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**Title:**
# Procurement Push and Marketing Pull in Supply Chain Management: the conceptual contribution of relationship marketing as a driver in project financial performance

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**Summary**

- The agenda for supply management practices on construction projects originated from clients. It is largely procurement driven, the dominant strategy of contractors being to emulate the client approach, and hence push the procurement model along the chain.
- This *procurement push* along the supply chain translates the intrinsic client interest in value into a contractor interest in repeat business from the same client or through referral markets, the consequence being: (i) loss of interest in adding further value along the chain, (ii) continuous improvement prematurely reaches the law of diminishing returns through a primary cost reduction focus, (iii) supply chains may be rationalised in terms of the number of suppliers for each link in the chain, yet the procurement push increases chain length in order to squeeze the lowest costs possible, hence those doing the work at the bottom of the chain will not have the resources to add value nor necessarily be aware of the strategic principles at the top of the chain.
- Marketing is the other side of the same "procurement coin"; relationship marketing (RM) soliciting a *pull* in the supply chain, potentially adding value for continuous improvement.
- Finally, the RM approach will be related to the theoretical and actual *decoupling point* for construction, with the potential to move the point towards the start of the chain, hence increasing the potential for agile manufacturing.

**Key Words:** Procurement, Relationship Marketing, Supply Chain Management

## Introduction

The application of 'best practice' in supply chain management is dependent upon appropriate application of theory and concepts. A lack of understanding gives rise to assumptions and taken for granted thinking which are misleading or inappropriate. This paper challenges current thinking about supply chains in construction. The shift from mainstream manufacturing based upon production ahead of sale to contract working requires fundamentally adapting the supply chain concept. The shift from relatively standardised and systemised production, to project working has similar implications. Such adaptation is necessary in order to have the same benefits found elsewhere. It is these shifts that have been poorly understood and failed to be applied in most construction contexts.

Following the Egan Report (1998) the UK, in parallel with other countries, began to implement supply management practices on construction projects. The next section shows the agenda originated from clients and so was procurement driven, the dominant strategy of contractors being to emulate the approach and drive the procurement model along the chain. This is the *procurement push* along the supply chain. As has been shown (Ive 1995, Gann 2000), the client is in the prime position to innovate in terms of motive, opportunity and means. Contractors are therefore emulators rather than initiators.

The paper will argue in the subsequent section that under *procurement push* the intrinsic client interest in value is translated by the contractor into an interest in repeat business from the same client or through referral markets. There are several consequences. First, loss of intrinsic interest in value along the chain linked to the constrained capacity to innovate means the contractor will primarily push the approach along the chain in terms of cost reduction. Second, the limits to continuous improvement reach the law of diminishing returns in achieving cost reduction. Third, while the suppliers at each link in the supply chain may have been rationalised, the length of the chain may be increased in order to squeeze the lowest costs possible, hence those doing the work at the bottom of the chain will not have the resources to add value nor necessarily be aware of the strategic principles at the top of the chain.

Marketing is the other side of the same "procurement coin". Applying the relationship marketing paradigm solicits a *marketing pull*. A relationship model will be explored as a means to solicit a client focus (Smyth 2000, 2004) and applied in the supply chain in order to explore the potential for adding value in the chain for continuous improvement. The relationship marketing and management paradigm will be explored, outlining the potential for improvement. The paper will further explore the model in relation to repeat business implications – client portfolio, programme and project management.

## Procurement Drivers

The procurement process starts with the customer or client recognising a pressing business requirement. Part of the solution may be a construction project. A project or series of projects are instigated. Within the client procurement function satisfying business requirements will comprise of a bundle of *expectations*:

- Needs
    i. The brief, encapsulating explicit knowledge of the building requirements – value added
    ii. The less explicit, sometimes tacit, knowledge of how the brief addresses the enterprise problem – value that is relevant
    iii. The physical realisation of the building – value realisation
- Desires
    i. Costs reductions below required standard – value for money ('added value' in management terms)
    ii. Quality that is above required standard – added value (part of value for money equation)
    iii. High quality service experience – added value.

The objective for the supplier or the contractor is to meet the expectations of the client. The expectations should be met to the level of need – the iron triangle of time cost, quality or scope – and preferably to meet some of the desires too. Most customers have come to expect that suppliers provide products and services to a level that exceeds *needs*. This has been the procurement norm for most sectors and especially for large organisations which can use their leverage in the market to drive down costs and drive up quality. Over time, current desires become standard needs and customers demand more (see Figure 1). Value is defined here as the resources, time and work effort required to transform these factor inputs in to the product and service that is more than the sum of the individual inputs. Value is therefore evident through outputs, which in the context of this paper must also be 'value' that is of benefit to the client. Value added therefore goes further: the effort required to improve product quality and service experience for the client over and above value added.

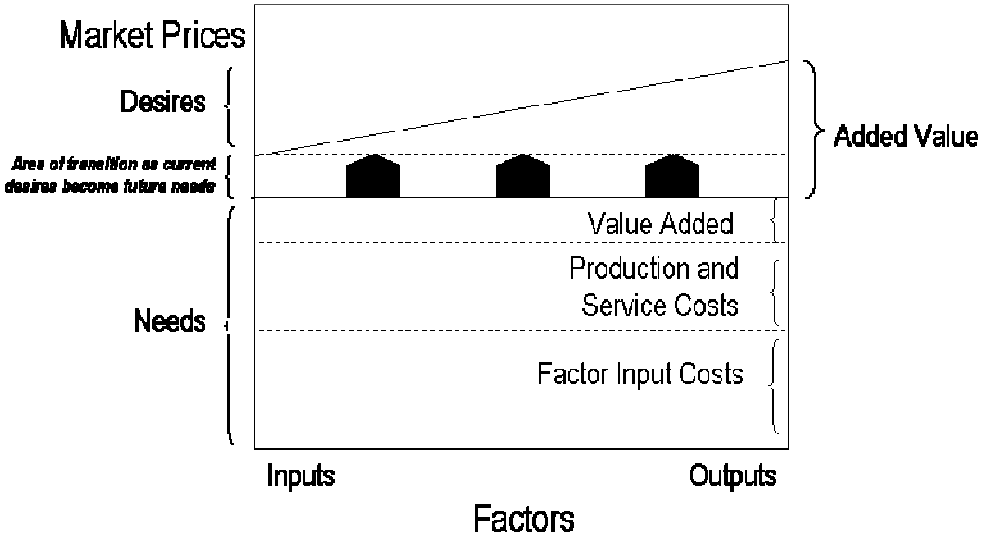



**Figure 1. Expectations and Value Dynamics over Time**

Supply chain management became a primary management tool for implementing cost and added value improvements. The work of Womack *et al* (1990) and Womack and Jones (1996) were influential in this respect, taking lessons from Japanese industry and transferring them to America and Europe in the late 1980s and during the 1990s. Thus, one way of looking at supply chain management is to see it as part of a basket of tactical tools that have been elevated to a strategic level, labelled business process re-engineering (Hammer and Champy 1993). The basket also includes concepts such as just-in-time, lean and agile production, being introduced in the 1980s, the 1980-90s and 1990s respectively. These business re-engineering processes have been applied post-*Rethinking Construction* (Egan 1998) to construction (see for example Akintoye 1995, Betts and Wood-Harper 1994, McGeorge and Palmer 1997), and supply chains, especially in the reduction of waste (see for example Koskela 1992).

In construction, the initiative or drive emanated from the clients, communicated through *Rethinking Construction* (Egan 1998) in the UK. Clients are procurers of construction services, hence, this drive is called a *procurement driver*. However, there are problems with these procurement drivers. The underpinning market structures in the construction sector have been ignored to date (Cox and Townsend 1998, London and Kenley 2001). There is a lack of definition (Green and May 2003), the concept of supply chain management meaning different things to different people. Different interpretations in practice are justified for strategic reasons of competitive advantage in the market or in the chain. However, 'common sense' interpretations or taken for granted thinking only leads to coincidental success. The prevalent cultural assumption is that supply chain management is derived from a production orientation (London and Kenley 2001, cf. Smyth 2000), hence is considered in a mechanistic way and thus leaves out the human resource management aspect (Green and May 2003). The result is a primary tendency towards cutting costs at the long term expense of adding further value.

Another way of looking at supply chain management is this: large diversified enterprises had sold off many of their businesses, as shareholders had begun to undertake their own portfolio analysis, thus permitting companies to focus upon their core activities – concentrating investment where their strengths lay. The result was that large companies were outsourcing activities that were formerly in-house and were buying in supplies that they formerly manufactured. This was particularly the case for vertically integrated companies. While outsourcing made economic sense, in management terms considerable control had been relinquished of the supply and quality of many products and services. Just-in-time, lean and agile production, when coupled with supply chain management, can be seen as ways to regain control over key components of the process without owning the enterprises – all the benefits of in-house supply without high costs. This type of control operates at a strategic level, whilst co-operation is required at the level of transactions and operations.

In terms of transaction costs, the shift has been from 'make' to 'buy' (cf. Williamson 1975; 1985). The effect of supply chain management is to raise transaction costs again, but to a lower level than those incurred through ownership and managing production directly. Any rise in transaction costs is theoretically offset by the benefits of supply chain management in terms of some combination of lower production costs and adding value.

However, construction had not followed this pattern of response to the demands of clients pre-1998. Construction had neither responded to the client experience of increased value being received from suppliers in other sectors over time, nor to working with the supply chain. Therefore clients took the initiative to drive change forward – the Egan Report (1998), *Rethinking Construction*, being the primary means of introducing supply chain management in the UK.

The issue had already been anticipated, for example Cox and Townsend stated:

> *By leverage one means the ability to obtain control over particular resources in a supply chain, and then to manage those resources in such a way that it becomes possible to appropriate value… This ability to develop a corporate understanding of what leverage means, and what is required operationally to allow for effective value appropriation in specific supply chains, is what we mean here by a strategic approach to construction procurement.* (1998, p.5)

In summary, the emphasis had become driving change through procurement practices across many industries. Supply chain management had become a key management strategy, elevating procurement from a tactical issue to aid this process.

**Procurement Push**

Customers are interested in the value of the product or service received. The supplier is concerned with the output for the market. In mainstream manufacturing, the product is produced first, and then sold. Customers search out the product information first and then buy. Leverage is exercised by large customers on price. However, using supply chain management, a smaller number of suppliers concentrates the market into fewer hands, individual suppliers being prepared to work with buyers to find ways of further reducing costs, developing products that are more highly customised, and developing innovations to achieve the two previous ends.

Clients are motivated in the same way in construction – they want their enterprise problem solved with a built facility with *added value*. They are therefore interested in *outputs*. The UK government as a major client in construction sector makes this clear:

> *Emphasis should be placed on outputs and how the outputs enable objectives to be achieved. In particular, objectives for the service to be provided should be distinguished from those for the means of provision.* (HM Treasury, p.6)

The PFI/PPP market places particular emphasis upon outputs to the extent that the brief is an output specification. Whether the means is direct or indirect, *outputs* are a key issue for clients. In every case, it is the match of the actual product and service outputs, which are to be evaluated against *expectations*, those expectations being derived from what it will take to solve the enterprise problem. The extent of the match achieved will be an evaluation of customer or client satisfaction. It is easier to satisfy the client when expectations are low and this has been the historic case in construction (Smyth 2000). However, expectations have been rising in construction too since the Latham (1994) and Egan (1998) reports. Clients have clearly stated that

they are not content to accept buildings that do not meet the iron triangle of time, cost, quality or scope; they are increasingly looking for continuous improvement. It is clients that have driven the agendas forward – for example in the UK over the last decade since Latham (1994) through to the post-Egan agenda of *Constructing Excellence*.

How has this procurement drive been received in construction? In other sectors the focus on core business has led to producers investing resources where their strengths lay and through supply chain management to work with others to improve value for money for customers. This pattern is the result of producing products *for sale*. Where services or products are delivered *to contract*, the situation is changed, especially where they are unique or largely different on each project. Uncertainty and attendant risk drive the contractor to minimise overheads, especially upon exposure to cyclical trade (Smyth 1985), and to keep costs low, especially transaction costs (Gruneberg and Ive 2000, Winch 2002). Therefore, the strength of the core construction business has been not about reducing the direct costs of the 'product', nor adding value to the 'product' or service *per se*, but has been focused upon managing transaction costs.

Furthermore, Ive (1995) has shown that contractors are unwilling to invest in innovation. They do not have the motive, means or opportunity. The client is the one who has motive. Large clients with complex projects can use their market power and apply supply chain management to provide the means. Large complex projects and development programmes provide the opportunity. Gann (2000) has confirmed the constraints that contractors experience in developing innovation, which has been echoed in a supply chain context (London *et al* 1998, London and Kenley 1999). The management consequence of this situation in construction is that contractors tend to receive the initiatives of clients as market demands placed upon them. Supply chain management has therefore been adopted in construction as a response to client demand. These demands can be direct, for example in the case of leading procurer BAA, or indirect through *Constructing Excellence* and its forerunners.

Therefore clients driving continuous improvement will use supply management as a *procurement push*. Contractors are recipients of the procurement push model (cf. London and Kenley 2001). Sector economics incline contractors to respond to keep investment and transaction costs at their lowest levels. Yet the market generally and clients specifically demand response to the procurement push driver. Economically the optimum response is to emulate the model, thus, push it along the supply chain to the next party. The responsibility is therefore transferred to the next supplier or subcontractor to respond to the push. The next party responds in like manner, the conceptual logic being the suppliers at the end of the chain squeeze costs. There are clear limits to this.

What is the consequence of this process of procurement push along the supply chain for meeting client expectation and delivering added value? The client is interested in outputs, hence has an intrinsic interest in value. In manufacturing, being competitive requires a response that delivers. In the short run emphasis is theoretically upon reduced costs, especially waste reduction (Womack and Jones 1996, Koskela 2000), yet the law of diminishing returns shifts emphasis from waste reduction towards new added value in the longer run.

There are not the same gains to be made from renegotiating around waste reduction, hence cost reduction, in construction; manufacturing need only review periodically for standardised products requiring standard inputs on a repetitive basis (London and Kenley 2001). In construction, many major contractors do not design nor produce anything, they manage the project. Contractors and subcontractors are also risk averse to committing resources to a single client (Clausen 1995, cited in London and Kenley 2001). Hence, scope for supply cost reductions for one project may not benefit other projects, hence the limits for cost reduction are conceptually reached earlier in construction than in other industries, which are practically reached in construction where contractors identify and capture learning and transfer it across other project (Smyth 2004). Added design and innovation value is infrequently in the hands of the contractor, the remaining responsibility is pushed along the chain. The contractor expectation is to have achieved sufficient to secure repeat business directly from the client or indirectly through referral markets for similar projects of scale, complexity and building type. Hence, the contractor fails to carry forward the intrinsic client interest in value (see Figure 2). Thus, in construction, the value link in the supply chain is broken that is not evident in most other sectors. The consequence is that the procurement push is simply pushed further along the chain.

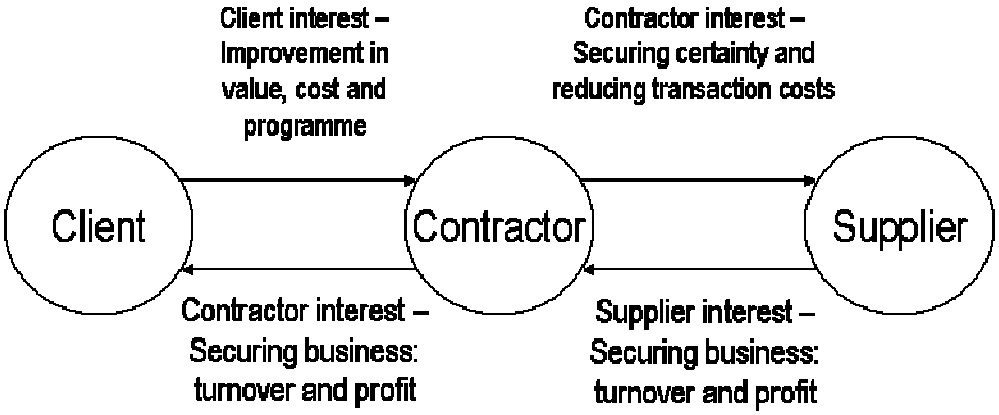



**Figure 2. Procurement Push Along the Supply Chain**

While contractors may follow supply chain management practice of rationalising the number of suppliers, as Green has pointed out (Green and May 2003; Green 2005 forthcoming), the length of the chain may well increase. As the procurement push model is handed along the chain not only has the interest in value been lost, but any collaboration, such as partnering, is lost too. Price becomes the issue and indeed the quality may fall below the needs of the client in the process, which means a reduction in value added in terms of time and quality.

On the other hand, the contractor can try to add service value by more effectively managing the project without increasing investment or costs. Added service value may take many forms, including minimising risks and uncertainty. This requires a different response.

In summary, the procurement drivers from the client are received by the contractor as a procurement model, which is emulated. Supply chain management therefore becomes characterised as *procurement push*, which is driven along the chain, especially where suppliers experience similar overall market conditions to the main contractors. The intrinsic value to the client, specifically potential added value, is lost in the way in which the procurement push is driven along the chain. Continuous improvement becomes largely confined to price reduction, which may result in a compromise of potential value added. The law of diminishing returns kicks in early when supply chain management is confined in this way. To move beyond this position a different response is needed.

**Marketing Drivers**

The customer seeks to buy in the market, utilising a procurement strategy or approach. The supplier seeks to sell in the market, utilising a marketing strategy or approach. Procurement and marketing are closely related – "two sides of the same coin".

Marketing develops strategies to create a satisfied customer, whom is retained (Levitt 1983). Marketing is utilised across industries to improve sales through customer satisfaction and customer retention, especially in service sector markets and in business-to-business transactions since the mid-1980s. In these two markets relationships are often used as a means to achieve marketing objectives, hence, people frequently are the main asset. Thus, relationships are the vehicle to mobilise change, which includes continuous improvement through supply chain management (in marketing see Gummesson 2001; in construction marketing see Smyth 2000; in supply chains in construction see Green and May 2003).

Historically, marketing in construction has been addressed by structural solutions to the market (Smyth 2005). In order to most effectively manage transaction costs, contractors tend to set up different divisions for each market, primarily based upon procurement route – traditional, D&B, partnering, PFI/PPP and so on. The motivation is to manage transaction costs most effectively, not to maximise service to the client. The full range of marketing functions has not been adopted by most large contractors, including contractors operating in markets of 'relational contracting'.

A marketing approach in construction to supply chain management would theoretically permit the intrinsic client interest in value to be preserved, indeed further enhanced, along the chain. The contractor would become primarily interested in serving the client needs even though transaction costs may rise because of the increased management costs from individual effort and human systems. Their selection of other members in the supply chain would therefore include suppliers that either share that interest or can be induced into adopting the same approach. The link between adding value in the supply chain and marketing are people, specifically the relationships between the parties in the supply chain. A customer orientated approach creates leverage through relations to deliver value, whether it is further value added to the product quality or added to the service. In this way a *marketing pull* is induced.

Hence, the customer or client initiative to improve the product and service quality above the minimum level of needs – added value on top of the value added component – provides the procurement driver. In the same way, the supplier or contractor initiative to improve customer satisfaction via improvements in product and service quality above the minimum level further adds value potentially, and provides a marketing driver.

**Marketing Pull**

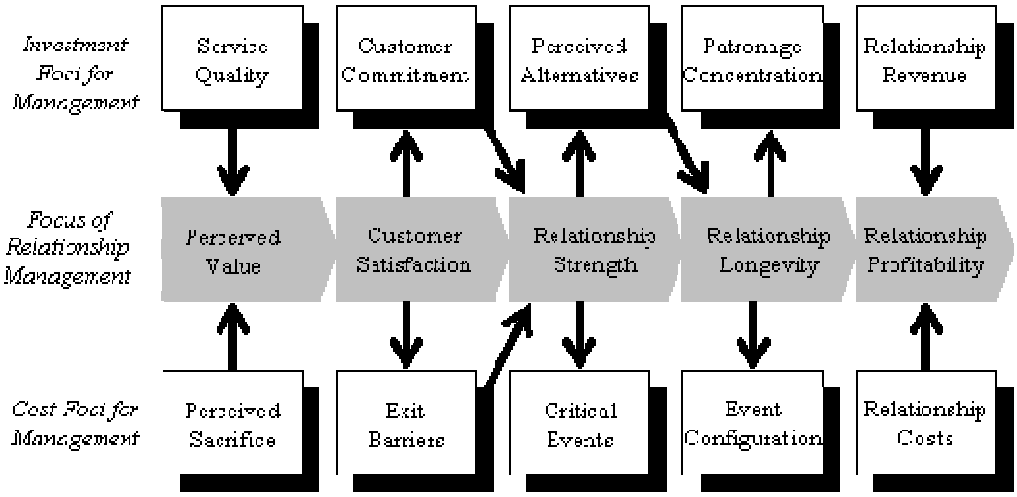
The logic of the *procurement push* is that there should also be a corresponding *marketing pull* in order that forces are maximized to add further value. The *marketing pull* concerns absorbing the client requirements and responding to them rather than simply passing them on. The marketing mix paradigm has serious shortcomings in a construction context as it inherently ends up emphasising price (Smyth 2000, 2004). The other main marketing paradigm is *relationship marketing*. A relationship approach has been set out elsewhere. The Nordic School pioneered the approach, Grönroos (2000) and Gummesson (2001) providing seminal overviews. The IMP Group is another major force (see for example Ford *et al* 2003). In construction the paradigm has been set out by Smyth (2000). Gummesson defines RM as:

> *Relationship marketing is marketing based on interaction within a network of relationships.* (2001, p. 3)

He outlines a minimum of thirty different types of relationships for marketing, under four headings:

1. *Classic market relationships* – incorporating the customer-supplier dyad, competitors and the distribution network.
2. *Special market relationships* – incorporating interaction in the service encounter, alliances and loyalty programmes.
3. *Mega-relationships* – non-market relations incorporating lobbying, PR, NGOs and social networks.
4. *Nano relationships* – non-market relationships incorporating internal customers, internal systems and logistics.

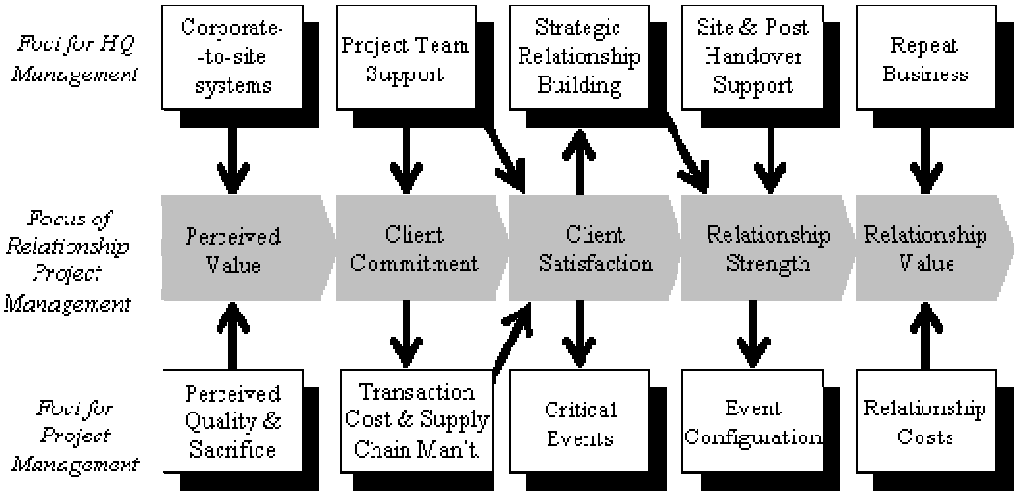
Relationships have to be managed. For business benefits to accrue investment is needed and cost incurred in order to produce net profits through the relationships. This is set out by Storbacka *et al* (see Figure 3).




Adapted from Storbacka *et al* 1994, in Smyth 2000; 2004

**Figure 3. Model of Relationship Marketing.**

However, in a project environment a supplementary model is needed to interface between managing the client or suppliers and the projects (see Figure 4). The model, developed by Smyth (2004), is applied to the project level of operation. It is located between the business strategy and the programme strategy for projects.



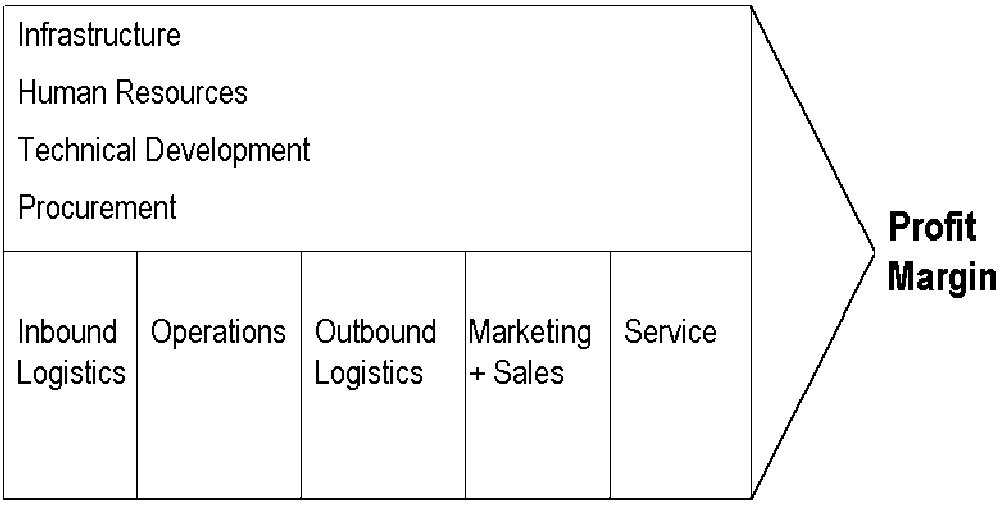

Source: Smyth 2004

**Figure 4. Model of Relationship Management for Projects**

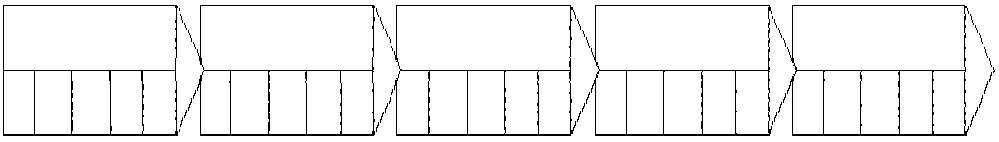
Effective RM leads towards a *relationship management* approach, functioning upon the premise that it is through relationships and the associated effort that further value can be levered between parties in the chain, hence increasing added value. This relates to the construction 'product', yet relates to a greater extent to the quality of

client service experience, certainly in terms of time and cost, but also managing uncertainties and risks, resolving problems, and helping to reduce stress hence increasing satisfaction of the experience. For the contractor, the satisfaction is likely to yield greater referral and repeat business, yet the effectiveness of improving performance through relationships can induce efficiencies to reduce net increases in transaction costs. Moreover, the effectiveness potentially improves the profit margin in the long term for a large or complex project and will yield a relationship profit from a programme of projects (see Figure 3, cf. Figure 4).

Relationship management therefore relates to the structure and process of supply management, being the means to deliver further added value in terms of quality and the service experience. How the relationship management processes in the models operate in construction is beyond the scope of this paper, but can be explored elsewhere (Smyth 2000, 2004). How the processes are configured at a detailed level is a matter of competitive advantage (Smyth 2000), and thus, strategy of each contractor (Smyth 2004). Configuration induces service differentiation, taking account of demand patterns in the market. This applies throughout the chain. In order to understand the process in a supply chain context, it is necessary to look at the structure. A supply chain can be conceived as a series of linked *value chains* (see Figure 5, cf. Christopher 1992).




**A). The Traditional Value Chain (Porter 1985)**



**B). The Value Chain Constituted as a Supply Chain**

**Figure 5. Value and Supply Chain Structure for Production**

Value chain analysis follows conventions of mainstream manufacturing where goods are produced first, so the sales function comes towards the end of the chain, that is, immediately prior to the transaction. This approach does not apply to projects undertaken by contract. Marketing and sales theoretically comes at the beginning of the value chain (see Figure 6).

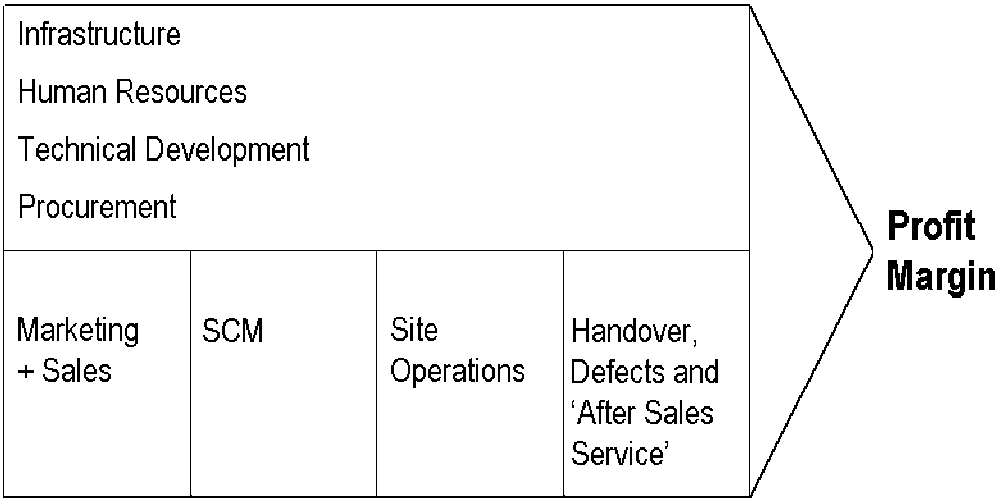
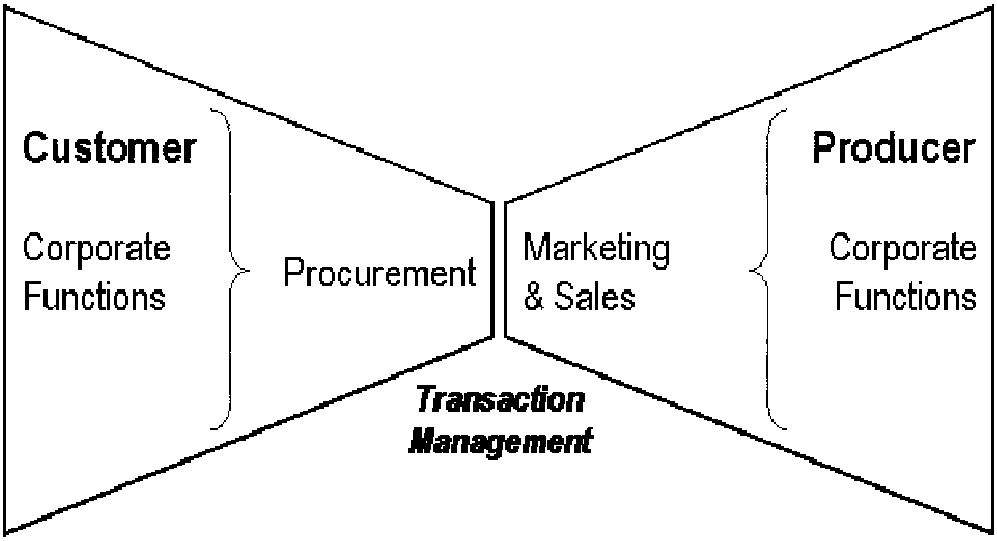
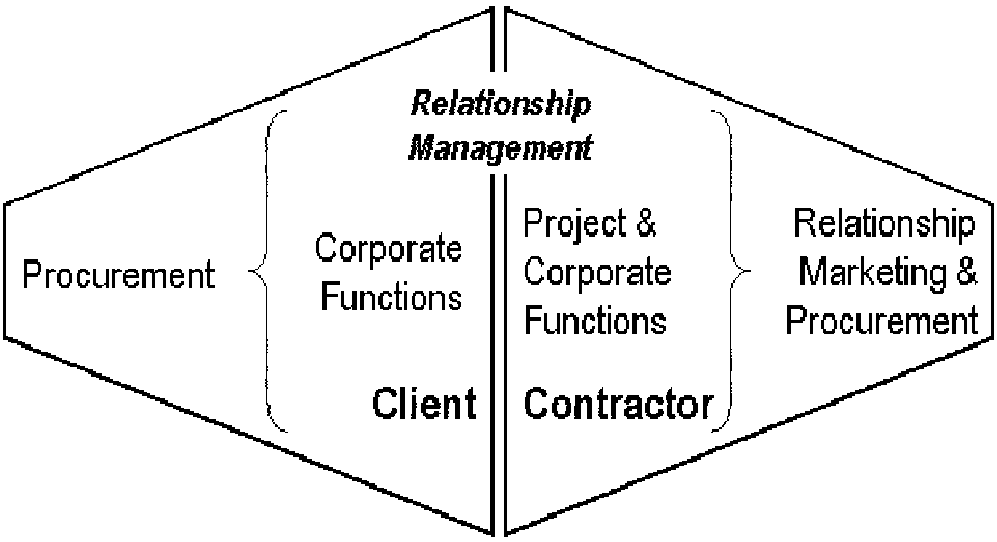



**Figure 6. Project Contracting Value Chain**

First investment into *relationship management* is needed to ensure that value is added directly and indirectly, value that is relevant to client needs and desires, which is not always concurrent with the task orientation of project work (Handy 1992). This commences with selling, commonly referred to as 'business development' in construction. Relationship marketing in construction is not just about pre-qualification and being short-listed for tendering or for negotiating a contract, but concerns understanding the clients needs and desires, which are then addressed in securing the contract and handed down through the project management process. Through RM the understanding of the needs and desires of the client are enriched during project management, delivering promises made pre-contract and the further adding value during the contract. Second, supply chain management mobilises value added along the chain, which in a contracting context requires management to ensure all suppliers respond according to the *marketing pull* model, which also starts through the sales process from the supplier side. Therefore the function of RM in procurement is to lever all the functions at the interface with its counterpart, the supplier using RM in marketing to commence the response, so that value is added to the product and service in the chain (see Figure 7). RM is therefore a process of marketing and management which reverses the extent of interface with parties. Figure 7 shows this between client and contractor, the picture being replicated in the whole supply chain.




**A). Transaction Management in Mainstream Manufacturing**




**B). Relationship Marketing and Management in Project Contracting**

**Figure 7. Interface between Supplier and Buyer**

The contrast between the transaction approach and relationship management – diagram "B" in Figure 7 – is the intensity of management at customer-supplier interface. The main addition required is the higher investment and transaction costs, which are incurred mobilising relationship development at each link in the supply chain. The RM and management functions mobilise these relationship resources throughout the project life cycle and in supply chain management in order to ensure that the *marketing pull* model is replicated throughout the chain in response to the procurement push.

Relationship management shifts the approach towards a client focus, provided it is underpinned with investment and hands on main office support for project teams. Such a shift theoretically increases costs, hence market risk, however, relationship building increases confidence and reduces perceived project risk (Smyth and Thompson 1999, Smyth 2003). Successful project outcomes will yield confidence for incremental corporate investment in relationship competency development.

The *procurement drivers* remain, whilst the *push* is moderated. The *marketing pull* acts in a coordinated and complimentary way. A prime advantage of RM is repeat business from the same clients and in referral markets, yet increased relationship revenue and hence profit will also be yielded on sustained relationships and project programmes. The procurement push does not facilitate RM, hence derived added value, plus the potential for repeat and referral business. RM and relationship management add further value than pure procurement approaches; RM increasing client satisfaction levels (Smyth 2000) throughout the chain. Coupled with the additional investment, services are differentiated as services are tailored to client needs and desires, hence raising switching costs (Smyth 1999). Competitive advantage is therefore achieved (Smyth 2005). Repeat business will be increased for the same clients that have programmes of projects as part of a corporate investment portfolio of activity (cf. Morris 1994, Morris and Pinto 2004).

In supply chain management, the *decoupling point* is the point separating management of inputs and management of outputs, essentially the difference between a production and customer focus (Hoekstra and Romme 1992). Theoretically, construction should have the decoupling point close to the commencement of the chain as the specification is tailor-made. Practice has been the exception, the procurement push approach being one reason. The marketing pull approach has the potential to move the decoupling point closer to the start, thus placing less emphasis upon lean production and more on agile manufacturing (Naylor et al 1999).

Therefore a marketing pull approach is to the long term benefit of clients and is of long term benefit to the strongest contractors and subcontractors, with whom business is likely to be concentrated.

## Conclusion and Recommendations

The paper has argued that some of the premises of current supply chain management practices in construction lack the integrity to maximise benefits for clients, and in the long run other supply chain members too. The paper has characterised the predominant approach as *procurement push*. It has been argued that a *marketing pull* approach is needed as a compliment to the push. The RM and management paradigm will achieve the necessary marketing pull required to directly and indirectly add value. This was demonstrated conceptually by considering the supply chain in terms of a series of linked value chains, showing how a relationship management approach overrides transaction management approach. Finally, it was shown RM offers a client focus, which conceptually yields higher satisfactions levels, and which in the long run will facilitate capital concentration.

The paper has looked at the structural and process issues of supply chain management. One of the most influential factors determining effectiveness is behaviour and the underlying attitudes. Further research is needed to set out the parameters of behaviour and behavioural change in terms of culture, the sociology of work and psychology. Of particular interest are competency issues of emotional intelligence (Druskatt and Wolff 2005; cf. Smyth 2004). Establishing detailed change requirements needs detailed mapping of current practices in supply chain management that go beyond current anecdotal and common sense thinking.

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