, with a capital value of around £60 billion. Annual charges for these deals amounted to £10.3 billion in 2016-17. Even if no new deals are signed, future charges lasting until the 2040s amount to £199 billion.

Perhaps partly in response to a scathing report of the Parliamentary Treasury Committee (House of Commons Treasury Committee 2014), in his 2018 budget speech, UK Chancellor Philip Hammond announced that he had never signed a PFI contract as Chancellor and never would[1]. But he asserted that half of the UK's infrastructure pipeline would be built and financed by the private sector, nonetheless. He claimed that this half would be 'delivering value for the taxpayer' but it is not clear how the criticisms levelled at PFI will be avoided by this alternative private sector finance.

UK Procurement and Project Institutions

The institutions in British government that companies dealt with have frequently been changed. It is likely that this reflected both changes of government and the different financial environment created by the 2008 financial crisis and its aftermath. In any case there must have been consequences for the management of long-term contracts. In 2000 the Office of Government Commerce (OGC), part of H M Treasury, was ultimately responsible for Private Public Partnerships. It operated through the Government Procurement Service, an executive agency now known as the Crown Commercial Service (for which the Cabinet Office is responsible). The OGC was moved into the Efficiency and Reform Group of the Cabinet Office in 2010, and closed in 2011.The Efficiency and Reform Group (ERG) worked in

[1] https://www.bbc.com/news/av/uk-politics-46023089/budget-2018-chancellor-abolishes-pfi-for-future-projects

partnership with HM Treasury and government departments to deliver efficiencies, savings and reforms on behalf of UK taxpayers. It was terminated in 2014.

The present Crown Commercial Service was created as the Buying Agency in 1991. In 2000, it became part of the newly established OGC. On 1 April 2001, the Buying Agency, the Central Computer and Telecommunications Agency, Property Advisors to the Civil Estate and other units from the Treasury merged to form OGC Buying Solutions. The agency's name was changed to just Buying Solutions in April 2009. On 15 June 2010, it moved, along with its parent agency the OGC, to become part of the Efficiency and Reform Group within the Cabinet Office. Its name was changed to the Government Procurement Service (GPS) in July 2011. In January 2014 the GPS merged with the procurement management from government departments to form the Crown Commercial Service (CCS). This is reinforced by the Government Commercial Function, a cross-government network procuring, or supporting the procurement of, goods and services for the government. It aims to improve the commercial capabilities of the Civil Service and so make significant savings for the taxpayer and to deliver improved public services.

Formed in 2000, owned jointly by HM Treasury and the private sector, Partnerships UK plc (PUK) was responsible for furthering public-private partnerships in the United Kingdom. In June 2010, Infrastructure UK (IUK) was established as a separate unit within the Treasury to work alongside the private sector on major infrastructure projects and in May 2011 PUK was dissolved. Infrastructure UK in January 1, 2016 was merged with the Major Projects Authority to form the Infrastructure and Projects Authority (IPA). The IPA supports the delivery of all types of infrastructure and major project and leads the project delivery and project finance professions across government. It is the government's centre of expertise for infrastructure and major projects. However, expert advice to HM Government on the pressing infrastructure challenges facing the United Kingdom comes from the UK National Infrastructure Commission (established in 2015 and an executive agency of H M Treasury from 2017). Once in every Parliament, the Commission offers its assessment of long-term infrastructure needs, with recommendations to the government. It also undertakes in-depth studies into the UK's most pressing infrastructure challenges, making recommendations to the government, as well as monitoring the government's progress in delivering infrastructure projects.

Between them these institutions and the relevant government department decide on what will be bought and how. It is not clear how this churn of civil service departments helped build up and retain expertise and 'corporate memory'. On the one hand, successive arrangements may have learned from, and improved, the earlier.

On the other, the shuffles may merely have been ministerial whims that lost expertise in the process.

There is evidence in government publications and stated policies that some lessons have been learned. Following the collapse of Carillion, the Government in 2019 published the Outsourcing Playbook (second version Government Commercial Function 2020) covering guidance on such matters as 'Make versus buy' and risk assessment. Extensive collaboration between the public and private sectors the following year created The Construction Playbook (H M Government 2020) which prescribed a best practice framework for delivering all public works projects and programmes. In the same month, triggered by the need to adjust to Brexit and the end of EU rules, the Government (Cabinet Office 2020) published a consultative Green Paper outlining regulatory options for public procurement. The overall stated objectives, to impose the least burden possible on businesses and the public sector and to drive a culture of continuous commercial improvement, were highly laudatory. But the effectiveness of these initiatives remains to be seen.

Incentives and Risk

In a PPP contract, the possibility of penalties and reward may affect the supply of effort (unobserved by the principal), which can determine whether the contract is value for money. This is the key to the principal-agent problem, where the potential buyers and sellers have different interests and information about the supply conditions of a service or project (Jensen and Meckling 1976; Rees 1985a and b). Typically, with PPP the state (as principal) must decide the terms and conditions of buying or renting from the private sector (agents) –- or taking direct ownership[2].

A solution to the 'principal-agent problem' is an incentive contract. A special case is the fixed price contract, where the supplier bears all the risk of cost overruns and receives all the rewards of efficiency gains not known at the time of contracting (eg Laffont and Tirole 1993). This incentivises the contractor agent to reduce costs (especially compared with a cost-sharing contract) but also to reduce benefits or quality insofar as they are not fully specified in the contract (consequences of under -specification are discussed in the next section).

To illustrate the cost-reduction incentive, government may prefer a fixed price contract (A in fig 1) – for they would bear no risk of price escalation because of cost

[2] More detailed theoretical analysis than covered in the chapter is presented in special editions of the Journal of Economic and Behaviour and Organization (Saussier 2013) and the Journal of Public Economic Theory (Martimort and Menezes 2015)

overruns. But to set up a Public-Private Partnership, or any contract, the participation constraint must be satisfied. Government may be willing to pay a price that includes an allowance for contingencies (C in fig 1) (£5 billion has been allowed in the HS2 contract). However, the private contractors still may not judge that the risks and rewards of such a relationship worthwhile.

An example of risk management and transfer is the Severn River Crossing contract, now completed. No government investment funds were available for this bridge connecting South Wales and England so separate private sector bids were sought in 1989 for two possible scenarios:

(a) to design, construct and finance the crossing, and to assume responsibility for operating and maintaining both it and the existing Severn Bridge during a concession period, in return for the toll revenue from both bridges during that period, and (b) to design and construct the new crossing in return for staged payments from the government (Severn Bridges Trust 2016).

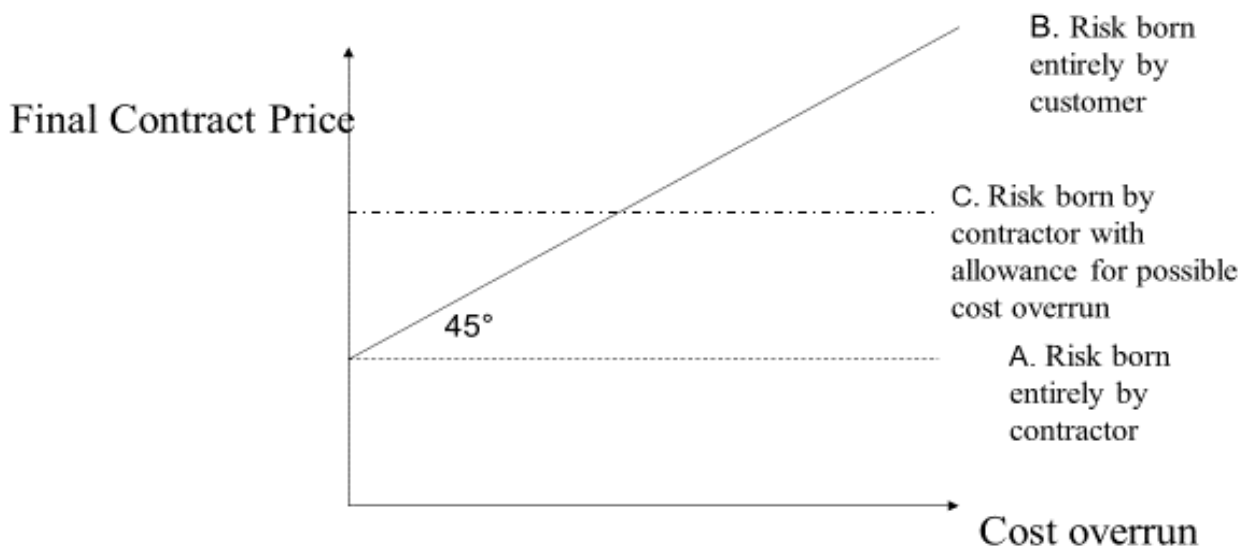
In 1990 the Government accepted, in principle, the proposal of Severn River Crossing Plc for bid (a). The consortium included major investment banks, a British contractor, John Laing Plc, and a French contractor, GTM Entrepose. The concession period was limited to a maximum 30 years but less if the agreed fixed sum was collected earlier in real Present Value terms to cover the £330m construction cost. Thus, the contractor was freed from most traffic volume risk – which they could not control - but not from construction risk – which they could. According to the Arrow-Lind (1970) theorem, the government was in a better position to shoulder the traffic volume risk because, unlike a private firm, they undertook very many projects, the risky outcomes of which were uncorrelated.

An extreme risk-sharing case is an R&D contract where the outcomes are very uncertain so the State (as principal and ultimate customer) may agree a contract type B with an agent (in figure 1). If the planned project costs are in practice exceeded in contract type B, as drawn, the price the principal pays increases by that amount. When the contract line gradient is less than 45 degrees, a given cost overrun is reflected in a price that is insufficient to cover the excess costs; the contractor bears some of the extra expense. With high technology projects, like R&D, the considerable uncertainty gives a strong rationale for risk sharing. For this reason, among others, IT projects were eventually ruled out for (fixed price) PFI contracts (H M Treasury 2003b).

In terms of figure 1 an optimal arrangement from the viewpoint of the principal (government) is to choose a larger intercept, or fixed component of the reward to the agent (private contractor), and a shallower gradient of the contract curve (a smaller share of the outcome) the greater is the uncertainty that the agent cannot control. The optimal reward or penalty sharing between principal and agent, or the gradient in the figure, depends on the elasticity and effectiveness of effort supply by the agent. The more effort attracted by a greater reward, and the more productive is the exertion of effort, the greater the optimal variable portion of the contract given to the agent.

This type of contract also determines the distribution of the risk between principal and agent. A collapse in aggregate demand will damage the agent's reward by more the larger is the variable, profit-linked, component of the contract. From the Minister's announcement it is clear that the British government renegotiated its aircraft carrier contract in 2013 because it was not sufficiently incentivising the contractor; with a budget of £6,200m, in the revised contract, the consortium led by BAE Systems agreed to pay 50% of any cost overruns, rather than 10% as previously (Hammond 2013).

Figure 1 Contract Price and Risk Transfer



Another side of this incentivising, risk-bearing and risk-sharing behaviour can be seen with the bureaucrat or civil servant with lifetime employment. They may have no material stake in the beneficial outcome of a project or action, but they may be penalised, by a promotion block for example, if the project or action for which they are responsible, is unsuccessful. Such people will be most reluctant to sponsor actions with any downside. They will appear highly risk-averse and unwilling to innovate. This may give rise to differences in behaviour between state and private organisations (see next section).

Performance-related contracts are hardly used within the public sector. Reliance for motivation is placed on a 'public service ethos' instead. This may be because incentive contracts require all outcomes to be measurable if the incentive system is not to create biases. Where there are many dimensions of a service that matter, measurement and therefore incentive contracts are likely to be problematic. There may be yet other reasons though, such as organisational size and rigidity, that are independent of ownership and the nature of the service. Large (private) pharmaceutical companies, recognising that they may not possess innovation advantages in biotech, encourage and finance startup enterprises in this area, planning to take them over if they eventually prove successful (Kolabtree Blog n d).

Incentive contracts can improve public sector performance through outsourcing, which has been estimated to generate savings of 15-20% in Australia, 5-30% in Denmark, 20-25% in Iceland, and 20% in the United Kingdom (Blondal 2005). Private sector prisons showed systematic differences in performance from those in the public sector (NAO 2003) Prisons are particular appropriate for a public-private sector comparison because of the common rigorous inspection regime. It should be noted that recent prison riots have not been restricted to privately run prisons – for instance Long Lartin, a Category A men's prison in Worcestershire. The National Audit Office commissioned survey at that time indicated that PFI prisons treated prisoners with more respect than did the public sector, they operated with lower staffing ratios but sustained a higher level of assaults. The likelihood of escapes was about the same in the two sectors and the public sector learned about collective performance incentives for staff from the private sector.

Simply learning from experience in both government and private sectors can also improve performance, by reducing cost overruns, as the Olympic Games illustrate. Games held over the decade since 2006 cost US $8.9 billion on average (Flyvbjerg et al 2016). The most expensive Summer Games to date was in London in 2012 costing US $15 billion. (The numbers cover the period 1960-2016 and include only sports-related costs, i.e., wider capital costs for general infrastructure, which are often larger than sports-related costs, have been excluded.) At 156 percent in real

terms, the Olympics had the highest average cost overrun of any type of megaproject. But the Olympic Games Knowledge Management Program appeared to be successful in reducing cost overrun risk for the Games. The difference in cost overrun before (166 percent), and after (51 percent), the programme began is statistically significant.

Output measurability and transactions costs

Principal-agent theory is concerned with incentives. Principal-agent formulations of government contracting, with problems of moral hazard and asymmetric information, implies that ownership does not matter if differing incentives between public and private sectors can be eliminated (Hart 2003). However, when contracts are incomplete, without full detail, ownership does matter because it confers the power not specified in the contract to make decisions about the asset. Great uncertainty about what good specific public service delivery requires, or can be shown to have, could justify government ownership. Residual control rights that cannot be contracted may be critical (Hart et al. 1997). A (non-piece rate) wage contract commits the employee to do what the higher level of the organisational hierarchy requires for the conduct of business, without indicating fully and explicitly in advance what that is. Without transactions costs, these services could be sub-contracted. With incomplete contracts, contracting out is less suitable for some government functions than others.

More detailed aspects of contracts are addressed by transactions cost theory, which also emphasises the fundamental importance of the arrangements for administering the contracts - governance structures. These structures include markets, firms, bureaux, charities, PPPs and regulation. The theory indicates that ideally specific procurements should be identified by their principal characteristics and then matched to governance structures with relevant attributes (Williamson 2000 p599).

Of special concern to government procurement are the distinctive characteristics of direct state governance. Some characteristics of state procurement maybe purely contingent, determined by national historical accident. For instance, ‘generalists’ - people with no special technical expertise – dominate the upper echelons of the British civil service. Their private sector counterparties typically have many technical experts at senior levels; private sector technical expertise is recognised and rewarded both financially and in career progression. Technical contracts drawn between these parties then may favour the private sector agent unwarrantedly but in a broader context there is no reason why technical expertise should not be recognised in state administrations as well.

In addition to the previously mentioned general lack of substantial incentive rewards for employees of public bureaux, the features include high administrative controls (including auditing and accounting) and high job security, compensated with low pay, together with 'honours' for upper echelons. Transactions cost theory suggests these features may in fact be well suited for governing specific types of programmes, projects and procurements, as will be apparent from the taxonomy below.

Four transactions characteristics can usefully be considered for matching with governance types (Blank 2000):

Externalities are often invoked to justify government provision. Inadequate water supply and drainage may generate adverse externalities, including the spread of disease and fire, such that the market alone may undersupply water services. Externalities across the stages of production can be critical for the desirability of bundling of construction and operation in a PPP project; they affect 'whole life costing' (Iossa and Martimort 2014).

Distributional concerns underlie the belief that everybody should have equal access to justice, to health and or to education or at least that the consumption of these services should not be entirely constrained by ability to pay. Justice, health and education are conventionally described as 'merit goods'.

Agency problems have been discussed above in the context of contracts allocating risks and rewards. But when a principal is very ill and obliged to choose between alternative doctors or hospitals (agents) the problem is not so readily addressed. The principal is incapable of making judgements and must defer to the agent, or to a third party to whom the decision has been delegated in advance. This type of difficulty can be expected to arise more often in the social services with the extension of market-like choices; the recipients of nursing home care are unable to judge the quality of the service they will receive, for example.

Unobservable output quality between supplier and client can mean that a market would work very imperfectly. What is being exchanged and therefore what it is worth is difficult to establish. Tax-collection, police and social security benefit administration have this characteristic. If in a PPP contract the quality of the building can be well specified, whereas the quality of the associated service cannot be, then the PPP contractor can modify the second but not the first without violating the contract. Hence conventional provision ("unbundling") is preferable. Bundling or PPP is preferable if there are comprehensive performance measures which can be

used to reward or penalize the service provider but there are no such indicators for building quality.

These four characteristics can be matched with four broad alternative types of government provision of services (Table 1) (Blank 2000). Privatisation involves selling state assets to the private sector but very often the private owners are subject to specific state regulation. The water industry can create negative externalities of disease when not properly managed. But the quality of the output is observed by the regulator (Ofwat). Whether the agency problems and distributional concerns matter for water depends to some extent on the observer's feelings about market forces. Subject to this proviso, governance type 1 seems a reasonable arrangement for the water industry. Governance type 2 adds subsidies to the regulatory mix. The privately-owned British Railways received a subsidy of £5.3 billion in 2017-18, and the critical externality involved is probably congestion. Why railways and not water should be paid subsidies is probably because cash flows modelled on water usage are far more predicable than passenger numbers. For this reason Dwr Cymru is able to access all its capital requirements through the debt markets. By contrast a number of railway companies have had to return their franchise through mis-estimating passenger numbers.

The third governance option in the table, 'public sector owns, private sector manages', is the contracting out and PPP route – though PFI involves 'private sector owns and manages'. Viability here turns on whether the governments can write complete contracts to assure service quality and access (the 'No' of the fourth characteristic). The quality of many core public services is hard to observe although the price or cost is readily apparent. Lower cost in the private sector may go with lower quality. A willingness to talk to clients may appear inefficient but in fact be an aspect of quality, for example the importance of allowing sufficient time for talking to medical patients as a part of diagnosis (Goleman 1996 ch 11).

Unobservable output quality arises when a service is dispensed which of its nature, the client cannot be allowed to purchase (Prendergast 2003). The recipient is not the agent who makes the decisions (Blank 2000). The payment of social security benefits, the collection of taxes or the decision to arrest suspects, are examples. Measures of performance of these services are respectively the correct payment of benefits, the collection of the correct amount of tax and the arrest of all for whom suspicions turn out to be justified. But information about both these measures is partial. A client who is over paid or wrongly paid is less likely to complain than one who is underpaid or unwarrantedly not paid at all. A criminal will not complain about not being arrested whereas an innocent person will. A taxpayer who is wrongly

investigated for under-payment of taxes is put to a great deal of inconvenience and is likely to object strongly. Those who successfully underpay taxes will be as silent as the criminal who is not arrested.

Table 1 Governance and Transaction Characteristics

Transaction type / Governance	Externalities	Distributional concerns	Agency problems	Unobservable output quality
1.Private sector owns / manages with regulation	Y	N	N	N
2. Ditto with state-financed subsidies	Y	Y	N	N
3. Private sector manages/ public and/or private sector owns	Y	Y	Y	N
4. Public sector owns and manages	Y	Y	Y	Y

Source: Blank 2000

Quality or standards are difficult to regulate when they are hard to observe. A bureaucrat about whom many complaints are made for wrongful arrest, for imposing excessive tax payments or for underpaying benefits, may also be more diligent in not over-paying, not under-assessing for taxation or in not failing to apprehend criminals. A high-powered incentive payments scheme for such persons based on the biased observable measure of complaints obviously would have undesirable effects on performance. Auditing (ex post) is the only regulation likely to be effective.

Privatising or contracting out these services is subject to similar contract specification and monitoring problems. The foregoing therefore suggests that government may privatise or sub-contract where quality of service or standards are easy to observe and therefore regulate. 'May' is the operative word. It cannot be assumed that for instance there are not self-identifying team effects. If medical staff and management do not feel 'ownership' of cleaning and catering services in hospitals, because they have been contracted out, those undertaking these tasks may not be treated as part of the 'hospital team', with adverse effects on performance.

If standards or service quality are not easily observed, there may be a case for the core activity belonging in a state bureau, with its low powered incentives. Incentives without perverse effects are near impossible to design. A corollary is that managing some types of risk and innovation will often be difficult precisely because successful management will not be rewarded. A public bureau manages risks with multiple audit controls (ex post monitoring), penalising downside risk and not rewarding upside achievement. So, where there are few upside opportunities the disadvantages of a public bureau will be less marked.

A PPP and conventional procurement differ in their incentives to innovate and to gather private information about future costs to adapt the service provision to changing circumstances. On theoretical grounds the government's preferred procurement route should depend on the information-gathering costs of the options, their costs of innovation efforts, and whether contractor effort can be fully incentivised by a contract (Hoppe and Schmitz 2013).

Where PPPs are suitable

These considerations point to the type of services for which PPPs might be suitable. PPPs are more suitable when service quality is verifiable, demand risk is low or the firm can diversify risk, and when there are government contributions or the initial capital investment is low. Recourse to private finance can however result in improved incentives for the operator if lenders bring expertise in monitoring the operator's effort, provided that this expertise was sufficient to offset the higher cost of private capital. In this respect, PPPs might be suitable also for high capital value projects (Iossa and Martimort 2014).

When the demand for the service is stable and easy to forecast, contracts can readily be written. For IT services, where demand and technology change quickly, the PFI is not suitable (H M Treasury 2003b). PPPs in the transport and water sectors, where

infrastructure quality is key and demand is relatively stable, may be appropriate. PPPs are less likely to deliver efficiency gains for nursing homes and schools, where service quality is mainly determined by human capital investment. Because of the difficulty of specifying their services compared to their buildings, Hart (2003) agreed that prisons and schools better fitted the conventional procurement requirement but for the opposite case of hospitals the PPP route was appropriate. Regardless of sector, bundling construction and the operation of an asset can be problematic because most of the risk is associated with the construction phase. Once construction is complete the operation phase, which may be for many years is relatively low risk and therefore can be refinanced at lower interest rates, to the substantial advantage of the PPP contractor.

However, not all of this is necessarily borne out by various analysts of British experience. The IPPR Commission found substantial advantages from PPP/PFI in prisons and roads, but not in hospitals and schools. A report by KPMG (2009) found that the rate of improvement in educational attainment was 44 percent faster in schools rebuilt using PFI than those rebuilt conventionally. Unauthorised absence in schools rebuilt using PFI was reducing, whereas in a comparable set of conventional schools it was increasing. Although on theoretical grounds Hart et al. (1997) rejected private enterprise prisons, other observers judged them one of the sectors where there was evidence of modest gains in efficiency, without any clear adverse effects on the quality of provision (Thompson 2000). One real benefit Thompson maintains was the creation of a competitive environment that stimulated the public sector to 'raise its game', a conclusion later broadly confirmed by the National Audit Office (2003b). Moreover, after the transfer of Birmingham prison back to the state, in 2019 although nearly two fifths of prisons were assessed to be in the lowest of four performance categories, none of these were privately run (The Economist 3.8.2019)[3]. The Treasury identified waste management and social housing as potentially suitable PFI activities (HM Treasury 2003b) But local authority housing PFI projects were subject to cost overruns and completion delays. And there was no evidence that they were better value for money than conventional procurement (NAO 2010). The discrepancy between theory and practice and between different commentators suggests greater complexity than has been considered.

Competition

Competition between contractors was thought generally a guarantee of good service. Though that does not mean it was always judged optimal. Some argued, for example,

[3] But see Ford and Plimmer (2018).

that the Official Journal of the European Union public procurement rules under which major public sector projects are bid inhibit innovation. Competitive bidders are unwilling to share know-how and ideas at that stage of the process. Consequently, this approach can, and often does lead to focussing on lowest cost rather than best value.

The competitive allocation of public contracts is analogous to a sealed bid or descending price auction (Klemperer 2004). The objective of such auctions is to attract as many bidders as possible and to obtain the maximum bid from the competitor with the highest valuation of, in this case, the contract (which means, willing to pay the lowest price). Bidding in the 3G UK spectrum auction is the ambassador for this approach, at least in terms of maximising revenue. With only a few bidders for contracts there may be only weak competitive pressure. Data on PFI competitions from an HM Treasury (2003) sample showed that they averaged four bidders each, which the Treasury emphasised was an ample number. The sheer size and complexity of the contracts limited the number of firms able to compete, and if the competitors were very similar in frequent bids then the likelihood of tacit collusion, or of 'cherry picking' the most favourable contracts, increased (Gosling 2004 20). Consistent with this possibility is evidence that building firms earned unusually high returns in PFI contracts (Public Accounts Committee 2003). In 2000 Carillion plc expected higher construction profits on PFI work and had been achieving a profit margin of 2.7% against turnover. The following year the Kier Group made returns of 2.5% of PFI turnover compared with one percent on other contracts.

Subsequent failures such as Carillion, and Keir's difficulties, qualified the benefits of competition with 'the winner's curse'; the successful bidder is the one that most over-estimates the returns they will earn so that on winning the contract they either skimp on delivery or fail completely. An early case was the Tower Hamlets School Refurbishment project (Pollock et al. 2005). More rigorous financial robustness checks were proposed to reduce the likelihood of a contractor failing (HM Treasury 2006 5.74–5.89), but they did not prevent the collapse of Carillion in 2018.

PFI was not obviously best suited to competitive procurement because of the length of time for which many PFI contracts were negotiated. The public sector is 'locked in' to one private supplier unless there are contract 'break points' at say four or five year intervals. Yet if such re-contracting is cost-minimising it is questionable whether there are sufficient synergies that warrant the 'bundling' that is a key feature

of PFI in the first place.[4] Ascertaining whether bundling with finance is the least cost alternative would be facilitated if there were genuine competition at the bidding stage between procurement routes – as appears to be the case with the Severn River Crossing contract.

The advantages of truly competitive bidding are likely to be better attained by not specifying highly integrated projects from the outset, but instead choosing a thorough separation of functions, option appraisal. This would allow more bidders, because an ability to raise substantial capital would not be required. Provision of state debt finance (Credit Guarantee Finance, HM Treasury (2003) 'taking some of the f out of pfi') could also have this effect. Indeed, results from two of these piloted schemes suggested this route had considerable promise (HM Treasury 2006 7.54–7.57). In turn this suggests there may be merit in investigating the lessons for water companies in Glas Cymru model, where there is no private equity capital at all but the company is run as a public interest corporation. Again, the Dartford Crossing was financed by private debt without private equity.

Value for Money Tests of Procurement Route

What counts as 'value for money' can determine the procurement route and, along with Treasury procedure for evaluating it, has proved controversial (NAO 2013). Was it the best use of a department's budget? Or the best use for the economy as a whole? And how should it be calculated? Lest private sector provision was intrinsically expensive despite competition among bidders, a test of 'Value For Money' was the 'Public Sector Comparator'. This was the hypothetical cost of undertaking a project conventionally in the public sector (HM Treasury Taskforce 1999). 'Value for money' (VFM) was supposedly captured by the excess of the present value of costs of undertaking the activity in the public sector (PSC) over the present value of the winning private sector bidder's 'unitary charges' to government.

Ideally the PSC would function as a 'reserve price' in the 'auction'; if bids were not below the PSC figure, the 'sale' would not take place. For example, the Ministry of Defence were able to reduce by £4 million the price charged by the winning bidder for their Main Building scheme by pointing out that the PSC was cheaper (Public Accounts Committee 2002 para 10). No PFI project has been abandoned because of too high a PFI bid relative to the PSC, so far as the author has been able to establish. Moreover, the VFM margin for early Department of Health schemes between PFI projects and the PSC averaged 1.7% (para 88. Health Select Committee 2002). This

[4] The governments stated determination that long contracts should not be driven by 'affordability' rather than VFM suggests at least a suspicion that they have been (HM Treasury 2006 5.54).

percentage is so small and the doubt about the valuation of the risk transfer so great, that the superior value of the PFI options in these cases is questionable.

To allow the computation of likely PFI costs for comparison with a PSC at the outline business case (OBC) stage, the Treasury (2004) provided a spreadsheet. The PFI unitary charge was estimated by allowing a range of returns on equity of 13–18% before tax and various other rates for the categories of debt assumed to make up the greater part of the finance, as well as the capital and operating expenditures of the project. Both PFI and PSC estimates were adjusted for 'optimism bias', a tendency to underestimate project costs. Flyvbjerg et al. (2002) attribute this bias to a desire of project sponsors to obtain support. Both the unitary charge and the costs of conventional procurement were then discounted at the (virtually risk free) public sector discount rate (3.5% real). The present values of the two options could then be compared and subjected to sensitivity analysis to assist the procurement route choice.

A post-full business case optimism bias adjustment represented the expected change in project costs after award of the contract because of the tendency of public sector projects to experience time or cost overruns. This is the potential risk transfer on a fixed price contact to the private sector, so it was only applied to the PSC. Under revised Treasury procedures (H M Treasury 2003b) the PSC was constructed at an earlier planning stage — the outline business case (OBC) — to allow budgeting for public funds if the calculation should warrant it. For the first time, in theory, the PSC became an element of option choice between conventional procurement and PFI.

There are a great number of project-specific risks, but they can usefully be divided into three broad categories: construction risk, availability risk and demand risk. Measuring and ensuring risk transfer is, however, difficult and controversial. The estimate of the risk transferred under the PFI relative to the PSC has been a specific target for criticism, partly because it is necessarily 'judgmental' and can be spurious (for instance Health Select Committee 2002 paras 83–4; Froud and Shaoul 2001). How much risk can be transferred is often constrained by the obligation of government to supply the service regardless of whether the contractor delivers.

To avoid losing PFI completely,[5] the 2003 guidance proposed raising the optimism bias loadings using a study by Mott McDonald, itself a major PFI contractor (which explains its access to the private sector data, then otherwise difficult to obtain, even for the Treasury). Even before the 2003 guidance there was some evidence that the

[5] The Department of Health acknowledged that, other things being equal, it would not have gone ahead with West Middlesex PFI project based on an evaluation using a discount rate of 3.5% in real terms (Public Accounts Committee 2002 para 9).

costs of these risks were exaggerated. For example, capital cost overruns on conventionally financed NHS construction projects averaged 7% in the late 1990s. In contrast a cost overrun of 12.5% or more was added to the cost of the public sector comparator for most NHS PFI schemes (Sussex 2001).

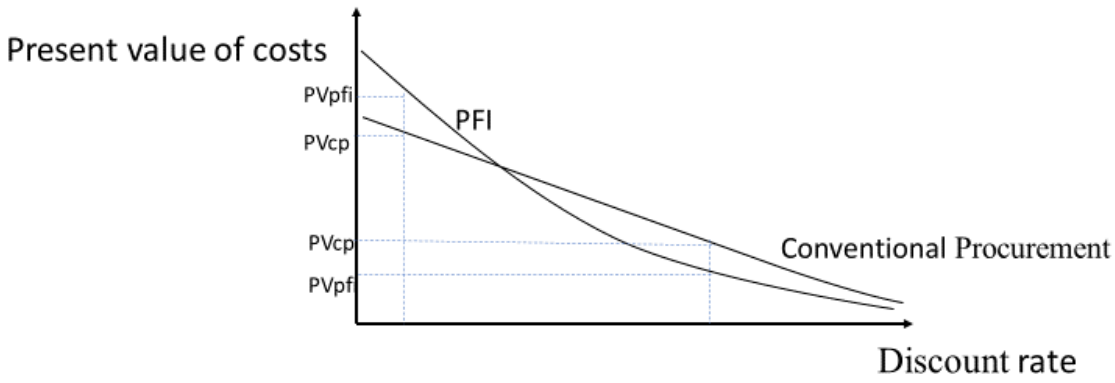
Also, the 2003 guidance specified that the tax that would be paid by the private finance project should be estimated and added to the conventionally procured option that would not pay tax. The National Audit Office (2013, 2018) observed that neither the tax adjustment nor the risk transfer was evidenced sufficiently in practice.

Affordability received little attention in appraisal by comparison with value for money. Yet PFI/PPP projects invariably increased outlays without any corresponding increase in revenues (Froud and Shaoul 2001). So, in the case of hospital PFIs, apparently satisfying the value for money criteria, the affordability gap was bridged in the short term by cuts in capacity, subsidies, asset sales, and diverting income streams to the PFI project. The Swindon PFI hospital scheme reduced available beds from 687 before PFI to 589, of which only 483 were staffed beds, and sold the original hospital site for housing (Lister 2004 5). Although on average only about 2% of the NHS budget is spent annually on services provided by private finance, some Trusts have greater PFI payments than others. In 2012 these payments were reckoned a contributor to the South London Health Care NHS Trust being placed in administration (Hellowell 2014).

The discount rate and cost of capital

In practice the appraisal method and the time profile of costs and revenues could be critical in deciding the procurement route. The discount rate plays a critical role in determining the value of the PSC relative to the cost of the PFI/PPP and therefore whether the project is good value for money. This is because conventional procurement tends to involve an initial investment that the public sector avoids under PFI/PPP by passing it to the private sector. In return the public sector must pay the contractor more in the future to cover the capital costs. A ‘high’ discount rate favours the PPP/PFI by heavily discounting these future capital charges. By contrast a ‘low’ discount rate encourages the choice of conventional procurement; the ‘upfront’ payment is less important relative to the stream of future capital charges payable to the private sector under the PPP/PFI route.

Figure 2, Comparison of Hypothetical PFI Project with Conventional Procuremen
Costs at Different Discount Rates



In figure 2 with a zero discount rate a PFI project involves greater total cost than conventional procurement, and this is also true of the present values of cost at low discount rates (as the NAO (2013) discovered in their reworking of several project appraisal at the government market borrowing rate). At higher discount rates, however, the forward weighting of the PFI spending counts for less, while the initial outlay of the conventional procurement counts for more so that its present value exceeds that of the PFI.

The radical reduction in the public sector discount rate from 6 to 3.5% real announced in the 2003 Treasury Green Book (HM Treasury 2003a) therefore tilted the scales away from the PFI option. Even before then the costs of PFI project finance had been falling (fig 5.3 PWC 2002). A study conducted of a sample of PFIs for the Office of Government Commerce (PWC fig 5.1 2002) showed that from 1999, project Weighted Average Cost of Capitals (WACCs) were all below 6% real — at a time when the public sector discount rate was 6% real (a beta of 0.38, the average for utilities over the period, was assumed). That is, the public sector was discounting the future more heavily than the private sector. As indicated above, the timing of payments combined with the VFM method of appraisal creates a bias in favour of PFI contracts. The ‘reserve price’ was, or would be, set unreasonably ‘low’.

Grout (2003) recommended higher discounting of private than public sector projects for a level playing field. He accepted that if the building and operation costs to the contractor and to the public authority were being discounted in the comparison

different discount rates would not be necessary. He maintained that the PPP discounting option includes revenue risk (transferred) but the government option does not. In practice the private sector calculates its unitary charge to cover building and operation costs using its own borrowing rate. The government then compares the present value of this unitary charge with the present value of public procurement costs, both discounted at the public sector discount rate.

With this approach the PPP flows have been discounted twice; once at a commercial rate, then this flow is discounted at the social discount rate. If government and the private sector could borrow and discount at the same rate and the building and operating costs were the same, then the present value of the private option would always be cheaper with the Treasury approach because it pushes government payments further into the future. Suppose building costs are F, next period operating costs are OC and the discount rate is r. PV of conventional procurement is $PV=F+OC/(1+r)$, or with a discount factor $d=1/(1+r)<1$, $PV=F+d.OC$. Assume that the private sector has the same costs but divides them into two equal unitary charges for the two time periods, a. So, the sum of the two equal unitary charges, in the absence of excess profits, equals the present value of conventional procurement. $a = 0.5(F+d.OC)$. The Treasury requires comparison of the present value of the unitary charges with the present value of conventional procurement, so the PPP option is discounted twice; $PV= a +a.d =0.5(F(1+d)+OC.d(1+d)) < F+d.OC$ (as long as $d<1$). To equalise PVs of the two routes the public sector discount rate must be higher and the discount factor must be smaller than those of the private sector with this (Treasury) method of appraisal. A level playing field then requires the government outlays on the private contract be discounted at a <u>lower</u> rate than for conventional procurement, when not considering any revenue risk to the private contractor.

Anticipated private sector internal rates of return (IRR), calculated from the bid prices, were higher than the cost of capital on average. The PWC (2002) report suggests reasons why, including the costs of launching failed PFI bids. That the IRR was higher than the return to Utilities might indicate that the market judged the regulatory risk to which Utilities were subject as <u>less</u> than the risk of supplying government. A lack of liquidity of PFI equity compared with utilities could also account for the premium (HM Treasury 2006 7.50), in which case the development of the secondary market should eliminate this margin. Possibly all these explanations are true.

Conclusion

Governments of countries with substantial private sectors and obligations to ensure the supply of a wide range of services must enter long term contractual relations with the private sector to procure prerequisites for these services. These relations are the broad definition of Public-Private Partnerships used here. The ideal forms these contracts take will depend upon the industry or sector involved and the distribution of relevant expertise. Complete measurement of the service is essential if the supply is to be contracted out or provided by a PPP: this accounts for the length and complexity of British PFI contracts as well as for the length of time taken to negotiate them. Where such measurement is not possible supply probably should be kept in house, directly provided by state organisations.

Governments will aspire to shift as much risk as possible to the private sector with fixed price contracts. But measuring how much risk has been transferred can be problematic. This creates difficulties for the British approach to PFI appraisal because risk transfer is a central justification for the use of a fixed social time preference rate for both private and public cash flows in procurement option appraisal. Without credible risk transfer measures this method of 'value for money' testing loses validity. It would be helpful if future research was able to estimate the acceptable additional costs of fixed price contracts, such as contingency and monitoring (for both client and contractor), as a proportion of the total contract value.

Linking private equity into government procurement contracts through PFI arrangements was supposed to increase efficiency and monitoring. There is little or no evidence that it has done this but good reasons for thinking it has increased expense. There are other, better value, ways of obtaining capital for PPPs. A political attraction of the PFI form of PPP was that unlike conventional procurement the debt incurred would be on the private sector's balance sheets, not on that of the government. The national debt/GDP ratio would not be boosted and therefore the national finances would continue to look sound. Yet PFI in this respect was a way of disguising riskiness of government borrowing. Unitary charges for PFI contracts are closely analogous to interest charges on debt.

Competitive bidding can be a useful way to keep down procurement costs, but the larger the contract, the more expensive the bid preparation and the fewer are the private organisations capable of entering the competition. Hence the greater are the chances of collusion. This objection especially applies to 'bundled' contracts such as PFI because these are so large. Even without collusion it must be recognized that in a sustainable market successful bid prices must cover the costs of expected failed bids, which adds to the costs of PPP contracts. Another bidding cost is signalled by the Carillion collapse; there is a continuing need for procurement procedures to

avoid attracting a winner's curse. More yardstick competition between procurement routes, including purely public sector provision, is feasible and desirable. It creates possibilities for learning and innovation about effective contracting and management that large organisations, be they government or private, can and have benefitted from, as demonstrated by the Olympic Games Knowledge Management Program and by pharmaceutical companies experience with biotech start-ups.

Policy should not adopt procurement route appraisals that assume in advance participation of private finance is efficient and desirable (as does the Chancellor's recent statement on PFI mentioned above). If risk is successfully transferred from the public to the private sector, then the private sector's cost of capital will be accordingly higher. Included in the general definition of the private sector from the viewpoint of the UK is the capital of foreign governments and companies. Hinkley Point C nuclear power station is financed by two foreign state-owned companies but is essentially underpinned by UK electricity consumers, whose bills will go up as a consequence.

Other countries, with less powerful finance lobbies, have not adopted the same appraisal approach as the UK, probably with good reason. Future research to assess appropriateness of procurement routes and governance structures requires more openness about the long term-performance of past contracts and government's willingness to experiment. This would permit closer link between theory and evidence than is presently available, and so accumulate more reliable results about what works. To that end it would be helpful if future research examined the performance of the different PPP administrative regimes since 2000. In view of the European Court of Auditors' (2018) adverse report on PPPs in continental Europe (the auditors assessed 12 EU co-financed PPPs in France, Greece, Ireland and Spain in the areas of road transport and ICT and found substantial cost over-runs and delays in completion), and the relatively clean bill of health on cost overruns and delivery times for British PPPs given by the National Audit Office, there may be useful lessons to learn from these regimes.

The poor performance of the privately-owned firms discussed above may have been due to their diversifying beyond their capabilities, relying upon their past successes in winning government contracts rather than their abilities to manage specific types of activities. Managing prisons is likely to call upon different skills from maintaining railway networks or managing housing but to be successful Carillion needed to possess or quickly acquire all these capabilities. If such *hubris* underlies the events triggering recent British disenchantment with private financing and outsourcing more attention should be paid to the relevance of the skills firms genuinely possess when considering contracting out and procurement.

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