PRICING CONSTRUCTION WORK: A MARKETING VIEWPOINT

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Version 2

29 November 200626 July 2006

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ABSTRACT

Recent work on pricing has shown that neo-classical microeconomic theory (NCMT) is preferred to tendering theory and that implied by absorption, or full-cost, pricing of construction work because of its explicit treatment of market conditions, competitor behaviour and firm capacity levels. Applying NCMT in practice, however, requires the consideration of pricing from a marketing perspective. This paper examines the challenges involved in terms of the a marketing perspective to NCMT of pricing in practice, however, requires consideration of pricing fromproduces challenges, t a marketing perspective. he This paper examines examining the relevance of two prevalent marketing paradigms – *marketing mix* and *relationship marketing* – to pricing construction work generally, and the traditional contracting (TC), design and construction (D&C) and speculative building (SB) procurement systems in particular.

In general, the marketing mix (MM) approach, which havings a the closest fit with NCMT, is concluded to be the most favoured inaligned to current practice. However, conceptual and practical limitations are identified. Relationship marketing (RM), on the other hand, is theoretically more applicable, but seems to have beenyet has been largely overlooked in practice due to the transaction costs and investment involved. Nevertheless, some relationship marketingRM tools are increasingly being adopted in response to demand

criteria and clients' needs for continuous improvement, offering a challenge to NCMT related pricing.

In terms of specific procurement arrangements, SB would seem most suited to the marketing mix MM approach over the long term as it is closest to consumer good markets. D&C on the other hand is considered to be the most price-sensitive to demand factors, with SB the least because of its ability to control resources, specifically land and financial packages, whilst TC is most suited to developing relationship marketingRM practices.

Keywords

Construction, pricing policies, marketing, marketing mix, relationship marketing.

INTRODUCTION

Most studies of construction pricing have been carried out by practitioners such as quantity surveyors, cost consultants or economists. These, however, are concerned with practical aspects and lack a comprehensive conceptual framework for analysis, while economics, though possessing a vast and sophisticated theoretical apparatus, is acknowledged by many to fail to produce much of practical value to price-setters. As a result, the formal education of practitioners, for example, proceeds on the basis of a set of very basic and unlikely precepts. Two of these are immediately obvious:

i. Economics provides a theoretical basis, yet is generally aimed at providing a rationalisation of pricing behaviour rather than providing a basis for making practical pricing decisions
ii. Practitioner pricing (PP) provides the necessary practical basis for pricing, yet is at best partial in application because of the overemphasis on costs at the expense of market considerations beyond appreciation of intensive competition as 'price-takers'.

Marketing, on the other hand, is alsoclaims concerned with for the theory and practice of pricing, but price being part of a broader 'with the goal of creating extra value equation', either real as in for instance from added design value to after sales services or special services for special customers or imaginary, as in "putting a tiger in the tank". The former is a way of dDifferentiating the product is used by producers to create price differentials or and the market acts back to stimulate producers to stratify prices. This is in line with NCMT, yet these forces lead firms to offer a series of products and services into the market, which is more akin to classical economics of Alfred Marshall than NCTM (Earl 1995) than neo-classical assumptions of single product firms. the latter is based on lack of knowledge about products and because of imperfect perceptions, preconceived ideas are often self-fulfilling.

This paper examines:

- tThe relevance of marketing, perhaps as a means of reconciling the economics-PP schism. ;
- The challenges Trends in the marketing literature are also reflected. For example, the assumptions and traditions ofprovides to neoclassical economics have been

challenged, and often refuted, and NCMT in the last three decades (Earl 1995; Estelami and Maxwell 2003).

Rather than viewing pricing as “a basic economic factor that determines the general lack of business activity or the manner in which resources are allocated” (Oxenfeldt 1975:viii), the interdependence of pricing and the other elements of marketing are examined in the context of that are available to the construction industry are examined.

The paper considers the A general framework in whichfor pricing decisions are madeis explored using marketing and reviews thein relation to particular contingent conditions that make the direct application of marketing knowledge to thein construction industry problematic. It reviewsThe the marketing perspectives of pricing for three procurement arrangements, namely Traditional Construction (TC), Design & Construct (D&C) and Speculative Building (SB), representing a range of product-cum-procurement optionsare considered. Elements of many gGeneric marketing procedures are considered (e.gcf., Grönroos 2000; Nagle et al,and Holden 1995; Oxenfeldt, 1964) ; Wilson and Gilligan, 1997) together with building industryconstruction-specific procedures (e.g. Abratt and Pitt 1985; Mochtar and Arditi 2001; Skitmore 1990; Slatter 1990) for setting pricing strategies. These procedures are then combined to develop broadput into the context of guidelines under which marketing can be applied to assist the difficult task of two marketing paradigms for strategic price setting for thewithin construction industry.

In doing so, tThe conceptual analysis developed adds strengthens to the idea notion that pricing construction work, although quite has some similarities to with intermediate and industrial goods and infrastructure, substantially differs yet is distinct from the pricing of

consumer goods. The rationale and logic of the analysis, however, has yet to be supported in requires empirical study because of the virtual absence of such work to date. One reason is the lack of research into pricing with marketing generally, another reason is sensitivity and confidentiality. Another reason is the lack of research into pricing with marketing generally, and in construction specifically.

OVERVIEW OF THE ECONOMICS OF PRICING

Runeson and Skitmore (1999) have shownargued the tendering theory implied by Gates (Gates 1967) fails because it is unable to take into account changes in market conditions, competitor behaviour and firm capacity levels. Conversely, Runeson and Raftery (1997) argue neo-classical microeconomic theoryNCMT is likely to succeed. , which Skitmore *and Runesonet al* (2006in press) have also shown the predominant form of construction contract pricing is unlikely to besupported in contrast to absorption or full-cost pricing – once again offering support for the tenability of. the neo-classical position.

From a practical point of view, hHowever, as Oxenfeldt (1975:10) observes, "[although] pricing has been written about in great depth by economists for centuries, many price-setters who have looked for help in a study of price theory and the literature on pricing have not found the effort too rewarding", the reason being that economic theory only "seeks to explain basic economic forces, hence" (Oxenfeldt 1975: viii). merely rationalise their behaviour rather than Gabor (1977) states theory does not aim to guide producers and consumers (Gabor 1977), but merely rationalises their behaviour. Moreover, the The assumption that a firms in perfect competition sets its their own prices with total control of production the

inputs, to its production and adequate, if not full, information on present and future supply and demand, restricts the applied explanatory explanation power of the theory to a small number of industries few single product firms dealing mostly in commoditiescommodity markets. Few, if any, managers Managers would acknowledgeaccept imperfect competition/knowledge generally as being sufficiently realistic inaccords with practice (Gabor 1977).

A great deal of eEmpirical research supports this view. F, for example, a *positive* price-demand relationship has often been found to occur due to price-quality schemata (e.g., Monroe 1990; Peterson and Wilson 1985; Rao and Monroe 1989; Shapiro 1973; Zeithaml 1988) which are dependent on the type of product (Liechtenstein and Burton 1989), the consumer's familiarity with the product (e.g., Lim and Olshavsky 1988; Monroe 1990; Rao and Munroe 1988; Zeithaml 1988) and contingent upon the state of both consumer and task environment variables (e.g., Bettman 1979; Bettman *et al* 1991; Johnson and Puto 1987; Olshavsky 1985; Olshavsy *et al* 1995; Payne 1982; Payne *et al* 1992), thus leading to the conclusion that practitioners should avoid usingrecognising that economic theory for perfect knowledge indoes not necessarily aid setting prices (i.e., lower prices may do not always automatically stimulate sales), and that instead, "practitioners should can employ empirical methods to determine the price-choice relationships for each particular pricing problems of interest" (Olshavsky *et al* 1995:216) or employ realist methods to conceptually determine what is necessary to stimulate sales across a configuration of marketing and pricing factors (cf. Smyth et al*et al* 2006).

Prices , of course, are not set by impersonal market factors that combine to produce a result that reflectspurely driven by inexorable market forces. The setting Setting and changing of

prices is also behavioural, reflecting perceptions, cognitions, aspirations, and preconceptions. It Prices reflects methods of making business decision-smaking, the quantity and availability of information, also motivations, environment and prior expectations and environment (Oxenfeldt 1975). In practice, few prices are generally set by individuals, but are formed through relationships, actors processing data being sifted based uponwith contextual perceptions of the current market and personal experience from the past. Decision-makers therefore mobilise objective data withand subjective evaluation criteria to actively engage with the market. This is tactical, yet informed by strategy concerning objectives for the firm (Kotler 2000). Basically, price setting is conceived as an optimisation problem: "Setting a price too high can have the effect of indirectly reducing profits via a reduction in the firm's market share, while setting a price too low can directly reduce a firm's profits through low profit margin" (Gordon *et al* 1980:1). This is essentially the same iIn tendering situations, where high prices result in winning less contracts and low prices win more contracts but with less profit in conceptual terms, moderated in practice by contextual conditions.

This overall view applies to construction: "A realistic model of price determination would need to be at home with loose or fuzzy concepts, not feel guilty about the lack of mathematical precision and able to cope with erratic non-optimising decisions" (Raftery 1991:146).), yet Empirical empirical research has showns that pricing practice in construction does not fully conform to the norms of other industries; it successfully borrows elements successfully. For example, South African firms in the chemical and construction industries employ the same organisational structures and costing systems and both emphasise costs and competitor prices rather more than buyer behaviour in determining how to price products. They do, however, differ in their pricing objectives, with construction firms emphasizing return on investment, while chemical firms emphasize mark-up on cost (Abratt

and Pitt 1985). Tendering is largely market-oriented, which includes many subjective judgments (Green 1989), however, marketing , as a systematised function of the firm, remains relatively unsophisticated and largely intuitive in construction (Slatter 1990Smyth 2000).

OVERVIEW OF MARKETING AND PRICING

Economics is generally far from developing reliable models ofhas tried to understand price pricing determination and even the development of effective pricing strategies, whilst reliable models for pricing still remains remain quite elusive (Hoffman *et al* 2002). This is not the case with marketing Marketing theory has established models, which includes pricing, recognising. s imilarities and In addition, although there are differences between industries in terms of objectives, methods and procedures, the similarities are more prevalent between industries (Gordon *et al* 1980), and between product/service lines. "[F]or marketers of industrial goods and construction companies, pricing is the single judgement that translates potential business into reality" (Walker 1967:38). Not surprisingly therefore, mAspects of marketing theory have been applied in construction and has already been shown to be directly applicable have further application to some construction industry practices (Smyth 2000; Preece *et al* 2003) as well as help in identifying significant differences in structure and operation of construction.

There are currently two primary marketing paradigms, the *marketing mix* (Borden 1964) and *relationship marketing* (Berry 1983). The marketing mix (MM) was developed for in mass market consumer goods. It is based upon, utilising the so-called 4Ps of product, place,

promotion and price (McCarthy 1964) and subsequent variants. This is a producer-orientatedoriented approach, in which producers aggregates consumers into segments that are then supplied by products derived fromusing the mix of ingredients from the 4Ps. The objective is to maximise sales, and hence profit. The producer accepts the market as it is and the consumer is viewed as passive,. The marketing mix therefore the transaction-based MM sits comfortablybeing aligned within neoclassical microeconomic theoryNCMT.

Relationship marketing (RM) was developed with for business-to-business (B2B) relationships in mind, especially for intangible services (see e.g., Grönroos 2000; Gummesson 2001; Ford *et al* 2003). This is customer or client focused, whereby agile production and tailor-made services are configured for "segments of one" (Gummesson 2001). The objectives are to add product and service value to provide client satisfaction, engender loyalty, and hence, increase repeat business and secure premium profit for the producer from satisfied customers. The consumer or client is viewed as active and the producer is a proactive market creator and market manager of their market.

Relationship marketingRM therefore offers an alternative perspective to neoclassical microeconomic theoryMM, yet opportunity for overlap is present. While some (e.g. Kotler et al*et al* 1996). emphasise overlap and integration of MM and RM, identifying scope for practitioners to amalgamate or transition between the two, tensions and conflicts can be overlooked, for example RM is not aligned with NCMT. RM requires Proactive proactive market management of the market requires through systematic organisational and individual behaviour both organisationally and individually. At the micro-level, relationship marketingRM seeks changes in the exchange processes and in the management of product and service delivery. Such Aggregated organisational behaviour can be aggregated to change

the market at sector level, for example investment in relationship marketing can increase switching costs and create barriers of entry.

Conceptually, the marketing mixMM does not fit construction. Traditionally, contractors do not design the end 'product' and therefore service is the only primary aspect that contractors can configure. Many Most contractors do notoffer undifferentiate or standardise their services, organising themselves into divisions mirroring procurement routes originally developed by clients (Smyth, 2006a). Overall this reduces management inputs, with a consequential lack of service communality and standardization in management-cum-behavioural terms, projects typically being organised on a one-off basis according to a personality (or blame) culture (Pryke and Smyth 2006; Smyth 2000).

'Place' refers to distribution channel in marketing theory. However, logistics and the outlet of sale do not easily translate into construction where 'site' relates to 'place', which is determined by the client rather than contractor determined. The procurement route also concerns 'place'. Whilst contractors in theory can configure procurement to fit specific client needs, in practice contractors have used structural solutions to the market – organising firms into divisions and subsidiaries, each handling particular procurement options, so, which at a project level the clients chooses the procurement route prior to approaching the relevant contractor division because of the structural solutions to marketing adopted by contractors (Smyth 2006a). Being an essentially oligopological situation, promotion Promotion in the market is constrained by geographical coverage for small firms and larger firms rely upon reputation and referrals, especially from consultants (Smyth 2000). Therefore, thisPromotion is not a major issue for firms, especially with undifferentiated services.

This cConceptually leaves price as becomes the major marketing issue, which accords with practice in a fragmented and competitive market. Whilst Alfred Marshall recognised the importance of multi-product firms (Earl 1995) and marketing theory and practice embraces heterogeneous product and service markets, constructors tend to offer undifferentiated services. The continuous improvement agenda has largely been "thrown over the wall" as client driven (Smyth 2006a) or simply passed along the supply chain (Smyth 2005; Green 2006).

Marketing theory of price and pricing strategies have not always been articulated in empirical research (Rao 1984). The mass market origins of MM have militated against price-based research as prices are fixed at an aggregate level, individual exchanges being irrelevant. This does not concur with specific assets in construction markets. Market leverage of individual suppliers and customers (Jain and Laric 1979) continue to exert downward price pressures in construction (cf. Cox and Ireland 2006; Green 2006). Rao (1979) recognized different customers value different product and service attributes, enhanced by customer perceptions of value (Shapiro and Jackson 1978), and thus accommodate different price structures – important in asset specific exchanges yet inhibited in contracts where features and benefits cannot easily be sought out and evaluated in advance compared to goods produced ahead of sale (Smyth 2000).

Conceptually, relationship marketingRM would be expected to closely fit construction services. Intangible services for one-off 'products' largely delivered B2B seem wellare suited to relationship marketingRM. In practice, the fragmented market of contractors supplying capital intensive services over long contracts in conditions of discontinuous workload and project uncertainty have led to transaction cost management being to the fore

(Gruneberg and Ive 2000; Winch 2002). Minimising transaction costs results in low levels of investment in marketing and the attendant management of relationshipsparticularly RM (Smyth 2000, 2004),. Consequentially, this has led to the undifferentiated services cited above, and the low service support levels from the head office to projects being consequences (Pryke and Smyth 2006; Smyth 2000, 2006a).

Client driven agendas for continuous improvement, such as – partnering, supply chain management and lean production, – have led to limited changes. In general, the contractor remains a market taker in line with neoclassical microeconomic theoryNCMT and the marketing mix transaction-based approach. Contractors have responded by adopting the client procurement driven model, rather than making a marketing response – the other side of the procurement coin (Smyth 2005) – learning the. Contractors have also responded with collaborative 'rhetoric' and passing the agenda along the supply chain with collaborative action geared to minimum client requirements (cf. Cox and Ireland 2006; Green 2006). Continuous improvement, therefore, remains is anchored within the transaction cost domain, including in the form of *relational contracting* (see for examplecf. Kumaraswamy and Rahman 2006), which seeks reactive behavioural responses to changes in governance and market structure, whereas RM, hence relationship management, seek proactive and aggregated behavioural change which can change the market if practices become widespread is largely reactive within the structure of the agreement or contract, rather than primarily proactive in behavioural terms organisationally and individually (cf. Smyth 2006b).

However, some contractors go beyond relational contracting (RC) on a piecemeal basis, making investment into improving relationships and adopting some of the 'tools' of relationship marketingRM (Kumaraswamy and Rahman 2006; Smyth 2000), which has

grown incrementally in recent years, but is yet to constitute systematic approaches to relationship marketing RM and relationship management (Pryke and Smyth 2006).

RM theory has also neglected empirical research on price, perhaps being partly explained by Grönroos' comment: "Price is never a sustainable advantage. As soon as a competitor can offer a lower price, the customer will be gone." (2000:4). RM has drawn attention to the value of the relationship in pricing (Ford *et al* 2003). This has to be offset against the investment and costs incurred in developing relationships (Grönroos 2000), inducing a positive relationship revenue over the customer life cycle (Storbacka *et al* 1994). Therefore, prices cannot be set too high so as to potentially damage the relationship, yet high enough to offset the additional costs and yield a profit based upon the enhanced service value (Ford *et al* 2003).

Pricing under RM therefore emphasises process – managing investment, relationships and costs – seeking to change market transactions in contrast to MM where 'hidden' relationship costs are high in terms of transaction cost analysis.

Therefore, it is relevant to examine pricing along the lines of the marketing mix and relationship marketing respectively, using the key criteria, developed above, in the following way:

1. Product-Price
2. Place-Price
3. Promotion-Price
4. Price *per se*

5. Repeat Business-Price
6. Client Satisfaction-Price
7. Profitability-Price.

The main characteristics of these in terms of the three procurement arrangements are shown in Table 1.

Insert **Table 1** about here

Price factors have consistently been under-researched within marketing (Rao 1984). This is partly because neoclassical microeconomic theory takes the market as is. In perfect competition, producers are price takers, hence the aim is to configure the mix to maximise market returns. The mass market origins of the marketing mix have militated against price-based research as prices are fixed at an aggregate level and individual exchanges are irrelevant. This does not concur with specific assets. However, both the leverage of individual supplies and customers, and the likelihood of bargaining after reaching an agreement in principle were recognised (Jain and Laric 1979), which are important in construction. Rao (1979) also recognized that different customers value different product and service attributes, thus value varies in particular exchanges, even if price is constant for standard products. Again this is important in asset specific exchanges. Some attributes are intangible and of these many can be a matter of customer perception (Shapiro and Jackson 1978).

Such observations have provided part of the challenge to the marketing mix, however, research into relationship marketing has equally neglected price, perhaps being partly

explained by Grönroos' comment, "Price is never a sustainable advantage. As soon as a competitor can offer a lower price, the customer will be gone." (2000:4). Attention has been drawn in relationship marketing to the value of the relationship in pricing (Ford *et al* 2003). This has to be offset against the investment and costs incurred in developing managing relationships (Grönroos 2000), inducing a positive relationship revenue over the customer life cycle (Storbacka *et al* 1994). Therefore, prices cannot be set too high so as to potentially damage the relationship, yet high enough to offset the additional costs and yield a profit based upon the enhanced service value (Ford *et al* 2003).

Grönroos (2000) identifies four approaches to pricing:

1. *Service perspective*: service is valued – distinct from product value – and/or the relationship within the service is valued (cf. subcontracting under 'make or buy' decision-making)
2. *Core perspective*: excellence in delivering core solutions (cf. iron triangle)
3. *Price perspective*: closely related to the marketing mix and is an unsustainable advantage from the providers' viewpoint (cf. zero sum games)
4. *Image perspective* is perceived value, where prices are set considerably above costs (e.g. designer goods).

Relationships help directly or indirectly in all the above, except price perspective, to add value or to be of intrinsic value.

Grönroos (2000) draws particular attention to the role of relationship costs in pricing. Pricing under the marketing mix approach, where price criteria dominate, can lead to

additional costs for the customer because 'hidden' relationship costs are high, and greater than the costs incurred in a B2B relationship, and where switching costs are high. Whilst this stance echoes transaction cost analysis (TCA), the difference is that TCA is structural, based upon market governance, whilst relationship marketing is process, seeking to change market transactions.

FACTORS AFFECTING PRICING - ISSUES PERTINENT TO THE CONSTRUCTION INDUSTRY ISSUES

Supply and Demand influences on setting pricing strategies

Producing in response to demand forecasts is a conventional product-price issue. Working to contract in construction means production only occurs *after* sales are secured, hence reversing basic marketing theory chronology. Each 'product' is client and project specific hence unique. Production and assembly techniques are generic rather than standard in a flow-line systems' sense, reducing opportunities for knowledge transfer between projects , and for accurate comparative pricing (Cassimatis 1969). Any hHistorical cost data are only pricing indicators so far as pricing is concerned and forecasts are inherently unreliable, scarce and time-lagged between data collection and availability (Bowen 1994; Raftery 1991). Actual work processes are not used as a basis for pricing, forms of measurement being surrogate indicators of activities.

Whilst effective cost control systems are essential to minimize uncertainty in construction (Perera 2003), few contractors know their real costs precisely, the cost curve of the firm at

any stage varying over a wide range (Hillebrandt 2000)**.** Construction firms are unaware of their exact marginal cost and revenue curves (Raftery 1991) and calculations for the point of equilibrium (Gruneberg and Ive 2000).

Speculative building (SB) can be an exception when the contractor is the developer and production precedes sale in the commercial market. Even where there are pre-lets these are sometimes secured in the early stages of construction, for example after planning permission is secured and demolition is completed and sometimes after preliminaries have been conducted. The product is also relatively fixed at an early stage in housing development markets due to planning and the application of standard house types.

Traditional contracting (TC) is typical of many business operations, both inside and outside the construction industry, where demand – number of contracts and value of work in the construction case – is outside the contractor control of contractors (Gruneberg and Ive 2000:236), industry living with demand fluctuations, hence firms being defensive (Hillebrandt 2000) amidst market uncertainty (e.g. Raftery 1991; Tavistock Institute of Human Relations 1966). Work is said to go to "the best assessor of an uncertain situation rather than the most efficient to undertake the work" (Hillebrandt 2000:153). Contractors can only stimulate demand where they offer an additional resource, for example SB, using land, or financial packages to overcome an obstacle to a conventional project (Smyth 1985) – a cases of increasing market share by product/service differentiation.

Business development managers and directors of construction divisions and the parent organisations endeavour to reduce uncertainty through courting potential clients, from their time design teams, and are appointed or earlier stages, especially for clients with large

programmes (Smyth 2000;e.g., Preece *et al* 2003) as well as . Several studies have found business development almost exclusively focuses upon obtaining relevant information about the environment and the competition, mainly through personal contacts that are established through courting and industry networks (e.g., Al-Higzi 2002; Ngowi *et al* 2000; Zarkada-Fraser and Fraser 2002). This sales activitySelling therefore mixes promotion and market research with selling and is largely aboutfor contractors trying to getting close to the potential clients and design teams (e.g., Ngowi *et al* 2000; Smyth 2000). The benefits ofSuch relationship benefits building are frequently lost at thefor pricing stages as business development managers are seldom involved with estimating, project planning, and decisions on tender prices that determine the service offer and margin. Directors are typically insufficiently involved to play this role; hence, the theoretical applicability of relationship marketingRM is compromised to the transaction approach of the marketing mix (Smyth 2000; cf. Pryke and Smyth 2006).

Environmental influences

The construction industry is characterised by a high degree of fragmentation as well as flexibility (Fellows *et al* 1983). Although competition can be intense, the market is divided into tiersed, contractor size acting as a barrier to tiers. In addition, competitors on one project can form a consortium to bid on another. These factors can render detailed knowledge of competitors for any project difficult, even for those with sophisticated management information systems. In the TC market it can be difficult to derive an analysis ofanalyse prevailing prices. S, reinforced by sealed bidding can result in their being minimal direct knowledge of other offer prices (Hillebrandt 2000:152; Raftery 1991:139). For these

reasons tThe contractor simply does cannot accurately know the rulingprevailing market prices very accurately (Hillebrandt 2000:153), price forecasting changes in price levels being "a matter of judgement and 'knowledge' of the market" (Raftery 1991:33), and. "there is no futures market … nor is retracking or assignment allowed" (Gruneberg and Ive 2000:238) This is further exacerbated by having to guess gauge about future project prices – "there is no futures market … nor is retracking or assignment allowed" (Gruneberg and Ive 2000:238).

PROCUREMENT ARRANGEMENTS

In the marketing mixMM, procurement is akin to place, which in construction is largely 'received' rather than created in market terms. In relationship marketingRM the procurement route is an active co-selection between client and contractor as part of meeting client needs. Three procurement options are examined, namely TC, D&C and SB, to illustrate some of the price-marketing factors.

Traditional

TC procurement is characterised by the separation of the design and construction processes and therefore offers contractors limited scope for contractors to competing compete on enhanced function or design quality of the finished product. Marketing has been price dominated within the marketing mix approachMM (Smyth 2000). What is surprising is that the service as 'product' is not configured as part of the mix. The creation of divisions to handle procurement routes inhibits contractors actively becoming involved with advising

clients and responding with differentiated services to generic service needs. HoweverMoreover, business development – the construction sales function – typically terminates with pre-qualification or tendering. This is the first breakdown in service continuity. Further horizontal breaks in service are often evident as the project team put forward to bid for a project is not always available when work commences on site, and various teams may be introduced at subsequent stages as teams are reallocated to maximise the potential to win new projects and manage transaction costs in personnel terms (Smyth 2000, 2004). This militates against service continuity for fulfilling promises and service differentiation for adding value, specifically affecting delivery of client satisfaction and securing repeat business. Moves towards partnering and supply chain management have not had a considerable effect upon this tendency – relational contractingRC working within market structures and governance – relationship marketingRM being the management means to improve service continuity, hence improving service quality in adding value and meeting client needs (Pryke and Smyth 2006; Smyth 2005) – coming close to perfect competition.

Some major contractors have started to implement key account manager or account handler methods (Pryke and Smyth 2006; Smyth 2000), although typically this has led to an internal struggle for resources, and support, and thus a loss of client orientation, hence the transaction mindset has largely prevailed prevails and is factored intoreflected in low prices and poor value for money (Smyth 2000).

There are also related, vertical beaks in continuity of service caused by the lack of relationship management systems for marketing and project management between the main office and sites. Therefore the experience a client receives on one project can be quite different on the next project because of the lack of systems between the main office and sites.

Hence a personality culture dominates on sites. A transaction cost based approach dominates pricing and hence sacrifices opportunities for managed service differentiation that yield client satisfaction, hence repeat business. Whilst there is nothing wrong with current such approaches for individual firms, the surprising aspect is that wholesale lack of service differentiation limits limiting client choice – between transaction and relationship approaches.

Design and Construct

In D&C procurement, or design and build, the contractor is responsible for design. This radically changes price-setting from pure service provision towards more of goods production. In theory it could be expected that the contractor seeks to configure the product, and has done so within the limits of 'buildability'. In practice D&C paradoxically intensifies price issues. Mistakes in estimating can prove a prime source of 'price advantage'. Importantly, however, dDesign introduces a new variable, so there iscreating every incentive for contractors to reduce design quality and specification in order to achieve the lowest bid price.

One production advantage of D&C is that contractors can optimise use of fixed assets, especially plant, which also induces value for money for clients (Ngowi *et al* 2000), which has been used extensively in the Japanese construction industry (Fraser and Zarkada-Fraser 2001).

Historically, some contractors have used design as a promotion tool and created a reputation in particular market segments or building types. IDC provided a good UK example in the 1980s process and pharmaceutical industries, but were taken over by Amec, which is – a likely market outcome for contractors wanting to create value beyond the undifferentiated services of traditional contracting. The firms absorbing such rivals tend to treat them as cash cows by default, if not by design, because they fail to adopt new pricing strategies that will protect and develop the expertise.

Speculative building

Like D&C, SB involves buildingincorporates design and production but with the addition of a sale, and is usually for housing, where current competitor prices are known. This form of building acquisition is the most similar to purchasing consumer durables. Reputation and brand have some impact in the SB markets, some house designs being recognizably attributable to certain builders. To this extent, product differentiation is discernable in the market, involving both technical specification and quality dimensions. Market segments are defined by income, lifestyle and house size, frequently expressed via price and number of bedrooms. However, promotion and product are not dominant marketing features. Once a speculative builder has secured a site they have a locational monopoly, becoming price-makers rather than being client customer or product focused. In addition, customer purchases are often determined through financial packages for mortgages and part-exchange schemes, which conceptually are part of price in thewithin marketing mixMM. Sales are conducted on a transaction basis either through sales offices on site run by in-house staff or contracted out to agents in transactional terms.

There are A growing numbers of customers who will only buy new homes. It is still a niche market and does not easily necessarily translate into direct repeat business. Particularly in buoyant markets, buyers frequently buy off plan or before their house isprior to completecompletion, which house builders encourage by phasing release on large sites, hence also increasing cash flow and minimising working capital. Therefore, the quality of the building is often being taken on trust (Shen and Dong 2001), largely an relationship marketingRM issue in a marketing mixMM dominated market.

Table 1 summarises some of the main marketing issues and options posed across different procurement routes.

Insert **Table 1** about here

A PROCEDURE FOR SETTING PRICING STRATEGIES FOR THE CONSTRUCTION INDUSTRY

Strategic motivation

Therefore price is foregoing analysis indicates the dominancet of marketing mix, especially price. It also suggests that relationship marketing is not merely a theoretical option, but that there may also be practical options to be applied to the market. The dominance of price implies that survival Survival factors may be is of greater strategic importance due to

downward price pressures domination in response to demand characteristics and attendant transaction cost managementfragmented markets. Survival is therefore important compared tocomes before profitability or growing market share via MM or through RM criteria of client satisfaction, hence repeat business – market offers of relationship marketing. This requires further exploration to build confidence in this analysis, therefore the analysis will consider strategic motivation and decision making in terms of product quality leadership, sources of profitability, market share and survivalis explored across several dimensions: product-quality, market share, profitability and survival *per se*.

Product-quality leadership

In theory thisProduct-quality leadership is possible where contractors control the design process. D&C paradoxically has the reverse effect asmitgates against design quality as design becomes the prime source of price competition, so much so that many clients take much of the design out of contractor hands through novation under D&C. BOOT-type contracts, such as PPP/PFI offer opportunities where input specifications have been substituted by output specifications (Ive and Rintala 2006). , but tThis can also be seen as an indirect form of 'product' control by the client. SB does offer an opportunity, however the control of inputs, especially land, provides a dimension of oligopoly that militates against this, thus the marketing mixMM has dominatesd and the control of input resources, especially land, provides a dimension of oligopoly that militates against this driverlargely via price and service-cum-financial packages. However, product quality has been improved as branding and mainstream advertising has grown over 25 years, in addition to which brownfield city centre development requires more innovative design and technology, which is incrementally having an effect on product quality from a customer viewpoint (Prapas 2005).

Maximum market share

The main motivations for companies tofor growing market share are is to increase their leverage in the market power and deliver increased dividend returns to shareholders from volume, which is particularly important where margins are static. For contractors the main motivation is different, whereby growth in company size permits entry into the next tier of the market, economies arising from access to larger projects in value rather than necessarily increasing the number of projects undertaken (Smyth 2006a). There is evidence to suggestHowever, contractors reduce prices to maintain market share, but minimal evidence to suggest that contractors reduce prices to gain market share or access to another tier. However, these aims may have an effect uponhelping to keeping prices at traditional market levels and stifle constrain price increases to invest in improving services, hence maximising repeat business opportunities as an avenue to increase share.

Gordon *et al*'s (1980) study suggests SBs ideally would want to maximise market share. In practice, though, even the largest firms have relatively small market shares compared to most industries. Clearly, they (Prapas 2005) and are not unprepared to lower prices to gain share.

Maximum current profit

Profit maximisation has been considered by many in the construction industry to be a rather naïve view of most firms' manifold project objectiveshas not been a major driver in construction (Skitmore 1989). Also, the , opportunities to set high prices are being limited for all procurement methods. Determining profit margins through bidding are highly unreliable and less important than maximising the efficient use of working capital and cash flow management once a project is secured. Hence, despite the fact that cContractors also

have less capital than most industries, return on capital employed (ROCE) is being more significant for them than profit margins. ROCE is and higher than for most other sectors (Gruneberg and Ive 2000).

Prices may be raised to levels of market skimming under exceptional circumstances, for example when work is very buoyant and capacity stretched. Conversely, prices may be lowered when the market is highly constrained, but that is a to protection of market share sufficient toand cover overheads and fora survival technique.

Survival

Companies pursue survival as their major objective, especially if they are plagued withwhere demand levels lead to overcapacity, intense intensified competition or changing customer wants. Price, hence profit, is less important than survival. According to Wilson and Gilligan (1997) pricing for survival more often than notcan often means pricing below (variable) cost in order to maintain a flow of working capitalcashflow. Many TC and D&C firms are able to maintain a reasonable flexible capacity by astute management of organisation resources and what these resources are able to manage. However, with intense competition, u to manage unevenness of demand, lumpy contracts, and the highest bankruptcy rate of all industriesproject uncertainties, it is commonly accepted thatthus survival is a major construction industry preoccupation for most firms in the construction industry (e.g., El-Higzi 2002). Exceeding financial capacity, for example, is known to be a major cause of insolvency. Similarly, under-capacity is a constant fear for many contractors due to frequent downturns in the demand for construction work and ensuing increased competition. Construction is generally a highly competitive industry (e.g., Krippaehne *et al* 1992) and, although some specialists may occupy dominant positions and contractors may occasionally

avoid bidding altogether in high intensity situations (Skitmore 1987), many organisations feel they have to fight for survival (Runeson and Skitmore *et al* 2006in press).

Determining demand

As noted, it can be difficult to know what the prevailing price for TC work is (Hillebrandt 2000). In pricing NCMT consumer goods prices are related to the current quantity of demand expressed in a demand curve. Demand is, moderated by competition from other products that will tend to be slightly different in marketing mixMM terms. In SB, this is easy to understand – normally, higher prices mean fewer sales and lower prices mean more sales – and usually consumers have product choice from other builders in the area and different house types from the same builder. In TC contract bidding, the product is identical for all bidders (Hillebrandt 2000). Contractors therefore weigh the opportunity cost of bidding for one contracts rather than another, assessing the risk profiles, the estimated number of bidders and other context specific factors rather than price in deciding whether to bid. Such choice is only an option in a buoyant market.

Price sensitivity

Several commentators (cf. Cox and Ireland 2006; Green 2006; Morledge 2000) have pointed out the lop-sided demand nature of TC, where client/owners possess considerable levels of market power. Speculative building, including certain BOOT-type schemes, provides exceptions. Thus, we invariably think of prices responding to changes in demand – a phenomenon that has been demonstrated by Andrews and Brunner (1975), de Neufville *et al* (1977), Runeson and Bennett (1983), McCaffer *et al* (1983), Runeson (1988) instead of *vice*

versa. Studies have shown that market conditions are important in determining pricing strategy (e.g., Beeston 1982; Flanagan and Norman 1982, 1985; Gaver and Zimmerman 1977; Grinyer and Whittaker 1973; Harding 1992; Sash and Abdul-Hadid 1992; Skitmore *et al* 1990; Upson 1987). Price sensitivity, on the other hand, is concerned with the effect that prices have on demand. T, that is, price elasticities and quantity demanded. In the competitive tendering situation this means how much potential changes in prices affect the chances of winning the contracts. T, therefore, willingness of contractors willingness to lower prices will not elicit higher demand levels, but merely increase the likelihood of securing a contract. Several commentators (eg., cf. Cox and Ireland 2006; Green 2006; Morledge 2000) have pointed out the lop-sided demand nature of TC, where client/owners possess considerable market power, which is not to say that some clients do not take advantage ofuse market conditions, anticipatingto solicit lower bid prices in a highly competitive market and dangle the carrot of repeat business where there is a programme of projects. Thus, market conditions are important in determining pricing strategy (e.g., Flanagan and Norman 1985).

It has been argued that price is a function of prevailing market conditions rather than sensitivity to one product or service offer that help form the market. This is largely an outcome of the transaction approach of the marketing mixmeans that marketing comes behind survival and that MM, particularly with a price orientation has been typically preferred. In the incremental and tentative moves towards cContinuous improvement has provided scope for contractors to adopt more comprehensive marketing policies, and where this has been done relational contractingRC has dominated – in essence another structural response as a marketing solution in line with historic structural responses to client procurement innovations. and While relationship marketingRM price sensitivity is

potentially affectiveremains theoretically possible, most actions within this paradigm have been tentative. Whilst this shows that MM and RM can be dovetailed, there is minimal evidence to suggest that transition strategies from MM to RM are underway, however, the scope for continuous improvement is seriously constrained without such a move (Smyth 2005). Nagle *et al* (1995) identified nine price sensitivity factors:

1.*Unique-value effect*. This comes into play where services are differentiated and prices can be adjusted accordingly: relational contracting being the primary response to marginally change services through changes in market structure and governance, and relationship marketing and management being the primary proactive means to differentiate services through investment.

2.*Substitute-awareness effect*. Buyers are less price-sensitive when they are less aware of substitutes, yet service differentiation is a requirement of the effect of reducing substitution: relational contracting providing insufficient differentiation to overcome substitution, especially where other contractors are following the same continuous improvement trends.

3.*Difficult-comparison effect*. Buyers are less price-sensitive when they cannot easily compare the quality of substitutes and intangible services help create this possibility: relationship marketing and management being the primary means to induce incomparability.

4.*Total-expenditure effect*. Buyers are less price-sensitive the lower the expenditure is as a part of their total income. Construction projects invariably are a major expense, except where clients look long-term and weigh service and capital costs against whole life costs: contractors individually and together have a responsibility to help educate repeat order clients to bring this to the fore, which requires further investment by contractors, which can be traded off against the costs of marketing and sales for new clients.

5.*End-benefit effect*. Buyers are less price-sensitive the smaller the expenditure is to the total cost of the end product, depending upon whether the client perceives the service or the building life cycle as the 'product' against which costs are calculated: again, an education issues.

6.*Shared-cost effect*. Buyers are less price-sensitive when part of the cost is borne by another party, which is rare in construction.

7.*Sunk-investment effect*. Buyers are less sensitive to price when the product is used in conjunction with previously bought assets. Whilst clients increasingly use portfolio analysis, property investment assets are physically separate unless undertaken as large phased developments. Apart from this, only maintenance work is associated with existing assets. This issue is sympathetic to both relational contracting and relationship marketing.

8.Price-quality effects. Buyers are less price-sensitive when the product is assumed to have more quality, prestige, or exclusiveness. This is predominantly a design issue, which is only in the hands of SBs.

9.*Inventory effect*. Buyers are less price-sensitive when they cannot store the product. Property, a fixed asset is 'stored' in location, tending not to carry inventory cost, but rather appreciating in the form of capitalised rent. The inventory effect only has relevance during construction when client interest accrues on stage payments and thus accelerated construction times decrease these costs. This issue is neutral in terms of marketing paradigms.

Selecting a pricing method

There are two conceptual techniques for setting the final price: cost or market oriented ones. Cost Cost-oriented ones techniques are: mark-up pricing, target return on investment, early cash-recovery.

Market Market-oriented ones techniques are: perceived value pricing and going rate pricing (see Mochtar and Arditi 2001).

i.Mark up pricing is the standard industry textbook approach used in students estimating and tendering (e.g., Bartholomew 2000; Brook 1998; Dagostino and Feigenbaum 2003; Gould 2002;). This producerA production-cum-cost orientated focus view is in line with the marketing mixMM, it approach and largely ignores current demand, perceived value and competition. It is not unlikely to lead to the optimal pricepricing, due to zero- sum games, yet forms part of setting price to win particular bids along the lines set out by Skitmore and Runeson (cf. by Skitmore *and Runesonet al*, in press2006), who demonstrate that PP is a mixture of mark-up and market oriented pricing (cf. the price perspective of Grönroos (2000)). In SB, mark up considerations are not directly involved, but increases in prices between land purchase and time of house sale creates a 'mark up' in the form of capitalised rent on the house.

ii.Target-return on investment pricing depends on price elasticity and applies in construction where time is critical, for example management fee, cost plus and target cost contracts. It could also come into limited play to a limited extent where added value is high and price sensitivity is lower, thus, where a relationship marketingRM and management strategy has been applied to create high levels of client satisfaction, repeat business and higher margins. Perceived-value pricing has parallels to the image perspective (Grönroos 2000) can occur where image andby the buyers' perceptions of value determines price, added service value

enhancing image (Smyth 2000), supplemented by promotion through brand, advertising and sales techniques (Tung-Zong Cang and Wildt 1993). Market research is needed to establish the market's perception of value, which in construction comes through relationship marketingRM in the sales process in the form of close understanding of client needs (Smyth 2000) in order to guide effective pricing (cf. Skitmore *and Runesonet al*, 2006 in press). This is poorly conducted or neglected in. construction.

This echoes elements of the *service perspective* (Grönroos 2000).

iv.Value pricing is a low price for a high quality offering. There have been some suggestions to use Use value pricing have been suggested for roadworks (Lam 2003), yet is inapplicable for construction work in the absence of repeat business, which is linked to in markets of high added value services, which remains largely absent in construction that induce client satisfaction. This also echoes elements of the service perspective (Grönroos 2000).

v.Going-rate pricing is largely based on competitors' prices. This applies in the bidding situation, where competitor prices are unknown at a detailed level, yet assessed or guessed by bidders through industry networks and suppliers (see vi below), and in SB where price comparisons form a primary means for price setting. This approach aligns with the *price perspective* (Grönroos 2000) and the marketing mix.

vi.Competitive-oriented pricing is common where firms submit sealed bids for jobs. The firm, bases based its price on expectations of how competitors will price rather than on a rigid relation to the firm's costs or demand. Using expected profit for setting prices makes sense for the firms that makesing many bids, thus learning through repeat games aids this approach, past experience being used to inform current bid prices (see alsocf. Runeson and

Skitmore 1999). This fits with the price dominant element of MM in construction. This approach also aligns with the *price perspective* (Grönroos 2000) and the marketing mix.

Initiating and responding to price changes

After developing pricing strategies, fFirms often can face situations in which they need to change product and service prices. A price decrease might be used tocan reduce excess capacity, declining market share, a desire toand induce dominate thehigher market share through lower costs, or during economic recession. This applies in the general to SB and tends to apply to D&C, unless the client initiates a variation. A pPrice increases might be brought about by cost inflation or over-demand. TC prices are set on a contact-by-contract basis, hence price changes are manifested in post-tender negotiations, and in makingthrough claims for and variations and for work that was not accurately fully nor fully accurately specified at for the time of tender due to an absence of information (see Pheng and Hua 2000; Smyth 2000). Contractors also try to absorb such changes by requiring subcontractors and suppliers to re-bid for their contracts as much as possible.

DISCUSSION

This paper has applied two marketing paradigms have been applied – the marketing mix MM and relationship marketingRM. It has been suggested that the marketing mixMM applies in current practice, with price being dominant of the 4Ps. This is the case in TC and is intensified in D&C as design becomes a key variable in achieving competitive pricing. Novation has been used by clients to take aspects of design out of the pricing equation,

however, where clients increasingly place design quality as a key selection criteria, as has been occurring recentlyfor example in PPP/PFI bids, then design quality becomes a product factor. Price dominates SB in the sense thatbecause builders are price- makers due to oligopoly being introduced through derived from the physically fixed nature of land as a resource input. SB uses the other three Ps – product, promotion and place (site) – to a greater yet stillsome limited degree.

Price is important in TC and D&C in terms of project costs, but demand factors are more dominantimportant in terms of market activity levels in the market. At the level of a single bid,For individual projects realistic pricing is difficult to establish with confidence (in comparison to other products) and usually bears little relation to outturn prices. Prices are formed upon the basisthrough of assessment of what it will take to win a contract. The effect is that contractors have sought survival as the primary strategic approach to pricing, marketing taking a subsidiary role. This results inConsequently, contractors largely failing to differentiate services and standardise services in the the management of theirprojects services and differentiate their services, hence educating clients into price domination.

Relationship marketingRM would seem to be conceptually the most appropriate marketing approach to marketing. While it is feasible to follow this route and cCertain contractors have done soapplied RM piecemeal in the wake ofresponse to continuous improvement agendas, . relational contractingRC will not secure such a shift in itself. Relational contracting is within the transaction remit, hence MM, governance and market structure being taken as given. Relationship marketingRM, on the other hand, accepts the market, but not as is, trying to change behaviour and processes by investing in in relationship marketing processes and relationship management systems that in aggregate change the market.

The analysis in this paper has indicated how relationship marketing conceptually fits withRM offers greater potential and flexibility for pricing strategies. However, mMoving from a transaction based marketing mixMM approach to a relationship marketing approachRM is an issue that contractors face. A – a change in pricing strategy is essential for any firm moving from a marketing mix approach to relationship marketingtowards RM. The change can start with raising prices in a buoyant market, the return being invested to deliver the added value to increase client satisfaction and repeat business. In a steady market, then the investment has to be made first, so that the added value is demonstrated to specific clients and in referral markets through promotion and reputation before prices can be raised. Investment therefore will initially lead to an increase in working capital and a reduction in ROCE. As repeat and referral business increase, further investment can be madecovered, for it costs over five times more to find a new client than keep an existing one (Smyth 2000).

In order to progress, exploration of practice is required along three further dimensions: general empirical work on pricing regarding contractors and clients, general empirical work on decision-making on pricing and mark-ups from a marketing-cum-pricing perspective, and specific work on attempts and constraints in using RM principles piecemeal and more comprehensively.

CONCLUSION

Unlike economics or PP, aA marketing approach, it is argued, offers a perspective that is both conceptual *and* suited to practical application. Pricing has, however, been a neglected

area in marketing generally and is totally absent within the construction marketing literature. In exploring this area, we conclude it opens up a fruitful avenue for educating and training practitioners has been opened up as it engages theory with practice in ways that economics and PP alone havehas yet to adequately achieve.

The analysis has also indicated that pricing from a marketing perspective may help inform price-setters in industry of the issues and factors to take into account in specific contexts. It may also inform construction firms in concerning pricing strategies to adopt according to their corporate strategy in general and marketing in particular. The paper has argued thatFurthermore, pricing is a key element in any strategic shift in marketing strategy.

The marketing mixMM approach fits with NCMT. Relationship marketingRM accepts the market, yet is interventionist, trying to change behaviour and form. It has been argued that SB is conceptually and practically closest to the marketing mix approachMM, whilst TC and D&C are price dominated yet theoretically more suited to relationship marketingRM, the paper analysing the scope for transition within the changing client driven construction agendas.

ACKNOWLEDGEMENTS

Many thanks are due to Anna Zarkada-Fraser for helping write an earlier draft of this paper and to Adrian Bridge and Goran Runeson for reviewing a later draft.

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Table 1. Characteristics of Marketing and Pricing across Procurement Routes

Issue	General	TC	D&C	SB
Design – Product	Not undertaken by contractor.	Not undertaken by contractor.	Contractor responsibility for design, concept frequently controlled through client under novation, all or remainder usually subcontracted by contractor.	Responsibility of contractor-developer, sometimes in-house, sometimes subcontracted; usually developed with a producer rather than customer orientation.
Facility – Product	Simple-complex.	Simple-complex.	Normally-complex	Simple.
Customer or Client	Institutional, suited to marketing mix and relationship marketing, core clients seeking added value with repeat business opportunities.	Usually institutional, suited to marketing mix and relationship marketing, some core clients seeking added value with repeat business opportunities.	Usually institutional, suited to marketing mix and relationship marketing, some core clients seeking added value with repeat business opportunities.	Contractor as customer
Procurement Route	A marketing issue treated structurally by contractors, thus clients are initiators rather than contractors.	Structural solution means contractor are too passive in understanding client needs and expectations	A procurement route that contractors react to client initiative.	A procurement route primarily suited to marketing mix, relationship marketing viable for referral market only.
Contractor Selection – Service as Product	Competitive tender, which practically is a price dominated variant of the marketing mix, yet conceptually is suited to relationship marketing; Negotiated which theoretically suits relationship marketing.	Competitive tender: opportunity to use marketing mix (through business development managers for pre-qualification) or use relationship management throughout (using account handler and/or relay team approach with baton representing understanding of client needs and expectations).	As TC, yet more product-like in marketing mix terms, typified low design quality as design is a variable in bidding process.	Self-selection or 'direct nomination'.
Differentiation	Service differentiation currently minimal, yet considerable scope	Service differentiation currently minimal, yet considerable scope.	Service and product differentiation variable and further scope.	Branding differentiation through design, some service differentiation with scope for further service differentiation.
Price	Competitor prices unknown. Price takers.	Competitor prices unknown. Price takers.	Competitor prices unknown. Price makers in design terms and takers in other respects.	Competitor prices known. Price takers in context of second hand homes market, price makers in context of design and especially location.