Jnl Publ. Pol., **25**, *2*, 219–240
doi:10.1017/S0143814X05000334
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Printed in the United Kingdom

Contractual Uncertainty, Power and Public Contracting

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ABSTRACT

This article discusses the concept of contractual uncertainty and assesses its impact upon the ability of public sector bodies to obtain value for money from their suppliers. Particularly in the realm of public private partnerships, governments around the world are increasingly developing specifications that are likely to be subject to contractual uncertainty. Contractual uncertainty is not necessarily a problem in itself, but can be if the public body cannot avoid an unfavourable power relation in its dealings with the supplier, because it is in a poor position to undertake the inevitable post-contractual negotiations. The argument is illustrated with two cases from the UK public sector that highlight the fact that British public bodies are often seeking to manage contractual uncertainty from a position of weakness.

In many countries around the world, the governing authorities are increasing the role of the private sector in the delivery of public services and infrastructure (Clarke 2000; Pollitt and Bouckaert 2000; Gerrard 2001; Sullivan and Skelcher 2002). In the UK – the focal country of the article – the government's enthusiasm can be seen in recent moves to allow private firms to assume responsibility for certain mainstream aspects of medical care in the NHS (a broadening of the role of the private sector) and in its continuing enthusiasm for ever-more complex private finance initiative (PFI) projects where discrete parcels of work are bundled together under design, build and operate arrangements (a deepening of the role of the private sector).

However, the corollary of greater private sector involvement in public service and infrastructure delivery is that public bodies are having with increasing frequency to manage transactions involving contractual uncertainty. In this paper, uncertainty will be understood in the terms established by Knight (1921). In his seminal paper, Knight established a distinction between risk and uncertainty. The concept of risk was used by

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Knight to describe contractual situations where there are many known alternative scenarios that could emerge during the contractual period. The concept of uncertainty, however, was used by Knight to describe contractual situations where there are unimaginable scenarios that could emerge during the contractual period.

The significance of uncertainty for the management of public contracts is that it places strain on the ability of public bodies to obtain value for money. This is because under conditions of uncertainty (as against certainty and risk), a complete contract cannot be developed *a priori*, meaning that post-contractual re-negotiation is inevitable. This is not necessarily problematic in of itself. It can be, however, if the public body is in a weak power position vis-à-vis its private sector supplier. As will be shown in the article, this is a common occurrence in UK public contracting.

A number of writers within the New Public Management literature have raised concerns about conflict and power being a common feature of contractual relationships between the public and private sectors (Vincent-Jones 1997; Lane 1999 2000; Mayo and Taylor 2001; Grimshaw et al. 2002). The contribution that this article seeks to make is to add to this sub-set of the New Public Management literature by putting at centre stage (a) the importance and nature of power relations in the public contracting arena, (b) the inclination of private sector suppliers to exploit favourable power positions (unless the down-side potential is considerable) and, particularly, (c) the enhanced scope for opportunistic and exploitative supplier behaviour that exists under conditions of contractual uncertainty.

The contribution is made partly through the theoretical discussion that follows, but also through the presentation of two cases that show, in detail, the interplay of contractual uncertainty and power. These cases are both taken from the UK public sector. However, whilst this means that the main focus of the article is on public contracting in the UK, the economic argument, consisting as it does of generic concepts, is applicable to public management elsewhere in the world. This point is discussed further in the conclusion.

The concept of contractual uncertainty

The challenges facing those seeking to contract with third parties under conditions of uncertainty have long been documented. This article will use the distinction made by Knight (1921) between risk and uncertainty. For Knight, risk is something that faces an actor when it knows, *a priori*, the structure of the problems that may occur, but cannot anticipate how those problems will play out over the contractual period (Brousseau and Glachant 2002; Watson 2004). For example, a customer might be able to

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foresee that its relationship with a particular supplier is likely to be affected by price variations with respect to a number of the supplier's key production inputs. However, it is not likely that it will be able to foresee the exact nature of those price variations.

Risk is something very different from what Knight describes as uncertainty. Uncertainty is something that faces an actor when it does not know, *a priori*, the structure of the set of problems that may arise over the contractual period (Brousseau and Glachant 2002). For example, if two parties agree to an arrangement whereby they work together to develop a new generation of computer software for use by one of the parties, it is unlikely that they will, *a priori*, to any degree of detail, be able to imagine all of the technical and commercial problems and tasks that might arise during the development process. Shackle (1955) characterised such a situation as involving unknowable potential states of the world to which probabilities could not be attached. Earl (1995: 113) talks of an incompleteness in 'the list of rival possible states of the world that decision-makers have in mind'.

The significance of the distinction between conditions of risk and uncertainty (and conditions where neither pertain) is that it affects the ability of the customer to accurately stipulate its requirements *a priori* and avoid the need for post-contractual re-negotiation. First, where there is certainty that the requirements of the customer will remain unchanged during the period of the relationship (i.e. where there is an absence of both risk and uncertainty), it is possible for the customer to formally stipulate *a priori*, and with an accuracy that avoids the need for post-contractual re-negotiation, what the supplier is to provide, when, how (if appropriate) and at what cost. This tends to be referred to as a classical contract (Macneil 1974).

Examples of where the public sector is able to use classical contracts under conditions of certainty include the procurement of catering services within public buildings (for example, a hospital), the procurement of standard desktop computers by a school, or an education authority purchasing for a number of schools, and the purchase of printed materials (for example, providing public information on tax or benefits entitlement).

Second, where there is risk, requirements can again be stipulated *a priori* in a manner that avoids the need for post-contractual re-negotiation, although the approach is somewhat different. In the presence of risk, customers can develop flexible contracts that provide for alternative scenarios. Such an arrangement, termed a neo-classical contract in the economics literature (Macneil 1974), has also been described by Llewellyn (1931) as the contract as a 'framework', a description that has remained in common business parlance to the present day. So, if the potential disturbances (Williamson 1996) to trade

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are likely to relate to variations in customer demand levels, then 'call-off' contracts can be established. Alternatively, if the potential disturbances are likely to relate to input costs, then 'escalator' clauses can be established that link the contract price to input cost indices.

The key here is that in circumstances of risk, whilst the pattern of events related to the disturbances cannot be anticipated in advance, the nature of the disturbances (for example, that they will constitute variations in input prices or customer demand levels) and the likely range of variation can both be established in advance and incorporated into the contract design. In other words, risk can be managed contractually *a priori* – negating the need for post-contractual re-negotiation.

An example of contractual risk within the public sector context would be a UK-style, PFI toll road project. With such projects the supplier covers its construction and financing costs through the collection of user payments. However, *a priori*, projections of road usage are only estimates, so the supplier may not cover its costs if usage levels are lower than hoped for. The issue here, therefore, is risk. The structure of the potential problem is known, but the way in which the problem might play out during the contract period is not. Risk also attends the purchase of medical consumables by the UK NHS. This is also in relation to demand. When purchasing, national-level managers do not know exactly how many of a particular type of bandage or syringe the service is going to use in a particular time period. As a result, national framework contracts (with agreed prices) are negotiated with consumable suppliers, which local managers are then able to use as and when required.

The situation is very different under conditions of uncertainty. Under conditions of uncertainty, it is not possible, as it is with risk, to stipulate detailed requirements *a priori*. This is because customers are faced with contracting for unknowable potential states of the world or, as McGuinness puts it, 'currently unimaginable possibilities' (McGuinness 1994: 70). As a result, customers face a situation (whether or not they recognise it) where they will have to engage in post-contractual re-negotiation – as and when the nature of the customer's requirements become clearer. When customers recognise the existence of uncertainty and the consequent need for re-negotiation they often pursue the development of a relational contract.

A relational contract has been defined by Milgrom and Roberts (1992: 602) as 'a contract that specifies only the general terms and objectives of a relationship'. Such a contract is often referred to as a memorandum of agreement. Whilst a relational contract lacks the detail that can be found in classical and neo-classical contracts, it can still contain important information. For example, a relational contract will try to set out, as much as is possible, the manner in which the inevitable post-contractual

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negotiations will be undertaken. This might include an attempt to establish the criteria for the successful management of unforeseen contingencies and the dispute resolution mechanisms for when such efforts break down.

An example of a public contract involving uncertainty is a software development project. With such projects, the two parties work together to define and develop a new software system that can perform a particular task. For example, the aim of the Libra project within the UK criminal justice system was to connect all of the public agencies concerned with criminal justice (NAO 2003). With such projects it is not possible to know, *a priori*, to any degree of detail, the process and product that will develop over the course of the contract. The issue here, therefore, is uncertainty. However, it is not necessary for purchases to be large-scale in order to be subject to contractual uncertainty. PFI contracts let by individual UK NHS hospital trusts for a managed equipment service are also likely to be subject to considerable uncertainty, given the nature of technological developments within the medical sector.

The point was made above that under conditions of uncertainty customers will have to engage in post-contractual re-negotiation *whether or not they realise it*. Yet, on many occasions customers ignore this fact and proceed with contracting under conditions of uncertainty in the belief that they can actually stipulate *a priori* the details of the relationship. Usually they attempt a neo-classical contract, hoping that the uncertainty can be encompassed within its flexible clauses. However, they usually end up disappointed as neo-classical contracts only take into account variance along previously understood parameters, not states of the world that cannot be foreseen. Post-contractual re-negotiation invariably still takes place. The two cases in this article are both arguably examples of a customer organisation mistaking uncertainty for risk.

The concept of power in customer–supplier relationships

It has been argued thus far that conditions of uncertainty make *a priori* complete contracting impossible. To understand the commercial significance of this it is necessary to introduce a further concept, that of power. Power is defined here as the ability of A to make B act in a manner that it would not otherwise have done (Dahl 1964; Lukes 1974). In the context of customer-supplier relationships, this ability is derived from the possession of superior resources on three fronts: utility, scarcity and information (Emerson 1962; Cox et al. 2000).

Utility refers here to the extent to which the customer and supplier value what each is offering within the relationship. Scarcity concerns the ability or otherwise of the two parties to obtain satisfaction outside of the

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relationship. Information is also included as a power resource as there is a need to recognise that there is often a difference between an actor's subjective view of its economic interests and its actual objective interests (Lukes 1974). The ability of an actor to serve its own interests will be severely undermined if it has an erroneous view of what its objective interests are. This observation transfers very easily to the contracting and negotiation process, with conditioning and the selective release of data being common features of such a process.

As power (defined as it is here) is a relative concept, to understand the power relation between a customer and supplier it is necessary to consider the relative power resources of the two parties (Campbell and Cunningham 1983; Cox et al. 2000). Depending on the relative resource endowment of the two parties, the power relation can be characterised by one of the following: customer dominance, customer-supplier inter-dependence, customer-supplier independence and supplier dominance. In customer-supplier relationships, the impact of power relations is that it affects the ability of the two parties to acquire the majority of the surplus value created by the relationship. The more favourable the power relation to the two parties the greater the amount of surplus value they obtain.

So what is the relevance of the concept of customer-supplier power to the existence of uncertainty in public sector contracts? The answer is that it affects the ability of public bodies to manage uncertainty effectively, which, in turn, affects their ability to maximise their share of the surplus value – i.e. obtain good value for money from private sector suppliers. As has been established in this article, the significance of contractual uncertainty is that it prevents the customer organisation from stipulating *a priori* the details of that organisation's requirements. As a result, post-contractual re-negotiations are inevitable and undertaken as the nature of the customer's requirements become clearer over time.

If a customer is to acquire acceptable value for money (i.e. a substantial share of the surplus value) from these re-negotiations, it is critical that it maintains a favourable power position post-contractually. This is because a favourable power relation will allow it to bargain effectively over the new requirements and avoid exploitation. Therefore, public bodies should be looking to enjoy a power relation of interdependence or customer dominance in the post-contractual phase. However, as will be argued, it is not always possible for public bodies to engineer such post-contractual power relations.

The causes of power relations in public contracts

The need for public bodies to create and maintain favourable power relations in their dealings with suppliers logically leads the article on to

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the consideration of the causes of power relations in public contracts. The causes of power relations in public contracting that shall concern this article are all related to the problem of post-contractual hold-up (The information problem of moral hazard also has an effect on power relations but is beyond the scope of this article) (Milgrom and Roberts 1992). Hold-up is said to have been successfully executed when A has been able, post-contractually, to force B to accept a disadvantageous movement in the terms of the contract because of the lack of alternative solutions (scarcity) outside of the A-B relation available to B.

Hold-up can occur in public contracting (or indeed in any contracting environment) for a number of reasons. First, it can occur because of the existence of asymmetric asset specificity and switching costs (Williamson 1985). The significance of asset or transaction-specific investments – that is, investments that would have a lower value if transferred to another relationship – is that they complicate the task of exiting a relationship, irrespective of whether the contract contains a termination clause. The reason for this is that once asset-specific investments have been made in a relationship, there is a cost attached to exit. If the organisation wishes to exit after making such investments, it will have to write those investments off. Not surprisingly, managers will often be reluctant to do that.

What can also complicate the task of exiting a relationship are the costs of switching resources to another relationship. Such costs include the costs of re-tendering, the costs of re-negotiating, the costs of transferring responsibility between suppliers and the costs of getting the new supplier up the learning curve. In the case of complex contractual situations these costs can run into many millions of pounds. The UK's Inland Revenue, for example, recently spent £9 million just paying for suppliers to bid against its incumbent IT supplier, EDS (Collins 2003). Furthermore, if the contract concerns a system or process that is central to an organisation's day-to-day operation, additional costs can be incurred as a consequence of the disruption caused.

One of the objectives of the pre-contractual negotiations can be to establish an arrangement with a supplier that is balanced in terms of asset specificity and switching costs. Balance is achieved by organising the contract so that both parties are constrained from exiting the relationship and thus have an incentive to make it work effectively. Sometimes balance happens naturally. For example, sometimes it will be in the interests of the effectiveness of the relationship that both parties make asset-specific investments. However, on other occasions the nature of the relationship will lead to one party incurring greater asset-specific investments and switching costs than the other. This will leave the relationship unbalanced. Under these circumstances, an objective of the pre-contractual negotiations can be to make the unburdened party post a

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'hostage' (Williamson 1985), that is, a compensatory financial commitment that restricts exit. The aim of the hostage is to provide a different way of creating contractual balance and thus the right incentive structure for an effective relationship.

It cannot be taken as read, however, that contractual balance will always be achieved in the pre-contractual negotiation phase. Creating balance in complex contractual situations is extremely difficult in practical terms and can often be further hindered by unbalanced pre-contractual power relations, imbalances in the quality of the two parties' commercial teams and the invasion of the contracting process by internal politics (Lonsdale 2005). Under such circumstances, one party will become dominant post-contractually. If it is the supplier, the public body will experience difficulties in managing the post-contractual negotiations necessitated by uncertainty.

However, even where there is a relative symmetry vis-à-vis asset specificity, switching costs and hostages, an unbalanced power relation can still emerge. There are three reasons for this. The first concerns time. In customer-seller relationships, as in other types of relationships, time is often the enemy of one party and the friend of the other. This is because delays in agreeing a contract, or in implementing its contents, can impose a greater cost on one party than it does the other. This is extremely relevant to public contracting as many, particularly high profile contracts, have a political and/or practical timetable attached to them and are, therefore, vulnerable to hold-up problems. This was a very public feature of the construction of the facilities for the 2004 Olympics in Greece. It was also a feature of the aforementioned Libra IT project run by the UK's Lord Chancellor's Department. The perceived need to get a new system in place before the existing one 'fell over', and avoid political embarrassment from project slippage, meant that unfavourable movements in the contract terms were accepted by the department. (NAO 2003).

A second reason is that the salience (utility) of the contract to the two parties may differ. Public sector purchasers are particularly vulnerable to this, especially now they are outsourcing tasks that are so central to the ability of their public bodies to fulfil their statutory responsibilities. IT or hospital contracts, for example, are usually central to the entire operation of a public body and the fulfilment of its statutory duties. For the supplier, however, a contract may just be one amongst many and mean it can issue a credible threat of hold-up.

The third reason concerns the legal liabilities taken on by private sector suppliers. When engaged in public private partnership contracts, private sector organisations often set up what are referred to as 'special purpose vehicles' (SPV). What this means is that a separate organisation

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is established by one or a consortium of (usually) large organisations to undertake the public contract. The key here is that the establishment of these SPV will often take away the parent companies' legal responsibilities for the conduct of the contract. So if the contract encounters commercial problems, it is the SPV that is responsible. An issue of contention in the UK, for example, has related to the extent to which these SPV have sufficient capital and parent company guarantees to cover the scale of the losses that might accrue from such problems. If they do not, the credible threat of a supplier is one concerning liquidation, not simply exit, and can again raise the potential for hold-up problems.

Notwithstanding what has been said above it should be noted that there is not unanimous support within the economics literature for the argument that has been presented thus far, that is, that asymmetric power relations can develop in contractual relationships and that this affects the ability of customers to effectively manage the post-contractual re-negotiations caused by uncertainty. Three different counter-arguments are often cited.

First, some economists take issue with the earlier outlined argument that contractual balance will sometimes not be achieved in the pre-contractual negotiation phase (Williamson 1990, 1995). Economists often question the existence and significance of power relations in pre-contractual business negotiations. Nor do all economists accept that customers sometimes face constraints on their internal contracting capabilities. Much of the contracting literature makes the assumption of 'feasible foresight', an assumption that actors have an ability to look into the future and recognise general categories of potential hazards, for example, hold-up, risk and uncertainty. (Williamson 1990).

Second, it is also argued that asymmetric power relations do not emerge during contractual relationships because contract managers always have the device of 'contingent renewal' (Bowles and Gintis 1998). It is argued that supplier performance can be controlled through making future contracts dependent on current performance. Third, a further reason why power relations are said to be less significant than is often argued concerns reputation. It is argued that suppliers hesitate to act opportunistically because the exploitation of a commercial advantage would have implications for its reputation in the marketplace and thus affect future bids for contracts (Milgrom and Roberts 1992).

All three of these arguments are powerful and their relevance is not contested. However, the author believes that they do not explain why power relations will never exist or have an impact upon the commercial conduct of a contract, they merely provide further variables that affect *when* power exists and has a commercial impact. As has been argued elsewhere (Lonsdale 2005), on some occasions a customer will enjoy

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favourable pre-contract leverage over the supplier, possess feasible foresight (unhindered by political interference and aided by learning over time), be able to offer potential future contracts that will affect supplier behaviour and be involved with suppliers, and in contractual situations, where issues of reputation loom large. On other occasions they will not and an asymmetric power relation will emerge during the contractual period.

To summarize, as the public sector increases the role of the private sector in the delivery of public services and infrastructure it finds itself increasingly contracting under conditions of uncertainty. Many of these contracts will also be characterised by significant asset specificity and switching costs. On some occasions, because of some combination of a favourable pre-contractual power relation, a competent and politically unhindered commercial team, favourable conditions vis-à-vis time and salience, the ability to use contingent renewal and the presence of reputation-related issues, the customer will be able to create and maintain contractual balance, enabling it to manage uncertainty effectively. On other occasions, the above-mentioned factors will be less favourable to the customer and an asymmetric power relation will emerge, presenting the customer with severe difficulties in managing uncertainty. This will have implications for the achievement of value for money. In the case of the competence and the freedom from internal politics of the customer's commercial team, this is a factor that is within the control of the public body. In the case of the other factors, the public body will often have very little control.

Contractual uncertainty and the problem of power in the UK public sector

Having established the theoretical argument, the article now proceeds to explore it further by examining contracting policy within the UK public sector. First, a view is advanced that current UK Government contracting policy is increasing the frequency with which its public sector bodies are contracting under conditions of uncertainty. Second, two UK public sector case studies are presented that show that if such contractual uncertainty is combined with adverse power relations then the public body is unlikely to obtain value for money.

UK Government Contracting Policy and Uncertainty

In line with other governments around the world, the UK Government is pursuing a policy towards public service and infrastructure delivery that is increasing the frequency with which public bodies are having to contract under conditions of uncertainty. Other aspects of the article

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have proceeded from that contention. Such a contention needs to be substantiated and can be through the identification of five aspects of UK Government policy that push in that direction.

First, the UK Government policy of encouraging greater private sector management involvement in public projects/service delivery, especially in the case of PFIs, is leading to 'bundling' together under one contract different aspects of product/service provision. On many such occasions, one aspect of contract delivery within these bundled arrangements is dependent on another – for example, the nature of the operational part of a PFI contract can be dependent on the design and build parts. Not surprisingly, stipulating requirements *a priori* under such circumstances is extremely difficult. The design, finance, build and operate projects for new-build NHS hospitals are a case in point.

In the pre-contract negotiations for such projects, facilities managers from the NHS hospital trust attempt to stipulate the details of what the supplier's obligations are going to be in the new building once it has opened (i.e. during the operational phase of the contract). What they also attempt to do is attach risk weightings to those obligations. However, this specification task is close to impossible to undertake effectively because at the time that this task is being attempted the specification of the actual building and its medical services have themselves not yet been finalised. To some degree, therefore, the managers are involved in little more than a guessing game. It is not surprising, then, that in many NHS PFIs there is a need for literally hundreds of post-contractual re-negotiations – often undertaken under less than ideal conditions from the point of view of the NHS Trust.

Second, the fundamental design of the PFI (i.e. initially invested private finance being recovered over the course of the contract) leads inevitably towards more contractual situations being characterised by uncertainty. This is because to allow the supplier to re-coup its investment – either through a unitary annual payment from a public body or through user payments – the contract needs to be of considerable length, on some occasions up to 30 years. Contracts of such length are inevitably designed under conditions of uncertainty. Indeed, one might go as far as to say that the impression created by many PFI projects is that the contract design has been driven by a desire to have a project privately financed rather than contract optimisation.

Third, the UK Government is increasingly contracting for solutions to unique (not to mention complex) organisational or technological problems. The nature of the solutions in such circumstances, by definition, cannot be known *a priori*. Furthermore, the uniqueness of many projects also means that there is often a limited ability to benchmark practice against other similar projects. The uncertainty inherent in such projects

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was a feature of the PFI for the Benefits Payment Card project. An audit report stated that because of the uncertainty over the eventual nature of the technological solution being contracted for, there were 289 'agreements to agree later' at the time of the contract signing (NAO 2000a).

Fourth, the UK Government is increasingly contracting with the private sector for the provision of services that are highly sensitive to changes in government policy, changes that cannot be known *a priori*. Contracts are being signed for long periods for the provision of services that could easily be scrapped or significantly amended should a new policy direction be taken either by an existing party of government or by a replacement one. The impact of policy changes on contract management can be observed in one of the cases later in the article – the NIRS 2 case.

Finally, the UK Government is increasingly signing long-term contracts for the provision of services that are highly sensitive to changes in technology. This partly relates to long-term projects that involve IT and telecoms – for example, the PFI for the Defence Fixed Telecommunications System (NAO 2000b) and the PPP for the airwave project (NAO 2002a) – but also to projects like the 30-year contracts for NHS hospitals. In the early part of the 21st century it is not possible to know how medical care will be delivered two or three decades into the future.

The existence of contractual uncertainty is not necessarily a problem in itself. Problems only arise if the ensuing post-contractual renegotiations are undertaken by a public body from a position of weakness. This is the situation in both of the case studies that follow. In both cases, the public bodies failed to establish and maintain a favourable power relation and, as a result, were unable to manage contractual uncertainty effectively. The cases concern the contract for the replacement national insurance recording system and the contract for the Devonport nuclear submarine facilities.

It should be noted that the primary purpose of the cases is to establish the importance of power relations to the management of uncertainty, not to comment on how the public bodies might have contracted more effectively. That it might be contended that adverse power relations might have been avoided or contracts differently designed does not affect the argument about the importance of power relations to the management of uncertainty.

The contract between the Contributions Agency and Andersen Consulting

The first of the two cases concerns the contract between the Contributions Agency and Andersen Consulting (called Accenture from 1999) for the development and operation of the replacement national insurance

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recording system – NIRS 2.[1] The national insurance scheme in the UK includes about 65 million contributions records. Not surprisingly, therefore, it requires considerable IT support. By the early 1990s, it was clear that the existing IT system – NIRS – was becoming increasingly unsatisfactory and needed replacing. As a result, in 1995, the Contributions Agency signed a contract with Andersen Consulting that gave it the responsibility for developing, operating and enhancing a new national insurance recording system – NIRS 2 (NAO 1997).

The Contributions Agency believed that it understood the nature and parameters of this project, to the extent that it developed a contract with Andersen Consulting that put a specific price range on it – between £45 million and £76 million (NAO 1997). However, this confidence proved misplaced and gave way to a realisation by 1999 that it was going to have to re-negotiate an extension. The re-negotiation was necessary because of changes in the political environment. Specifically, the *a priori* 'unknowable state of the world' resulted from a change in the UK Government in 1997 and a set of policy changes that were announced between 1998 and 1999 (NAO 2001). These new policy proposals meant a new set of benefits and schemes that required the development of new software solutions and adaptations to the NIRS 2 system – unfortunately before the new system had really had time to bed down.

The amount of IT work that these legislative changes demanded was far beyond what the Contributions Agency had imagined might be required. Its original estimate of the additional upgrading work that might be required during the course of the contract concluded that a maximum of 2000 function points (an industry method of calculating work on IT projects) would be needed in any given year. However, estimates following the release of the Labour Government's new pension and national insurance policies suggested that between October 2000 and April 2002 up to 7,240 function points of work would be required (NAO 2001).

A point that needs to be understood here is that the structure of the original contract, and the pricings within them, were based upon a set of predictions (arguably on both sides) about the amount of work that was going to be required to upgrade the new NIRS 2 system over the course of the contract. As has been mentioned, the Contributions Agency believed that 2000 function points per annum would comfortably cover that aspect of the contract and, as a result, the contract only contained pricings up to the level of 2000 function points per year. Any work required beyond that figure would have to be re-negotiated.

An obvious criticism of the Contributions Agency's conduct in the original contract design is that it contracted too tightly and should have set the annual function point limit at a level higher than 2000. This would

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have given it greater flexibility and avoided the need for post-contractual re-negotiation. However, whilst this is clearly a fair argument the transaction was not as simple as that. The NIRS 2 project contained many aspects, some that related to the development of the new system, some that related to its upgrade and some that related to its operation. In all of the bids the Contributions Agency received during the tender stage (from Andersen Consulting, CSC and an EDS-Sema alliance), the prices of each aspect of the project showed signs of being interdependent. As a result, any adjustment to the contractual agreement on the upgrading work within the Andersen Consulting bid would almost certainly have affected Andersen Consulting's attitude to the price of the work on the original development of the system.

With the contract design that the Contributions Agency eventually agreed with Andersen Consulting – a low initial development cost vis-à-vis the other bidders, but also a low limit on the negotiated function points – the achievement of value for money essentially came down to which of the two parties identified the contractual environment correctly. The Contributions Agency clearly believed that the scope of the project was knowable *a priori* and merely required a flexible or neo-classical contract (i.e. a contract that accounted for up to 2000 function points upgrade work). Andersen Consulting would appear to have believed, from the structure of its bid, that the contractual environment was in fact characterised by uncertainty and that any *a priori* attempt to try to assume a certain level of upgrade requirement was, at best, a gamble. As it turned out, Andersen Consulting proved to be more accurate. Unforeseeable events occurred, the contract was exceeded and re-negotiations were necessary.

The main element of the re-negotiation concerned the prices that should be charged for the necessary additional work. Very quickly, the Contributions Agency realised that its ability to manage these negotiations was limited. The problem was two-fold. First, the Contributions Agency's ability to hold a competition for the additional work was constrained by the high sunk (asset specificity) and switching costs it had incurred in its relationship with Andersen Consulting. A study by PA Consulting, commissioned by the Contributions Agency, found that it would cost £44 million for the Contributions Agency to break the contract with Andersen Consulting. It was also estimated that alternative suppliers would require a differential to operate NIRS 2, something that was put at £31 million (NAO 2001). It is hard not to conclude that these figures represent a situation of asymmetric asset specificity and switching costs.

A further asymmetry concerned time. It was reported by the NAO that: 'In carrying out their evaluation, the [Contributions Agency] also

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took into account the need to deliver changes arising out of the legislative timetable. Using a supplier other than [Andersen Consulting] would have delayed implementation of the changes because of the time it would have taken for them to mobilise and become familiar with the system' (NAO 2001: 17). This, it is said, would have led to the possibility of potential compensation claims from people left without benefits, the additional cost of providing interim clerical solutions and, of course, political embarrassment. It was concluded by the Contributions Agency that these issues made the option of using other suppliers even less attractive.

It would seem reasonable, therefore, to come to the conclusion that the Contributions Agency was in a weak post-contractual negotiation position vis-à-vis Andersen Consulting. The outcome was fairly predictable. Whilst it is possible to put a different perspective on the outcome, and whilst the NAO (2001) is no doubt correct to state that re-negotiating the additional requirements with Andersen Consulting was the Contributions Agency's best option (perhaps least worst would be more accurate), it can be argued that the price of the contract extension was favourable to Andersen Consulting. The extension that was agreed increased the value of the contract by between £76 million and £144 million, depending on the amount of new work taken up (NAO 2001).

This price range was assessed in a value for money study undertaken by the Contributions Agency. The study compared the Andersen Consulting proposal with two benchmarks (industry average prices and the prices charged by EDS on other government work). The comparisons, based on a hypothetical requirement of 8,000 function points, were instructive. The Andersen Consulting proposal for 8,000 function points came in at exactly £100 million. This was found to be the cheapest option – thus the view of the NAO stated above.

The benchmark that was closest to this was that based on the EDS prices. The price here for 8,000 function points was £149 million. This figure, however, includes three factors that suggest that the Andersen Consulting price was rather high and included a significant profit. First, the £44 million that would be incurred by the Contributions Agency in exiting the Andersen Consulting relationship was included in the EDS-based price. Second, the EDS-based price also included the £31 million differential that it was stated that other suppliers would demand if they were to take over the Andersen Consulting-developed system. Third, the productivity rate agreed by Andersen Consulting was nearly 50% higher than that estimated for a replacement supplier. This also should surely have had an effect on the Andersen Consulting price vis-à-vis the EDS-based price.

It does seem reasonable to conclude, therefore, that the evidence here suggests that the Contributions Agency found itself in an unfavourable

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post-contractual power relation vis-à-vis Andersen Consulting and, as a result, found it difficult to manage the post-contractual negotiations that were made inevitable by the existence of uncertainty. A similar situation can be identified in the next case, the contractual relationship between the Ministry of Defence and a supplier called Devonport Management Limited.

The contract between the Ministry of Defence and Devonport Management Limited

In 1997, the Ministry of Defence signed a contract with Devonport Management Limited to design and build new and upgraded facilities for the re-fitting and refuelling of the Royal Navy's submarines, including its nuclear submarines. As with many defence projects, the project was highly complex, involving a number of upgrades to docks, together with the development of new nuclear fuel handling facilities.

The uncertainty in this project was related to two elements. The first concerned design. Until the designs for the different aspects of the project were completed it was not possible to ascertain exactly what the costs would be for those aspects (NAO 2002b). The second concerned regulation. The project had to conform to the 1992 Safety Assessment Principles issued by the Health and Safety Executive's nuclear regulator, the Nuclear Installations Inspectorate. The exact manner in which the Safety Assessment Principles would affect the different elements of the project was not known *a priori*, although the extent to which this was problematic became a matter of dispute between the two parties.

The original contract, signed in 1997, tried to put some kind of framework around the contractual uncertainty. Most significantly, the two parties decided to make an *a priori* estimate of the project cost – between £576 million and £650 million. Devonport Management Limited was then incentivised under the contract to complete the project for a cost at the lower end of this range. If the project came in at £576 million, Devonport Management Limited would earn a management fee (effectively a profit) of £30 million. The closer the cost moved to £650 million, the lower Devonport Management Limited's profit margin would be. If the costs actually exceeded the £650 million figure, Devonport Management Limited would have to suffer a loss, unless the cost increase could unambiguously be demonstrated to have resulted from the post-contractual activities of the Ministry of Defence (NAO 2002b). This aspect of the contract provides echoes of the neo-classical form of contract.

As it turned out, the complexity and scope of the project was far greater than either of the two parties had anticipated. The uncertainty

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characterising the project had led to a total cost that far outstripped the *a priori* estimates. In the autumn of 2002, it was announced that the final cost would be at least £933 million. The figure was announced as an estimate as there were still, five years into the contract, outstanding design issues that were said to threaten to push the actual final figure significantly higher than the £933 million figure (NAO 2002b).

This cost overrun of (at least) £283 million led to a series of accusations as to who was to blame and post-contractual re-negotiations as to who should bear the additional cost. The view of the Ministry of Defence was that Devonport Management Limited should bear the main burden of any cost overrun, as agreed in the 1997 contract. It did accept responsibility for some error on its own part, related to the late provision of some design information, but claimed that the cost implications of this only ran to £38 million. The Ministry of Defence argued that this still left £245 million outstanding as Devonport Management Limited's responsibility. In any case, the Ministry of Defence took the view that between £86 and £110 million of this £245 million cost overrun was nothing to do with anything that might be described as the consequences of uncertainty and was actually the result of the poor performance of Devonport Management Limited and its sub-contractors (NAO 2002b).

Devonport Management Limited, not surprisingly, took a different view of events. Like the Ministry of Defence, it took some responsibility for the cost overrun. It admitted mistakes, but argued that these were only responsible for £20 million of the £283 million cost overrun. The main culprit, Devonport Management Limited argued, was the regulatory environment, that forced it to increase its costs in a manner it could not possibly been expected to have anticipated. It argued that it was operating in an environment of uncertainty, caused by regulation, and that contractually this uncertainty was the Ministry of Defence's responsibility.

Specifically, Devonport Management Limited pointed to a new 1996 agreement between the Ministry of Defence and the Nuclear Installations Inspectorate. This agreement, it argued, caused a 'sea-change' in regulation and caused changes to the conduct of the project that, under the previously mentioned clause in the contract, was the responsibility of the Ministry of Defence. This view, however, was rejected by the Ministry of Defence which argued that the 1996 agreement merely formalised the existing regulatory arrangements, arrangements that it claimed Devonport Management Limited knew about before it signed the contract in 1997 (NAO 2002b).

The result of all this was that in 2002 Devonport Management Limited launched a series of legal claims against the Ministry of Defence that sought to make it responsible for most of the cost overrun. In considering

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how to respond to these claims and potential future negotiations, the Ministry of Defence considered the strength of its position in the relationship. The evidence was sobering. First, it did not own the Devonport facility and there was nowhere else where it could re-source the work in any realistic timeframe. The facility was asset-specific. Second, it had no desire to enter into a legal fight with Devonport Management Limited as this would have caused a further delay to the completion of the project. This was deemed militarily and politically unacceptable. Third, an insistence on Devonport Management Limited absorbing the cost overrun was likely to force Devonport Management Limited into liquidation. Its assets were only valued at £60 million (NAO 2002b).

Together, these three factors meant that the Ministry of Defence was in a very weak post-contractual power position. As a result, it agreed to enter into new negotiations with Devonport Management Limited. However, Devonport Management Limited knew, of course, that the Ministry of Defence was only doing this, and so soon after Devonport Management Limited had issued its threat, because of the weakness of its position and pushed for a settlement that met its demands. The result was that the Ministry of Defence agreed to pay all but £43 million of the cost overrun. In the initial estimate, made in 1997, the Ministry of Defence forecast that the project would cost between £576 million and £650 million. The re-negotiated figure now stands at £849 million, which, as has been mentioned, could still increase further (NAO 2002b).

Now it could be argued that the Ministry of Defence was unreasonable in expecting Devonport Management Limited to pay for the additional costs that were incurred on a project that was clearly characterised by uncertainty. The view could be taken that the Ministry of Defence had simply misunderstood the nature of the project that it was managing. Where it did, perhaps, deserve more sympathy was over the additional costs incurred as a result of contractor and sub-contractor under-performance. However, the key point as far as the article is concerned is that because of the Ministry of Defence's unfavourable post-contractual power position it had no choice but to bear most of the costs of both.

Conclusion

Many writers in the area of purchasing and supply take the view that the options facing customers in their dealings with suppliers consist of (a) collaborative relationships based upon non-adversarial commercial practices and (b) arm's-length relationships based upon adversarial practices – that is, practices underpinned by a reliance on power (for example, Lamming 1993; Hines 1994). To the author, such a view is based upon a

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false dichotomy. The nature of working relations between a customer and a supplier – collaborative or arm's-length – is an entirely different matter from the terms of the commercial deal struck between them, either pre-contract or in the post-contractual negotiations. It is perfectly possible to believe that relationships can be both collaborative in their operational working relations and unequal and adversarial in terms of the commercial negotiations. It is also very common.

It is critically important that the UK Government understands this observation, especially given that its policy of expanding the role of the private sector in the delivery of public services/infrastructure is increasing the number of relationships with suppliers that are conducted under conditions of uncertainty. The cases presented in this paper show very clearly that, even in 'partnership' relationships, where post-contractual negotiations provoked by uncertainty are conducted against a background of a supplier dominance power relation the public body will suffer from the hold-up problem and experience difficulties in obtaining value for money. In short, public bodies within the UK Government need not only to develop collaborative relationships or 'partnerships' with suppliers, they also need those relationships to be underpinned by favourable post-contractual power relations.

Given the difficulties that public bodies will often face in establishing and maintaining favourable post-contractual power relations – as has been mentioned, many factors vis-à-vis customer-supplier power relations will be out of their control – this all raises questions about the current UK Government contracting policy. The current policy, whilst expanding the number of contracts characterised by uncertainty, is not consistently observant of the need to establish and maintain favourable post-contractual power relations. The need is stated in many documents on public contracting (for example, HM Treasury 2003), but not consistently observed in practice. For example, it is often stated that the PFI is the only game in town – whatever the power circumstances (Spackman 2002). Whilst such an attitude may serve other policy objectives, it will inevitably lead to further occasions where poor value for money is obtained from suppliers.

This observation also has consequences for governments beyond the UK. This is for two main reasons. First, the economic concepts here are generic, not UK-specific. The concept of hold-up, for example, was originally developed on the basis of observations of relationships between private sector firms in the United States (Williamson 1985; Milgrom and Roberts 1992) – it is not by any means a public-private problem – and is widely discussed in relation to economic events in, for example, mainland Europe (Menard and Saussier 2002; Arrunada et al. 2004; Creti and Villeneuve 2004). Second, the same trend towards 'bundling' public

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contracts can be seen in a number of other countries including Australia, Canada, India, Ireland, the Netherlands and the US (Webb and Pulle 2002; Daniels and Trebilcock 1996; Faruqi and Smith 1997; Department for Environment, Heritage and Local Government 2003; Reijniers 1994; Trujillo et al. 1998). As is the case in the UK, this is likely to lead to a situation where many public contracts are incomplete and subject to post-contract re-negotiation.

The issue of the bundling of contracts leads us to finish the article by considering a common response to the type of argument made in this paper. This response speculates that whilst there may be costs attached to using the market under conditions of uncertainty, a better solution is unlikely to lie in relying on the public sector to make internal provision. So, whilst the outcomes in cases such as the two presented here are not perfect, they are the lesser of two evils. The answer to this response is to reiterate that the choice facing public managers is not just between an 'internal solution' and a 'market solution'.

Whilst not ruling out internal provision, the issues being raised in this article invite readers to consider that there might be *different ways* of engaging with the market. One of the points that has been made in the article is that the current trend in public contracting is leading towards more contracts being organised under bundled arrangements. Alternatives to this type of arrangement do not just include bringing the requirement in-house, but also include organising the purchase requirement differently, in particular, unbundling the requirement into a number of smaller contracts. With this in mind, Hart (2003) has started to offer some guidance on when bundled and unbundled contracting approaches are likely to be most appropriate.

Evidence from the IT sector certainly suggests that the option of unbundling is an important intermediary between in-house provision and bundled arrangements. In a report, Lacity and Willcocks (1996) found a dramatic difference in the outcomes achieved by customer organisations when they bundled and unbundled their requirements. Bundled contracts were found to be successful in only 14 per cent of the cases, whereas unbundled arrangements had an 85 per cent success rate. Whether these findings are a vindication of Hart's nascent model is not known. However, both sources point to the conclusion that it would be a mistake to view bundled contracts as the latest incarnation of 'best practice' contracting.

NOTE

1. During the contract, responsibility for NIRS 2 passed from the Contributions Agency to the Inland Revenue. In the interests of simplicity, the buyer is referred to as the Contributions Agency throughout the case.

https://doi.org/10.1017/S0143814X05000334 Published online by Cambridge University Press

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https://doi.org/10.1017/S0143814X05000334 Published online by Cambridge University Press