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Incentives in Construction Contracts: Should we pay for Performance?

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ABSTRACT

Incentives and disincentives are common contractual tools to influence the behaviour of contracting parties. The type of incentivization differs according to the objectives involved. A contract may involve general objectives, for example, the enhancement of the client-contractor relationship, the establishment of long term relationships, or the use of certain business models. Other more tangible objectives concern the issues of cost, performance, and time/completion on schedule. In regard to the latter types of incentive, a range of different types of incentive may be used, e.g. monetary incentives such as fixed-price contracts, cost-plus-incentive fees, cost-plus-award-fees, share-in-savings incentives, and non-monetary incentives such as automatic extension of contract term, more frequent payments, letters of appreciation etc. There is little information available about how they are used and whether they are effective. Questions to be answered in this connection concern the scalability of performance, the choice of the appropriate kind of incentive, the frequency of their use, the percolation of incentives through supply chains and methods of incentive management.

KEYWORDS: Incentivization, Contracts, Performance, Procurement.

1. INTRODUCTION

A perennial question in construction contracting is how to get people to improve their performance. This is connected with the issue of what motivates people and organizations to do work, because if the motivation is right, then they will do their work better, quicker or cheaper. As Bresnen and Marshall (2000) have pointed out, despite a lot enthusiasm for the use

of incentives, there has been little systematic research on the motivational principles and the assumptions underlying the use of incentives. Indeed, the idea that financial incentives (whether positive or negative) have a direct impact on performance seems so obvious that it is rarely questioned. For example, Arditi and Yasamis (1998) begin their study with the unquestioned assertion that “incentives are generally used along with disincentives to promote efficient contract management and to reward only successful contractors with high performance standards...”. The purpose and efficacy of incentives were not questioned.

Recently in the UK, the question of performance has been dealt with as a “value-for-money” issue, but this often results in a confused agenda, because while notions of “value” are discussed widely, there is no consensus about what value is, the result usually being that parties to a contract focus on doing the same thing as they did last time, but more cheaply. In other words, for all that is written about it, value for money often translates into lowest price for a particular specification of work. This is a very well-established concept in business, and there has been much written about it over the years.

Incentives have long been used in attempts to improve performance. Reiners and Broughton (1953: p13) showed that the labour expenditure of main contractors who operated incentive schemes for their employees was considerably less than that of contractors not operating such schemes. Interestingly, Fleming (1967) concluded in a study about productivity in housebuilding that improvements could flow either from technological developments and increasing efficiency of individual firms, or from changing the nature of demand by altering the sizes of contracts or adopting contract procedures designed to encourage more efficient working methods. This has tremendous resonance with recent developments in UK government procurement practice, particularly in terms of bundling contracts and developments such as partnering, PFI and performance-based contracts. These two studies illustrate incentives operating at two levels: the employee and the firm.

Focusing at the level of the firm, Scherer (1964) showed that for US Defence projects, contractors who were financially incentivized to improve their performance behaved in unexpected ways. It appeared that the fact that their contracts included clauses that enabled them to renegotiate the price and/or duration of the project has a big impact on the effect of the incentives. Contractors did not even try to maximize the expected value of their profits. This may provide some background and context for understanding why simple financial incentives have little impact on construction contractors. It is certainly consistent with the findings of Bresnen and Marshall (2000) who showed that varying incentive schemes may have little impact on performance by comparison with other sources of motivation. Along similar lines, Rosenfeld and Geltner (1991) identified that there were important counter-productive effects of “adverse selection” that must occur in an incentive contract environment - to the extent that we should expect there to be a decline in their use.

2. CONTEXT AND BACKGROUND

The idea of incentivizing performance usually boils down to finding ways of getting suppliers (or contractors) to perform quicker, cheaper or better (prosaic versions of the mantra of time, cost and quality). In fact, much that is written about improving performance in the construction sector usually falls short of actually specifying what aspects of performance are to be improved. There are many guidance documents from the UK's Office of Government Commerce, for example, that substitute "value-for-money" for improved performance, without going as far as dealing with what could be meant by the concept of value.

There is clearly a deeply held and widespread belief that financial incentives work. But, as noted above, there is sufficient reason to doubt that the effects of financial incentives are as significant as they might be perceived. One way to examine the notion of incentives would be to see how different disciplines approached the theory of motivating people and/or organizations to perform quicker, cheaper or better. A key aspect of this is the question of business relationships and the extent to which the continuation of long-term business relationships can motivate businesses to modify their behaviour.

There are several ways of looking at incentives. Some texts focus on economic issues, to do with the way that financial rewards can be used to induce changed in behaviour, connected with productivity and efficiency. Others focus on the extent to which the promise of future work might motivate suppliers to focus on producing better work than they would under discrete contracts, what might be termed a relational focus. A third view of incentives takes the legal view, in terms of the extent to which contract might include bonuses or penalties, and the extent to which the courts might interpret and apply such provisions. Finally, there are psychological aspects of incentivization and motivation that may be important in understanding how individuals and firms react to the measures put before them. Each of these perspectives is dealt with in more detail below.

2.1 ECONOMIC PERSPECTIVE

Incentive schemes have economic and financial consequences. In the normal course of events, contractors seeking to achieve performance targets may have to increase their resources on a project, and thus reduce their profit, unless they can renegotiate a better price during the execution of the work. Therefore, at its most basic level, the traditional approach of tendering a contract so that the price is agreed before the work starts acts as an incentive to the contractor, because if the contract is concluded quickly and efficiently, using fewer resources than planned, the contractor will make more money.

Incentive schemes are often set up as risk sharing arrangements, where the risk of things turning out differently to what was envisaged is shared between buyer and seller. Although this is very appealing at first

sight, it not be quite so attractive on reflection. As explained above, with a firm price related to an agreed scope of works and an agreed time for completion, the contractor will be perfectly well incentivized to complete the work according to the price, time and quality targets. The introduction of an incentive scheme as an extra layer on to such a deal seems to be linked to either getting a better performance than would otherwise have been the case, or enabling the buyer to share in the savings that a conscientious contractor makes. If the buyer is also in agreement to sharing the losses, in the event that there are some, then this would be called "pain-share/gain-share" arrangement. The twist to it is that without such an agreement, the contractor may have stood to gain more, in the event of efficiencies, and therefore the extra agreement is less of an incentive to achieving efficiency savings. Earlier work on the diversity of procurement arrangements in the construction sector (Hughes *et al.* 2006: 59) revealed, among other things, that contractors are sometimes subjected to pain-share/gain-share arrangements both up and down the supply chain to such an extent that they might only collect 10% of the efficiency gains, even though they would have had to spend money to make the gains. In other words, these extra arrangements may not incentivize contractors at all.

2.2 RELATIONAL PERSPECTIVE

Important as they are, the use of financial incentives could be more successfully employed to effect "calculative trust" in inter-organizational relations at company level than in projects at operative levels (Bresnen and Marshall 2000). Individuals react not only to financial incentives but they can draw motivation from interpersonal relations and identification with a group or commitment to a cause. They may simply enjoy the work that they do. In other words, incentives as motivation operate not only at the level of the individual, but also, and differently, at the level of the organization. This is a key aspect of understanding why incentive schemes may not have the effects that their progenitors hoped.

Business relations are important. Collaborative working has become a popular topic, despite the lack of any evidence that it promotes more efficient/effective working (Gruneberg and Hughes 2004). Many recent developments to procurement practice have been based on the idea that repeat business is better than one-off contracts (not such a new idea, but the idea of partnering has taken firm root in the construction sector, as if it were a new concept). One potentially powerful incentive for contractors to perform quicker, cheaper and better is the potential loss of turnover and profit that would arise were they to lose the promise of future work from a particular client. Partnering and so-called collaborative working usually involve commitments on the part of contractors and suppliers, with no equivalent commitment from the buyer to actually put work their way (Hughes *et al.* 2006). A contractor who gets into such an arrangement is strongly motivated to perform well, as there is much to lose. However, Hughes *et al.* (2006: 43) discovered that prudent contractors rarely put

more than 30% of their workload into such collaborative working practices, simply because of the risks of having too much work with one client. Clearly, there is much to be learned about incentives by looking at relationships in business. There are also important connections with ways of looking at the legal relationship, see below.

2.3 LEGAL PERSPECTIVE

A legal system in itself constitutes an incentive system and therefore legislation, regulations and judgements can be examined for their incentive effects (Veljanovski 2006: 44, 45). In the context of construction contracts entered into within the UK¹ numerous incentives can be distinguished. One important example is the rules regarding the assessment of damages for breach of contract. By assessing these damages, the law puts tags on certain behaviours. Accordingly, Friedman describes the law as a "giant pricing machine" (Friedman 1984). Thus, the actors in a construction project can align their behaviour to the categories "cheap" and "expensive". If a dispute arises because a construction contractor has left a long-term PPP project before its end, and there was no contractual right to do so (breach of contract), the judicial assessment of damages will clearly affect the future behaviour of other construction companies involved in PPP projects. Owing to the fact that the assessment of damages is based on the compensation principle (compensation of the expectation interest), the promisor has an incentive to breach the promise if the value of the breach (for the promisor) is greater than the value of the performance to the promisee (Kreitner 2005: 27).

Another very interesting aspect of long-term relationships is how they are viewed in law, especially when they come to an end. Harrison (2004) asks whether a series of discrete contracts conducted within an environment of long-term business relations constitutes an implied contract. The case of William Baird who sued Marks and Spencer for £56.3m when their relationship came to an end highlighted what could happen when suppliers are led to believe that they have an exclusive arrangement with a particular buyer. In that case, the court held that a long term relationship with no express terms could not be interpreted as an enforceable contract. The implied terms in such a relationship are too beset with uncertainty for an enforceable contract to be implied. In this case the supplier argued for an implied contractual term of a reasonable notice period, said to be three years, which would have prevented Marks and Spencer from terminating the arrangement without notice. However, the court of appeal rejected the implementation of an implied contract to this effect (*Baird Textile Holdings Ltd v Marks & Spencer plc* [2001] C.L.C. 999). Thus, English law motivates suppliers to enter into a contract and to insist on a clause that prevents the employer from terminating the

¹ Although three legal systems exist in the UK, here we confine ourselves to the law of England and Wales which is commonly referred to as English law.

arrangement without reasonable notice. Without such a clause, there is no legal commitment on the part of the buyer to the seller.

As mentioned earlier, all construction work by a contractor takes place under some kind of a contract, so there will be a fundamental legal obligation to perform the work in accordance with the contract. A traditional arrangement will provide quite a strong set of incentives to motivate contractors. First, they may not get paid if the work is not good enough. Second, they may incur liability to pay damages if the work is late or below the promised standard. Third, they may face significant losses and loss of reputation if their defaults are sufficient to warrant a writ and court action. These are powerful incentives.

The interesting thing about focussing on relationships is that there is a view of contracts that takes a wider approach to the interpretation of the deal than the strict interpretation that courts have taken in the past. Relational contracting is a view of contracts where lawyers and the courts would look not only at the documents that recorded the deal, but also at the business relationship as a whole. The ground-breaking empirical work in this area was by Macauley (1963, 2000) and subsequently Beale and Dugdale (1975). These studies showed that in practice, business contracts were not used in the role that had been assumed for them. As MacNeil (1980) points out, formal documents are not an important part of the usual day-to-day process of running the business. The relationship between the businesses tended to be much more important than the contracts that they had negotiated. This has led to a more comprehensive view of contracts as business relationships, rather than merely as a means to take legal action in the event that one party feels the other has not performed in accordance with contractual obligations.

More recent work in this area indicates that it may indeed be better to leave a long-term contract incomplete specifically to allow renegotiations during the life of the deal (e.g. Hviid 1998). It is common for construction contracts to be re-negotiated as the work proceeds and there are comprehensive provisions within the widely used standard-form contracts to expedite the re-negotiation process. But the language of the industry tends to stigmatize this process with negative connotations such as "claims procedures".

A significant portion of this branch of legal literature is about contract planning. In forming contracts, businesses have to plan for what they would like to happen, and they have to plan for the eventuality of one of the parties not properly discharging its contractual obligations. One intriguing aspect of the need to plan effectively is that while the legal literature is coming to terms with the need to plan and the need to develop techniques for contract renegotiation, the construction management literature is rich with research into both of these topics. Construction planning is known to be difficult. Indeed, Radosavljevic (2002) has shown through his analysis of construction productivity data that it is actually impossible to make detailed plans for construction site operations more than two weeks ahead, so the need to re-schedule resources is something that will be inevitable, rather than inadvisable. This is an interesting insight that explains much,

and provides a challenge. The challenge can be dealt with through techniques common in construction contracts such as provisional sums and variations clauses, both geared up to deal with the need for constant renegotiation. The irony is that the contract claims that are brought about by these clauses are the very things that the new collaborative working practices are designed to do away with. There is a very strong resonance between the need to deal with renegotiation, the need to perceive of the business relationship as a whole, not just the contract, the need to conceptualize behaviour as not just self-seeking and opportunistic, the need to identify incentives not just as financial techniques (see next section), and so on.

2.4 PSYCHOLOGICAL PERSPECTIVE

Monetary incentives are based on motivational theory of behaviour modification that assumes standard responses to rewards from the subjects in question. In contrast the cognitive approach assumes, among other things, that the individual will process information received and interpret it before acting upon it, weighing up the pros and cons of different courses of action. The psychology of how people are motivated to work, and how individuals and organizations can be motivated to improve performance, are wide areas of the literature that may provide insights into the extent to which business in the construction sector can be incentivized to build better, quicker and cheaper.

The historical assumption in the economic literature that people are opportunistic and self-serving lives in popular perceptions of economics. There is increasing evidence that this over-simplification not only distracts us from the real complexity of business organizations, but also misleads us into approaches to business that require not only incentives for good performance, but disincentives for bad. Among the disincentives are penalties for poor performance (even though such penalties may not be permitted under English law), loss of future work, loss of reputation and so on. Even though the view of individuals as self-serving may be misplaced, the fact is that there is a large array of techniques and mechanisms that have been developed as a response to this perceived problem.

In working out how to deal with the question of incentivizing people in organizations, it is essential to distinguish the differences between institutional, organizational and interpersonal forces that shape behaviour (Marchington and Vincent 2004).

3. TYPES OF INCENTIVE

Many incentives are incorporated into construction contracts, some more customary than others. Some of the newer schemes are often new words for well-established business practices. By and large, commercial incentives involve monetary rewards but in addition to contractually binding

deals, there are extra-contractual incentivizing methods that are also used to motivate individuals, groups or organizations.

Bresnen and Marshall (2000) indicate that there is a general assumption underlying the use of use of financial incentives that those involved adhere to the principles of behaviour modification theory without consideration of what really persuades people to change their behaviour. They comment that there is little consideration given to the differences in effect that such schemes can have on individuals or groups on one hand and organizations on the other. Moreover, there is nothing to indicate that two people will respond in the same way for a given financial incentive. Most importantly for the designers of incentive schemes, they warn that there may be a dangerous assumption of a direct relationship between cause and effect without accounting for any variations in personal differences, or in the cognitive aspects of motivation.

Some incentive methods in use are: automatic extension of contract term, frequency of payments, letters of appreciation, promise of future work and letters of guarantee all of which are not directly monetary forms of incentive. For example, lengthened contract term or "award term" is a non-monetary performance incentive scheme that sets out to reward a contractor for good performance by extending its contract term and it is commonly used in the US Federal Procurement Service. Or, on completion of a project a client can provide an official letter of appreciation to a contractor for good performance. Another form of non-monetary incentive is a letter of guarantee confirming the performance of the contractor in delivering the project as per the contractual agreement, which can safeguard a contractor that the client will meet their obligations.

In order to carry out research into the way that incentives are used in construction projects, it is useful to ascertain whether types of incentive can be separated into categories.

3.1 MONETARY AND NON-MONETARY INCENTIVES

In thinking about the non-monetary incentives mentioned above, one thing that all of these schemes have in common is that if the conditions for being given the reward are met, the recipient will benefit financially, although indirectly. For this reason, it is not clear why a distinction between monetary and non-monetary incentives is often used.

Many incentives are incorporated into construction contracts, some more customary than others. Some of the newer schemes are often new words for well-established business practices. As stated earlier, there are fundamental and everyday aspects of contracting that incentivize participants already. In categorizing incentives, it may be worthwhile starting from the distinction between contractual mechanisms and extra-contractual mechanisms that may or may not be contractually binding, but lie above the basic contract for a particular item of work or service. Any of these three types could, in theory contain monetary and non-monetary incentives, as we would see if each type of incentive is explained,

exemplified, and illustrated. Future research will, among other things, assess how widespread each of these mechanisms is in practice.

3.2 CONTRACTUAL INCENTIVES

Richmond-Coggan (2001: 16) defines incentive schemes as consisting of two aspects: first, aligning the objectives of both parties through the use of performance measures and second, linking them to payment. This raises an interesting conundrum. First, the idea that objectives can be articulated in such a way that they can be shared is more an act of faith than a real sharing of objectives. In principal/agent theory, there is a recognition that objectives will differ and this difference has to be dealt with (Eisenhardt 1989). It cannot simply be wished away. Given the difficulty of effectively aligning objectives, the idea of linking payment to them seems to create more problems than it solves. Richmond-Coggan (2001: 16) defines "better performance" along these lines, "[t]he broader objectives will include contract completion dates, the quality requirements and risks to concluding a successful outcome to the contract. Therefore incentivized contracts are about delivering a performance that is "better" than that which could be achieved under a standard contract; the "better" being the greater certainty of delivering the client's desired performance through a detailed agreement on the sharing of risks and the associated rewards (...)". The contractual mechanisms for incentivizing construction contractors occur at the whole contract level, and at the level of particular aspects of the work.

3.2.1 Whole contracts

One aspect of incentivizing whole contracts would be to take the traditional contract for labour and materials that has evolved over the years, and replace it with a contract for a whole building, a so-called performance-based contract. The concept of performance in construction has grown in interest in recent years. It has often been asserted that the performance concept would be an incentive for the contractor to perform better. The performance concept can be defined as follows (Gibson 1982: 4), "[t]he Performance approach is [...] the practice of thinking and working in terms of ends rather than means" and further, "[i]t is concerned with what a building or a building product is required to do, and not with prescribing how it is to be constructed."

This concept is regularly applied in private finance initiative (PFI) projects. It is associated with many advantages (e.g. strong stimulus for product and process innovation, enhancement of consumer orientation, and cost optimization), and thus it can be seen as an incentive to achieve these advantages. However, there is apparently very little research to back up these claims. For example, Fenn *et al.* (2005: 3) state that their work on the legal implications of this concept "has been frustrated by the dearth (total lack) of empirical data." They continue: "The benefits, incentives and triggers for PBB [performance-based building] are well documented but in a

journalistic manner.” Even so, there are circumstances where whole buildings are procured on the basis of their performance. It must be pointed out, though, that techniques such as PFI are based on a contract for the performance of a facility being put in place between the purchaser of a service and an intermediary who then often procures the construction work from a contractor in a very traditional way, such as design and build.

3.2.2 Whole contract incentive schemes

As well as contracts for performance, there are several ways in which incentives can be used to encourage contractors to complete their contractual obligations satisfactorily. One category of such schemes is related to the completion date of a contract. Various bonuses might be paid for early completion or penalties (damages) deducted for late completion. There are many ways of achieving financial incentives for timely or early completion. A second category relates to the final price to be paid by the customer. Construction contracts tend to be complex, comprehensively specified but incomplete. Therefore, the price is subjected to many valid changes during the execution of the work, as better information becomes available. Customers who seek to control the changes to the final price may rely on the traditional approach of securing rates for different types of work, and then applying the agreed rates to the final quantity of each type of work (re-measurement contracts, or bills of approximate quantity). Alternatively, there are various target-cost methods available, also known as pain-share/gain-share schemes that seek to share risk between buyers and sellers.

3.3 EXTRA-CONTRACTUAL INCENTIVES

3.3.1 Contract bundling and partnering arrangements

As mentioned previously, there is a wide variety of arrangements that would lead to longer business relationships than the traditional contracting process that has been used in the construction sector. Much has been written about partnering, relational contracting and contract bundling. Clearly, many people perceive great benefits from such arrangements, but their perceptions have not, as yet, been rigorously tested. There are signs of some dissatisfaction (e.g. Harrison 2004, Hughes *et al.* 2006), especially with the change that comes about in the balance of economic power when a client holds a large proportion of a supplier's work. There is also a conceptual difficulty, commented on by Bresnen and Marshall (2000) in the idea that trust forms an essential part of the relationship, but formal agreements are used to back this up. Clearly, there is much to be investigated in the way that such arrangements motivate and incentivize participants to either build quicker, cheaper and better, or to change their behaviour in some other way.

3.3.2 *Incentives to change behaviour*

Taxes and laws have also been developed to change the way that people behave. For example, the UK's Construction (Design and Management) Regulations 1996 were developed to make it a criminal offence for clients, designer or contractors to behave in such a way that the safety of building occupants or the public is compromised. Taxes such as the UK's Landfill Tax establish another way of modifying behaviour by charging taxes on those who continue to do things that, while unavoidable, society would prefer them to minimize.

4. CONCLUSIONS

Clearly, there are many ways of introducing techniques for incentivizing individuals, groups and organizations to conform to many different kinds of expectation. They range from vague to specific, and some are more legalistic than others. The most worrying thing about these differing uses of incentives is that they seem to be based on untested assumptions about what modifies behaviour. This provides two useful strands for research. First, an investigation into the kinds of incentive in use in the construction sector, and the formal wording used to record them. Second, an investigation into how people talk about what motivates them may form a useful backdrop for understanding what participants in the construction sector think about when they are being urged to perform quicker, cheaper and better. And this may go some way towards ascertaining whether any of the plethora of techniques actually work in practice. Finally, among the wide range of papers and articles about incentivization of performance, there is almost no recognition of the extended supply chains that characterize construction projects. It will be important to ascertain the extent to which incentives are passed from contractor to sub-contractor and along the supply chain.

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