

# CLIENT PROCUREMENT STRATEGIES: A CROSS-SECTORAL ANALYSIS

**Sarah J Millett, Andrew RJ Dainty and Geoffrey H Briscoe**

*Construction Labour Market Research Group, School of the Built Environment, Coventry University,  
Priory Street, Coventry, CV1 5FB, UK*

Earlier research suggested that the UK construction industry should adopt best practice from other industries to help improve its productivity. This paper reports on research to examine general procurement practices across all areas of a clients' business. This has been compared with the practices used by the same organization specifically to procure construction projects. The study has taken a cross-sectoral approach drawing on experiences from three different industries: telecommunications, transport and automotive manufacturing. The case studies have comprised interviews at three or more tiers of the supply chain, encompassing parent companies, commissioning clients, main contractors and subcontractors. Analyses have taken place within each case study between construction procurement and other procurement practices. Significant similarities and key differences in the approach to the supply chain are drawn across the case studies.

Keywords: procurement, supply chain, case study, cross-sectoral analysis.

## INTRODUCTION

Many aspects of the construction industry's performance in the UK have been heavily criticized over recent years. Reports such as the Latham report (1994) underlined the reliance of the construction sector on competitive tendering for subcontracted work. It also drew attention to the adversarial attitudes that commonly exist between main contractors and their suppliers. The construction industry is characterized by one-off contracts and a failure to develop longer-term relationships between main contractors and key suppliers. Following the Latham Report some changes took place such as legislative changes embodied within the Construction Act (1996). However, even this has been difficult to implement (Barrick, 2000, Cook, 1999).

The state of the industry was further criticized by the Egan report (1998) which stated the need for improvement in terms of reducing construction costs, time, defects and accidents. Egan identified solutions such as 'lean construction', 'supply chain management' and 'partnering' as performance improvement measures. The first section of this paper considers these three solutions and their applicability to the UK construction industry. The paper thereafter reports on research conducted to investigate current relationships within client's supply chains to discover the extent to which these solutions are already utilized within clients' core procurement activities.

## THE EGAN RECOMMENDATIONS

The three solutions offered by Egan, lean construction, supply chain management and partnering, have all been extensively discussed and the concepts are often seen as

interrelated. All three concepts are aimed at improving the production process, whether it is in manufacturing or construction.

### **Lean construction**

Lean construction stems from the Japanese concept of lean production and was seen as the reason that Japanese car firm Toyota gained a competitive advantage over other automotive companies (Womack *et al.*, 1990). The main principles of lean production includes the elimination of waste, the addition of value to the product, the production process orientated to the needs of the customer and the drive for the perfect product by continuously improving the process. Evidence has shown that by applying these principles to the manufacturing process the organization can profitably deliver the customers needs (Womack and Jones, 1996). However, the successful companies have typically been involved in repetitive manufacturing processes in controlled environments, such as factories. In some instances, the supplying organizations are partly owned by the manufacturing company themselves; this makes it easier for them to align practices with the procuring organization. The UK construction industry is more complex than this, in so far as its projects are often bespoke, one-offs, constructed in variable weather and uncertain ground conditions. It has been recognized that the full lean production concept is not necessarily suitable for construction but certain aspects could be usefully adapted (Barlow, 1996). Commonly suppliers or subcontractors used on projects may never have worked in that particular team before and so there is more of a need for relationships to be developed before any of these principles can be implemented.

Lean principles are mainly adopted for the benefit of the customer (Womack *et al.*, 1990; Womack and Jones, 1996), but Green (1999a) has recently argued that adoption is primarily for the financial incentive that the shareholders of the client organization receive. Other research has identified attitudinal constraints preventing the development of lean principles (Briscoe *et al.*, 2001).

### **Supply chain management**

Whereas lean production is an integrated approach to the production process, encouraging all parties involved to add value, reduce waste and continuously improve the product, supply chain management takes a less holistic approach. It is critically concerned with the co-ordination of materials and services into the organization, the manufacturing process and the distribution to the customer, to ensure flexibility and reduction in waste through “Just In Time” (JIT) philosophies (Lockamy and Smith, 1997, Lamming 1996, Alber and Walker, 1997). It is possible to build on the principles of supply chain management to achieve lean production (Lamming, 1996). Recent supply chain management research has reported that competitive advantage can be found through closer relationships within the supply chain and that these should be developed into something more than just an exchange of materials (Levy *et al.*, 1995). Although supply chain management originated in physical distribution and transport, it can be applied to the UK construction industry. The supply of materials and services to the construction process is critical to the flow of production onto the construction site and even JIT concepts could be adopted. The use of supply chain management in construction is subject to on-going experiment (Building Down Barriers, 1999, Graham and Hardaker, 1998). The emphasis for construction to date has been on the management of relationships, with partnering being advocated as the key idea for facilitating the implementation of supply chain management and lean production.

## **Partnering**

Whilst there are many definitions of partnering (Bennett and Jayes, 1995, Construction Industry Institute, 1989, DETR, 1998), in practice there is very little difference between them and they result in the same benefits. It has already been observed that by improving relationships within any type of manufacturing process there will be a resulting gain in efficiency. Partnering is a formal mechanism for achieving improved relationships. In construction, partnering can either be project specific or much longer-term. The benefits of project specific partnering in improving relationships remains open to question..

Bennett and Jayes (1995) and Barlow *et al.* (1997) state that for any changes to occur in an organization, whether it is to formalize partnering relationships or to completely subscribe to lean production, there needs to be a long-term commitment from all involved in management. Once these managers have committed to the principles, then partnering can be established with other organizations. Mutual objectives must be established and this should include the sharing of risks. Information flow is an important aspect of any construction project and within such partnered relationships information should flow freely and openly. It is suggested that for partnering to work efficiently and for good mutual benefits to be established, the client needs to be involved in the development of partnering arrangements across all supply chain relationships. Bennett and Jayes further suggest that partners should be chosen carefully so that partnering organizations are financially stable and are able to relate to their partner in matters relating to quality, development and innovation

It should be noted that the concept of partnering is not without its critics. Partnering has been called into doubt within the construction management literature. For example, Green (1999a) suggests that large clients, such as those operating in the grocery sector that are advocates of partnering, are merely doing so in order to increase their own profits.

## **THE AIMS AND OBJECTIVES OF THIS RESEARCH**

Many recent studies have investigated specific partnering relationships and how they have developed in recent years (Himes, 1995, Shove, 1999). However, there has been little investigation into the forms of partnering that already exist within the industry. Client-main contractor partnering may well prove to be fragile if the main contractor fails to develop similar relationships with their subcontractors (Bennett and Jayes, 1995). Other research has concentrated on specific relationships, namely that of the client and main contractor (Bresnan and Marshall, 1999, Barlow and Jashapara, 1998). Although some work has looked at the main contractor – subcontractor relationship (Hinze and Tracey, 1994, Matthews *et al.*, 1996) these relationships have not been investigated through the multiple tiers of the supply chain.

The present project aims to address some of these deficiencies. The previous stage of the research (Millett *et al.*, 2000a, Millett *et al.*, 2000b, Millett *et al.*, 2001) has identified a link between the clients' core business practices and the main contractor – subcontractor relationship. Specifically, where the client was operating best practice supply chain management principles in its core business, there appeared a strong link to performance in its construction projects. This stage of the research investigates this relationship more fully by conducting a series of case studies to analyse up to five different tiers of the supply chain; encompassing parent companies, clients, designers, main contractors and subcontractors. The aim of the research is to examine in depth

the relationship between clients core procurement and construction procurement activities and, in particular, to identify if the construction activities are influenced by the wider knowledge and experience that exists elsewhere in the client's organization.

## **OUTLINE OF THE METHODOLOGY**

Major clients, who had a dedicated construction department, were identified and approached. These client organizations all had a single point of contact to facilitate the development of partnering relationships. Another criteria for case study selection was the extent of partnering already carried out by the client organizations. The three finally selected case study organizations were chosen because of the varying nature of their partnering experiences. These included the full spectrum of relationships from single project partnering through to partnering that had evolved from long term relationships.

Interview schedules were prepared, based on the literature and preliminary studies (Millett *et al.*, 2000a, Millett *et al.*, 2000b and Millett *et al.*, 2001). These schedules asked the respondents questions relating to their relationships with other tiers of the supply chain and reciprocal questions were asked within the other tiers. This approach enables the research to identify the types of existing relationships between the various parties and the way in which these were established and maintained. All interviews took place on an individual basis with appropriate employees of the supply chain companies. Specific company officers were selected due to their involvement with the other members of the supply chain and, in almost all instances, these people were the main point of contact at the supply chain interface. The interviews were tape-recorded and transcribed verbatim. Figure 1 indicates a typical supply chain and shows the different tiers in which interviews were conducted.

Upon completion of the interviews, verbatim transcriptions were produced and the data was analysed using the software NUD\*IST NVivo. This software was used as a complete project management tool to organize the data and code it under thematic headings. A first set of themes were constructed around the questions that were asked at the interview and a second set were created on a more ad hoc basis to reflect popular themes that emerged from the analysis.

## **INTERIM RESULTS**

In this section interim results from three major case studies are discussed. The case studies varied in the types of relationship that existed from very close, long-term partnering to one off relationships. Although no obvious benefits could be identified from the one-off relationship, they were sometimes inevitable due to the specialist requirements of specific projects.

### **Benefits of partnering**

During the course of the analysis various benefits of partnering were observed. These came from different tiers of the supply chain, proving that there are advantages to all parties to be involved in partnering relationships.

#### *(a) Negotiated contracts*

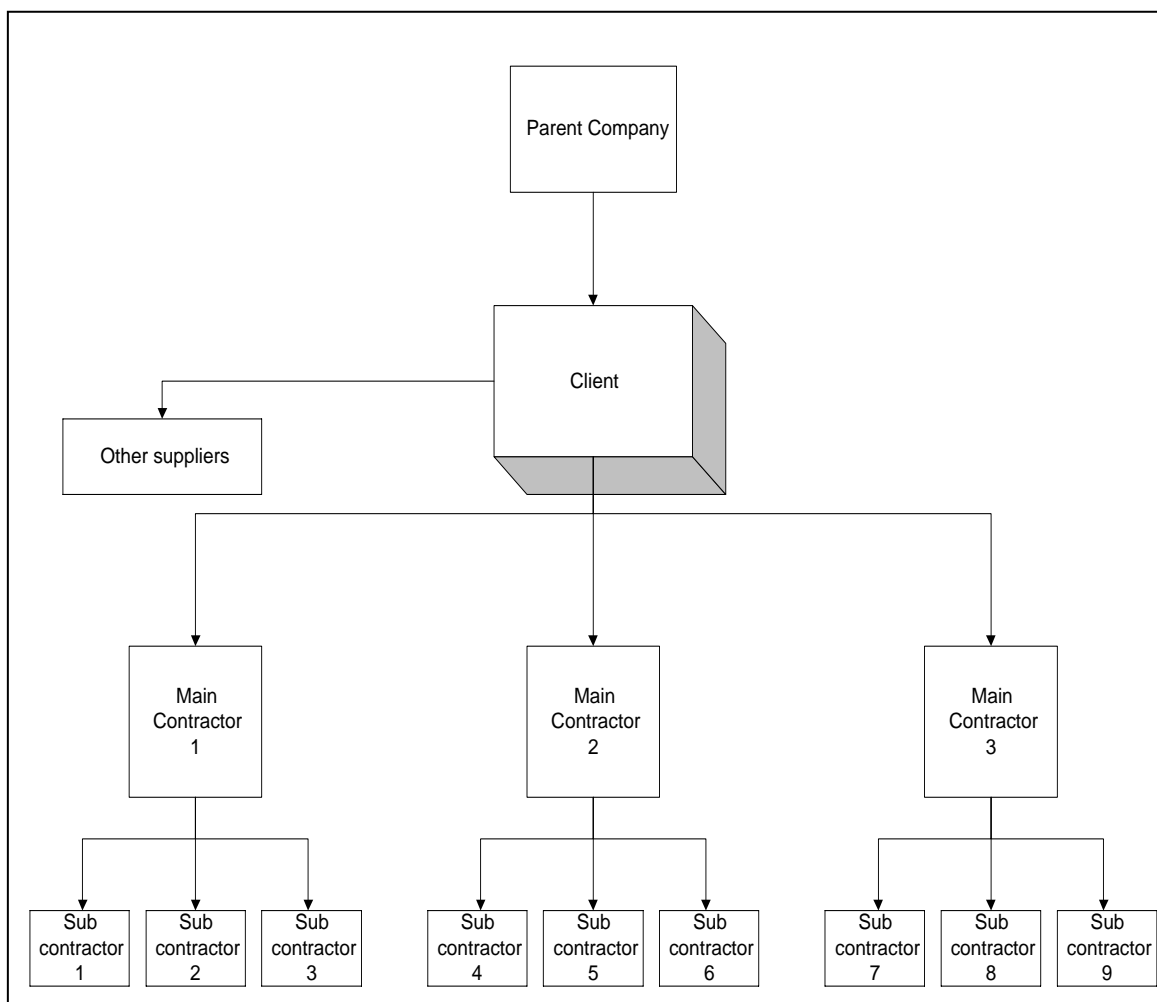
One major partnering benefit is the use of negotiated contracts that eliminate costly tendering processes for all parties involved and reduce the time taken before a project starts on site. Savings were identified where both main contractors and subcontractors were able to negotiate work and so reduce the costs associated with tendering.

Negotiation also realized the shortening of project times, as there were no drawn out tender periods.

*(b) Learning curve*

Another valuable benefit arises from the fact that main contractors and subcontractors who partner with clients do not need to go through a learning process at the start of each project. For example, the client in the automotive industry required exemplary house-keeping practices, whilst the transport client normally had restricted hours of working and its sites were particularly hazardous. By working in a partnering manner and re-employing the same contractors and subcontractors, the requirements of the specific client were already well understood.

Contractors interviewed as part of the research stated that a benefit of partnering was efficiency gained through repeat work, particularly where clients' requirements and working environment proved to be highly specialized. Shortening the learning curves that typically arise when establishing relationships with new organizations could reduce overhead costs.



**Figure 1:** Typical case study supply chain

The research found evidence of main contractors and subcontractors becoming more aware of the clients' business needs and this led to the development of improving relationships with all parties. As a result, partnering practices such as negotiations,

good information flow and back to back quality procedures were exhibited and these led to an improvement in quality and a reduction in contract periods.

*(c) Future work and certainty*

Main contractors also cited the fact that partnering offers the ability to plan future work more precisely. Greater certainty is a significant benefit illustrated within the research case studies. Both main contractors and subcontractors who work in longer-term relationships for a particular client understand project requirements and constraints more clearly. Thus, all parties involved appreciate risks and are able to manage them more effectively.

*(d) Improved performance*

The research to date has found little obvious evidence of the measurement of continuous improvement. However, where good examples of partnering exist, parties to the process cite benefits such as staff development, continuity of resource, better value, early project completion, cost and time certainty and improved quality.

Obviously some of these benefits are also advantageous to the client and ultimately can be expected to provide gains to all parties to the relationship.

### **Organizational aspects**

The way in which organizations and supply chains are managed has an impact on the relationships that exist within the procurement process. Some of these organizational issues are discussed below.

*(a) Management commitment*

Evidence of management commitment flowing down to employees was evident within the case study organizations. One of the main contractors in the study had evolved its organization around the relationships its founding directors had developed with the main client. The management set an example to newly employed staff who had come from more adversarial backgrounds. Although these new staff had taken time to adjust, in the longer-term, their attitudes were beginning to change. The style of relationships that this main contractor enjoyed with the client fed back into the relationships they had with their own subcontractors. These relationships were constructed around the central values of trust and honesty.

*(b) Trust*

Where main contractors claim to be working towards partnering and less adversarial relationship with clients, trust and honesty are present. If the main contractor is not being honest and trustworthy with their subcontractors they cannot possibly expect to avoid disputes. Similarly, expected benefits such as continuous improvement, cost reductions, improved quality, safer construction and better programme time will not be achieved.

*(c) Risk*

The research has shown that where relationships are working better and benefits are being accrued by all parties, risks must be borne by the party most able to manage it. However, where this may be a company with less financial backing, both the main contractors and the clients have been prepared to take on board some of the risks. One particular project that has been investigated has gone one step further by locating building control and the insurers on site, so that risks are not only shared and managed by all parties, but also mitigated as soon as they arise. It is yet to be seen whether or not this will actually help or hinder other aspects of the construction process.

*(d) Information flow*

Longer-term, successful partnering relationships were characterized by few if any inhibitions regarding the flow of information. Open book accounting was prevalent and in some instances intranets and other electronic tools were used to exchange information. Where relationships were best by traditional adversarial practices, the exchange of information was hindered by a lack of openness.

*(e) Location logistics*

One concern expressed amongst interviewees was the fact that closer integration within the supply chain would result in too many meetings taking up too much time. There were complaints that meetings that were being held were not managed correctly and too much time was wasted discussing irrelevant issues. This potential problem was overcome by one particular team who decided to co-locate to the same office for the duration of the project. This meant that the client, the design team, the main contractor and key subcontractors were all operating from the same office. Not only did this overcome the problem of time wasting in excessive meetings, but it also breaks down barriers allowing information to flow freely.

*(f) Evolved partnering*

The majority of partnering relationships observed within the research have evolved out of more traditional contracting relationships. The strengths of the relationships were due to the trust and knowledge that had been achieved through years of working together; there was no specific effort to establish partnering relationships, they had just evolved. Where one of the case studies had more formally created a partnering agreement, this undoubtedly incurred very significant costs and time at the initial stage of the project. However the agreement did later lead to compensating rewards through a better team environment, knowledge exchange and a general sense of trust and openness.

**Continuing barriers**

The interviews revealed a number of issues that supply chain companies considered to be effective barriers to the integration of the construction supply chain.

*(a) Attitudes*

Some main contractors were criticized by subcontractors as jumping on the partnering bandwagon, simply as a marketing exercise. The only way in which some main contractors are able to win work with particular clients is to work in partnering relationships their subcontractors. In these instances, there have been no cultural advances within the organizations and traditional adversarial attitudes still exist. There is wide scepticism amongst subcontractors who have been victims in the past of main contractors abusing the term 'partnering' to achieve financial gains over the less powerful party.

*(b) Discontinuity of contracts*

Various respondents stated the importance of maintaining relationships within project teams, beyond the immediate the project duration. Very often project teams are dispersed after project completion and this fails to take advantage of working relationships developed through the partnering process.

*(c) Commercial viability*

A major concern held by clients is that by entering into longer partnering relationships they will be compromised commercially by main contractors and subcontractors who may seek to take advantage of the agreement. The observed successful partnering

relationships have all resorted to some competitive tendering as a cross-check on the prices quoted by the main contractor and subcontractor partners.. This in itself is proof to the client or main contractor that their suppliers are not taking advantage of the situation and can be trusted.

## CONCLUSIONS

The results reported in this paper are interim results of the research project that is being conducted as partial fulfilment of a PhD. To date the research has provided evidence of good working relationships at several tiers of the supply chain. The better examples of partnering are those that have evolved from more traditional relationships. These all exhibit the benefits of partnering, such as continuous workload, reduction in risks, costs and time and better working groups. However, the successful relationships rarely use formal mechanisms, such as team building and risk or reward payment systems, but rather they rely on the trust and honesty built up over time. Clients and main contractors provided several examples of this less formal approach to partnership but there was much less evidence of its use at the main contractor-subcontractor interface, where formal mechanisms were still commonplace.

## ACKNOWLEDGEMENTS

The authors would like to take this opportunity to thank all organizations and individuals who participated in the research.

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