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Skitmore, Martin; Smyth, Hedley

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PRICING CONSTRUCTION WORK: A MARKETING VIEWPOINT

Martin Skitmore¹, Hedley Smyth²

¹School of Urban Development
Queensland University of Technology
Gardens Point
Brisbane Q4001
Australia

²School of Construction and Project Management
UCL Faculty of the Built Environment
Torrington Place Site
Gower Street
London WC1E 6BT

Corresponding Author:

Professor Martin Skitmore
School of Construction Management and Property
Queensland University of Technology
Gardens Point
Brisbane Q4001
Australia

rm.skitmore@qut.edu.au

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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 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, having the closest fit with NCMT, is most aligned to current practice. However, conceptual and practical limitations are identified. Relationship marketing (RM) is theoretically more applicable, yet has been largely overlooked in practice due to the transaction costs and investment involved. Nevertheless, some RM 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 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 RM 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:

- 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, claims concern for the theory and practice of pricing, price being part of a broader ‘value equation’ from added design value to after sales services.

Differentiating the product is used by producers to create price differentials 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.

This paper examines:

- The relevance of marketing, perhaps as a means of reconciling the economics-PP schism;
- The challenges marketing provides to neoclassical economics and NCMT (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 marketing are examined in the context of the construction industry.

A general framework for pricing decisions is explored using marketing in relation to contingent conditions in construction. The marketing perspectives of pricing for three procurement arrangements, namely Traditional Construction (TC), Design & Construct (D&C) and Speculative Building (SB), are considered. Generic marketing procedures are considered (cf., Nagle and Holden 1995; Oxenfeldt 1964) together with construction-specific procedures (e.g. Mochtar and Arditi 2001) for setting pricing strategies. These procedures are put into the context of two marketing paradigms for strategic price setting within construction.

The conceptual analysis strengthens the notion that pricing construction work has some similarities with intermediate and industrial goods and infrastructure, yet is distinct from pricing consumer goods. The rationale of the analysis 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 in construction specifically.

OVERVIEW OF THE ECONOMICS OF PRICING

Runeson and Skitmore (1999) argued tendering theory (Gates 1967) fails to take into account changes in market conditions, competitor behaviour and firm capacity levels. Conversely, Runeson and Raftery (1997) argue NCMT is likely to succeed, which Skitmore *et al* (2006) have supported in contrast to absorption or full-cost pricing.

However, 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 merely rationalise their behaviour rather than guide producers and consumers (Gabor 1977). The assumption that firms in perfect competition sets their own prices with total control of production inputs, adequate information on present and future supply and demand, restricts applied explanation to a few single product firms dealing mostly in commodity markets. Managers acknowledge imperfect competition generally accords with practice (Gabor 1977).

Empirical research supports this view, for example, a *positive* price-demand relationship has been found due to price-quality schemata (e.g., Monroe 1990) 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) and contingent upon the state of both consumer and task environment variables (e.g., Bettman 1979), recognising that economic theory does not necessarily aid setting prices (i.e., lower prices do not automatically stimulate sales), and instead practitioners can employ empirical methods to determine price-choice relationships for pricing problems (Olshavsky *et al* 1995) 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* 2006).

Prices are not impersonal market factors purely driven by inexorable market forces. Setting and changing prices is also behavioural, reflecting perceptions, cognitions, aspirations, and preconceptions. Prices reflect methods of business decision-making, availability of information, motivations, expectations and environment (Oxenfeldt 1975). In practice, prices

are generally set through relationships, actors processing data with contextual perceptions of the current market and personal experience. Decision-makers therefore mobilise objective and subjective 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). In tendering situations 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 overview 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 research shows pricing in construction does not fully conform to the norms of other industries; it successfully borrows elements. 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 price. 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 remains relatively unsophisticated and largely intuitive in construction (Smyth 2000).

OVERVIEW OF MARKETING AND PRICING

Economics has tried to understand pricing and pricing strategies, whilst reliable models for pricing remain elusive (Hoffman *et al* 2002). Marketing theory has established models, which includes pricing, recognising similarities and differences in objectives, methods and procedures 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). Aspects of marketing have been applied in construction and has been shown to have further application (Smyth 2000; Preece *et al* 2003).

There are currently two primary marketing paradigms, the *marketing mix* (Borden 1964) and *relationship marketing* (Berry 1983). The marketing mix (MM) was developed in mass market consumer goods, utilising the so-called 4Ps of product, place, promotion and price (McCarthy 1964) and subsequent variants. This producer-oriented approach aggregates consumers into segments that are then supplied products using the mix of ingredients from the 4Ps. The objective is to maximise sales, hence profit. The producer accepts the market as it is and the consumer is viewed as passive, the transaction-based MM being aligned with NCMT.

Relationship marketing (RM) was developed for business-to-business (B2B) relationships, especially for intangible services (e.g., Grönroos 2000). This is customer 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 is viewed as active and the producer is a proactive market creator and market manager.

RM offers an alternative perspective to MM, yet opportunity for overlap is present. While some (e.g. Kotler *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 market management through systematic organisational and individual behaviour. At the micro-level, RM seeks changes in exchange processes and in the management of product and service delivery. Aggregated organisational behaviour can change the market at sector level, for example investment in relationship marketing can increase switching costs and create barriers of entry.

Conceptually, MM does not fit construction. Traditionally, contractors do not design the 'product' and therefore service is the primary aspect contractors can configure. Most contractors offer undifferentiated 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 client rather than contractor determined. The procurement route also concerns 'place', which at a project level clients choose prior to approaching the relevant contractor division because of

the structural solutions to marketing adopted by contractors (Smyth 2006a). 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). Promotion is not a major issue, especially with undifferentiated services.

Conceptually price 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, RM would be expected to closely fit construction services. Intangible services for one-off 'products' largely delivered B2B are suited to RM. 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 particularly RM (Smyth 2000, 2004), undifferentiated services 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 – partnering, supply chain management and lean production – have led to limited changes. In general, the contractor remains a market taker in line with NCMT. 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 collaborative 'rhetoric' and passing the agenda along the supply chain (Green 2006). Continuous improvement, therefore, is anchored within the transaction cost domain, including *relational contracting* (cf. 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 (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 RM (Kumaraswamy and Rahman 2006; Smyth 2000), which has grown incrementally in recent

years, but is yet to constitute systematic approaches to 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.

FACTORS AFFECTING PRICING - 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 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 accurate comparative pricing (Cassimatis 1969). Historical cost data are only pricing indicators and forecasts 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. 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 construction – is outside contractor control (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) – cases of increasing market share by product/service differentiation.

Business development managers and directors of construction divisions and parent organisations endeavour to reduce uncertainty through courting potential clients, their design teams, and client programmes (e.g., Preece *et al* 2003) as well as information about the environment and competition through personal contacts established through courting and industry networks (e.g., Al-Higzi 2002). Selling therefore mixes promotion and market research for contractors trying to get close to potential clients and design teams (e.g., Ngowi *et al* 2000). Such relationship benefits are frequently lost for pricing 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 RM 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 tiered, 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 analyse prevailing prices, reinforced by sealed bidding (Hillebrandt 2000:152; Raftery 1991:139). The contractor cannot accurately know prevailing market prices (Hillebrandt 2000:153), price forecasting 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) to gauge future project prices.

PROCUREMENT ARRANGEMENTS

In MM, procurement is akin to place, which in construction is largely ‘received’ rather than created in market terms. In RM 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 design and construction processes and therefore offers limited scope for contractors to compete on enhanced function or design quality of the finished product. Marketing has been price dominated within MM (Smyth 2000). What is surprising is 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. Moreover, 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 – RC working within market structures and governance – RM 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).

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, support, and thus a loss of client orientation, hence the transaction mindset largely prevails and is reflected in low prices and poor value for money (Smyth 2000).

There are also related, vertical breaks 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. Hence a personality culture dominates sites. A transaction approach dominates pricing and hence sacrifices opportunities for managed service differentiation that yield client satisfaction, hence repeat business. Whilst there is nothing

wrong with such approaches for individual firms, the surprising aspect is wholesale lack of service differentiation limiting client choice.

Design and Construct

In D&C the contractor is responsible for design. This radically changes price-setting from pure service provision towards 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. Design introduces a new variable, creating every incentive for contractors to reduce design quality and specification in order to achieve the lowest bid price.

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 – 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

SB incorporates design and production with the addition of a sale, usually for housing where current competitor prices are known. This form is the most similar to purchasing consumer durables. Reputation and brand have some impact in SB markets, some house designs being recognizably attributable to certain builders. To this extent, product differentiation is discernable, 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 locational monopoly, becoming price-makers rather than being 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 within MM.

A growing numbers of customers will only buy new homes. It is still a niche market and does not necessarily translate into repeat business. Particularly in buoyant markets, buyers frequently buy off plan or prior to completion, which housebuilders 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 RM issue in a MM 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 dominant. Survival is of great strategic importance due to downward price pressures in fragmented markets. Survival comes before profitability or growing market share via MM or through RM criteria of client satisfaction, hence repeat business. This is explored across several dimensions: product-quality, market share, profitability and survival *per se*.

Product-quality leadership

Product-quality leadership is possible where contractors control design. D&C paradoxically mitigates against design quality as design becomes the prime source of price competition, so much so that many clients take 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). This can also be seen as an indirect form of ‘product’ control by the client. SB does offer opportunity, however the control of inputs, especially land, provides a dimension of oligopoly that militates against this, thus MM dominates largely 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 motivation for growing market share is to increase market power and increase dividend returns to shareholders from volume, particularly 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 number of projects undertaken (Smyth 2006a). However, contractors reduce prices to maintain market share, helping to keep prices at traditional market levels and 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 shares compared to most industries (Prapas 2005) and are unprepared to lower prices to gain share.

Maximum current profit

Profit maximisation has not been a major driver in construction (Skitmore 1989), opportunities to set high prices 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. Contractors have less capital than most industries, return on capital employed (ROCE) being more significant for them than profit margins. ROCE is 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 to protect market share and cover overheads for survival.

Survival

Companies pursue survival as their major objective, especially where demand levels lead to overcapacity, intensified competition or changing customer wants. Price, hence profit, is less important than survival. According to Wilson and Gilligan (1997) pricing for survival can often mean pricing below (variable) cost to maintain cashflow. Many TC and D&C firms maintain flexible capacity by astute management of resources to manage unevenness of demand, lumpy contracts, and project uncertainties, thus survival is a major construction industry preoccupation (e.g., El-Higzi 2002). 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 (Skitmore *et al* 2006).

Determining demand

In NCMT consumer goods prices are related to the current quantity of demand expressed in a demand curve, moderated by competition from other products that will tend to be slightly different in MM terms. In TC contract bidding, the product is identical for all bidders

(Hillebrandt 2000). Contractors therefore weigh the opportunity cost of bidding for contracts, assessing risk profiles, 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

Price sensitivity is concerned with the effect that prices have on demand, that is, price elasticities and quantity demanded. In competitive tendering potential changes in prices affect the chances of winning contracts, therefore, contractor willingness to lower prices will not elicit higher demand levels, but merely increase the likelihood of securing a contract. Several commentators (eg., 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 some clients use to 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 price is a function of prevailing market conditions rather than sensitivity to one product or service offer that help form the market. This transaction approach means that marketing comes behind survival and that MM, particularly with a price orientation has been typically preferred. Continuous improvement has provided scope for contractors to adopt more comprehensive marketing policies, and where this has been done RC has dominated – in essence another structural response as a marketing solution in line with historic structural responses to client procurement innovations. While RM remains 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).

Selecting a pricing method

There are two conceptual techniques for setting the final price. Cost-oriented techniques are mark-up pricing, target return on investment, early cash-recovery. Market-oriented techniques are perceived value pricing and going rate pricing (see Mochtar and Arditi 2001). Mark up pricing is the standard industry textbook approach (e.g., Bartholomew 2000). A production-cum-cost focus in line with MM, it largely ignores current demand, perceived value and competition. It is unlikely to lead to optimal pricing, due to zero-sum games, yet forms part of setting price to win particular bids (cf. by Skitmore *et al*, 2006). 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.

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 where added value is high and price sensitivity is lower, thus, where RM has been applied to create high levels of client satisfaction, repeat business and higher margins. Perceived-value pricing can occur where image and 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 RM in the sales process in the form of close understanding of client needs (Smyth 2000) in order to guide effective pricing (cf. Skitmore *et al*, 2006). This is poorly conducted or neglected in construction.

Value pricing is a low price for a high quality offering. Use value pricing have been suggested for roadworks (Lam 2003), yet is inapplicable for construction work in the absence of repeat business in markets of high added value services, which remains largely absent in construction. Going-rate pricing is largely based on competitors' prices. This applies in bidding, where competitor prices are unknown at a detailed level, yet assessed by bidders through industry networks and suppliers, and in SB where price comparisons form a primary means for price setting.

Competitive-oriented pricing is common where firms submit sealed bids, based 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 firms making many bids, thus learning through past experience to inform current bid prices (cf. Runeson and Skitmore 1999). This fits with the price dominant element of MM in construction.

Initiating and responding to price changes

Firms can face the need to change product and service prices. A price decrease can reduce excess capacity, declining market share, and induce higher market share through lower costs, or during economic recession. This applies in the general to SB and tends to apply to D&C. Price increases might be brought about by cost inflation or over-demand. TC prices are set contact-by-contract, hence price changes are manifested in post-tender negotiations, and through claims and variations for work that was not accurately nor fully specified for the

tender due to an absence of information (Pheng and Hua 2000). Contractors try to absorb such changes by requiring subcontractors and suppliers to re-bid for their contracts as much as possible.

DISCUSSION

Two marketing paradigms have been applied – MM and RM. MM 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 design out of the pricing equation, however, where clients increasingly place design quality as a key selection criteria, for example in PPP/PFI bids, then design quality becomes a product factor. Price dominates SB because builders are price-makers due to oligopoly derived from the physically fixed nature of land as a resource input. SB uses the other three Ps – product, promotion and place (site) – to some limited degree.

Price is important in TC and D&C in terms of project costs, but demand factors are important in terms of market activity levels. For individual projects realistic pricing is difficult to establish with confidence and usually bear little relation to outturn prices. Prices are formed through 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. Consequently, contractors largely fail to differentiate services and standardise services in the management of projects, hence educating clients into price domination.

RM would seem to be conceptually the most appropriate marketing approach . Certain contractors applied RM piecemeal in response to continuous improvement agendas. RC is within the transaction remit, hence MM, governance and market structure being taken as given. RM accepts the market, but not as is, trying to change behaviour and processes by investing in relationship management systems that in aggregate change the market.

RM offers greater potential and flexibility for pricing strategies. Moving from transaction based MM to RM is an issue that contractors face – a change in pricing strategy is essential for any firm moving towards 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 covered, 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

A marketing approach offers a perspective that is both conceptual *and* suited to practical application. Pricing has, however, been a neglected area in marketing generally and is absent within the construction marketing literature. In exploring this area, a fruitful avenue for educating and training practitioners has been opened up as it engages theory with practice in ways that economics has 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 to take into account in specific contexts. It may also inform construction firms concerning pricing strategies to adopt according to their corporate strategy in general and marketing in particular. Furthermore, pricing is a key element in any strategic shift in marketing strategy.

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

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REFERENCES

- Abratt, R. and Pitt, L.F. 1985. Pricing practices in two industries. *Industrial Marketing Management* **14**(4) 301.
- Bartholomew, S.H. 2000. *Estimating and bidding for heavy construction*. Prentice Hall, Englewood Cliffs.
- Bennett, S. and Wilkinson, J.B. 1974. Price-quantity relationships and price elasticity under in-store experimentation. *Journal of Business Research*, **Jan**, 30-4.
- Berry, L.L. 1983. Relationship marketing. *Emerging perspectives on service marketing*. L.L. Berry, G.L. Shostack, G.D. and Upah (eds). American Marketing Association, Chicago.
- Bettman, J.R. 1979. *An information processing theory of choice*. Addison-Wesley, Reading, MA.
- Borden, N. 1964. The concept of the marketing mix. *Journal of Advertising Research*; June, 2-7.
- Bowen, P.A. 1994. Building price modeling and price information management in South Africa. *Transactions of AACE International 1994*, CSC12.1.
- Cassimatis, P.J. 1969. *Economics of the Construction Industry*. Studies in Business Economics No 111. National Industrial Conference Board Inc., 845 3rd Ave, New York NY 10022.
- Cox, A. and Ireland, P. 2006. Relationship management theories and tools in project procurement, *Management of complex projects: a relationship approach*, S.D. Pryke and H.J. Smyth (eds). Blackwell, Oxford.
- Earl, P.E. (1995) *Microeconomics for Business and Marketing*, Edward Elgar, Cheltenham.

- El-Higzi, F. 2002. International market entry for construction services. *International Journal of Construction Marketing* **3**(1).
- Estelami, H. and Maxwell, S. 2003. Introduction to special issue: the behavioral aspects of pricing. *Journal of Business Research*, **56**(5) 353-354.
- Fellows, R., Langford, D., Newcombe, R. and Urry, S. 1983. *Construction management in practice*. Longman, London.
- Flanagan, R. and Norman, G. 1985. Sealed bid auctions: an application to the building industry. *Construction Management and Economics* **3**(2) 145-61.
- Ford, D., Gadde, L-E., Håkansson, H. and Snehota, I. 2003. *Managing business relationships*. Wiley, Chichester.
- Gabor, A. 1977. *Pricing: principles and practices*. Gower, Aldershot.
- Gates, M. 1960. Statistical and economic analysis of a bidding trend. *Journal of the Construction Division, American Society of Civil Engineers* **93**(CO1)75-107.
- Gordon, L.A., Cooper, R., Falk, H. and Miller, D. 1980. *The pricing decision*. The National Association of Accountants and The Society of Management Accountants of Canada.
- Green, S.D. 1989. Tendering: optimization and rationality. *Construction Management and Economics* **7**(1) 53.
- Green, S.D. 2006. Relations in the supply chain: management fashion and the discourse of supply chain management, *Management of complex projects: a relationship approach*. S.D. Pryke and H.J. Smyth (eds). Blackwell, Oxford.
- Grönroos, C. 2000. *Service management and marketing*. John Wiley and Sons, London.
- Gummesson, E. 2001. *Total relationship marketing*. Butterworth-Heinemann, Oxford.
- Gruneberg, S.L., Ive, G.J. 2000. *The economics of the modern construction firm*. Macmillan Press Ltd. , Basingstoke.

- Hall, M., Holt, R. and Graves, A. 2000. Private finance, public roads: configuring the supply chain in PFI highway construction. *European Journal of Purchasing and Supply* 6(3-4) 227-35.
- Hillebrandt, P.M. 2000. *Economic theory and the construction industry*, 3rd ed. Macmillan, Basingstoke.
- Hoffman, K.D., Turley, L.W. and Scott, W.K. 2002. Pricing retail services. *Journal of Business Research* 55 1015-23.
- Ive, G.J. and Rintala, K. 2006. The economics of relationships. *Management of complex projects: a relationship approach*. S.D. Pryke and H.J. Smyth (eds). Blackwell, Oxford.
- Jain, S. and Laric, M. 1979. A framework for strategic industrial pricing. *Industrial Marketing Management*, 8 January 75-80.
- Kaafandris, S. 1980. The building industry in the context of development. *Habitat International* 5(3-4) 289-322.
- Kotler, P. 2000. *Marketing management*. Prentice Hall International, Englewood Cliffs.
- Kotler, P., Armstrong, G. Saunders, J. and Wong, V. (1996) *Principles of Marketing*, Prentice Hall, Hemel Hempstead.
- Krippaehne, R.C., McCullouch, B.G., Vanegas, J.A. 1992. Vertical business integration strategies for construction. *Journal of Management in Engineering* 8(2) 153-66.
- Kumaraswamy, M. and Rahman, M. 2006. Applying teamworking models to projects, *Management of complex projects: a relationship approach*. S.D. Pryke, H.J. Smyth (eds). Blackwell, Oxford.
- Lam, T. 2003. Evaluating value-pricing projects with both scheduling and route choices. *Regional Science and Urban Economics* 34(2) 225-40.
- Lichtenstein, D.R. and Burton, S. 1989. The relationship between perceived and objective price quality. *Journal of Marketing Research* 26 (Nov) 429-43.

- Lim, J-S. and Olshavsky, R.W. 1988. Impacts of consumer's familiarity and product class on price-quality inference and product evaluations. *Quarterly Journal of Business Economics* **27** (Summer) 130-46.
- Lovelock, C., Vandermerwe, S. and Lewis, B., 1999. *Services marketing: a European perspective*. Prentice Hall Europe, London.
- McCarthy, E.J. 1964. *Basic marketing: a managerial approach*. Richard D Irwin Inc..
- Mochtar, K. and Arditi, D. 2001. Pricing strategy in the US construction industry. *Construction Management and Economics* **19**(4) 405.
- Monroe, K.B. 1990. *Pricing – making profitable decisions*. McGraw-Hill, New York.
- Morledge, R. 2000. Marketing – a solution to construction market failure. *International Journal of Construction Marketing* **1**(1).
- Nagle, T.T., Holden, R.K. 1995. *The strategy and tactics of pricing*, 2nd ed. Prentice-Hall, Saddle River, NJ.
- Ngowi, A.B., Iwisi, D.S. and Rwelamila, P.D. 2000. Creating and sustaining a construction market position. *International Journal of Construction Marketing*, **1**(1).
- Olshavsky, R.W., Aylesworth, A.B. and Kempf, D.S. 1995. The price-choice relationship: a contingent processing approach. *Journal of Business Research* **33** 207-18.
- Oxenfeldt, A.R. 1964. Multi-stage approach to pricing, in Burk, E.C., Chapman, J.F. (eds) *Modern Marketing Strategy*. Harvard University Press, Cambridge.
- Oxenfeldt, A.R. 1975. *Pricing policy*. AMACOM, New York.
- Perera, A. A. D. A. J. and Imriyas, K. 2003. Knowledge-based system for construction cost control. *AACE International Transactions*, IT101.
- Pheng, L.S. and Hua, L.N. 2000. The strategic responses of construction firms to the Asian financial crisis in 1997-1998. *International Journal of Construction Marketing*, **1**(2).

- Prapas, D. 2005. *The growing competitive advantage of the larger housebuilders over the smaller in the UK and the USA*. MSc Report, UCL, London.
- Preece, C., Smith, P. and Moodley, K. 2003. *Construction business development*. Butterworth-Heinemann, Oxford.
- Pryke, S.D. and Smyth, H.J. 2006. *Management of complex projects: a relationship approach*. Blackwell, Oxford.
- Raftery, J. 1991. *Principles of building economics*. BSP Professional Books, Oxford.
- Rao, A.R. 1984. Pricing research in marketing: the state of the art, *Journal of Business*, **57**(1) S39-S60.
- Runeson, G. 2000. *Building economics*. Deakin University Press.
- Runeson, G. and Raftery, J. 1998. Neo-classical micro-economics as an analytical tool for construction price determination. *Journal of Construction Procurement* **4**(2) 116-131.
- Runeson, G. and Skitmore, R.M. 1999. Tendering theory revisited. *Construction Management and Economics* **17**(3) 285-96.
- Shapiro, B.P. and Jackson, B.B. 1978 Industrial pricing, *Harvard Business Review*, **56**, 119-127
- Shen, Q. and Dong, Q. 2001. A structural analysis of Hong Kong's housing sector in the aftermath of the Asian financial turmoil. *International Journal of Construction Marketing* **2**(1).
- Skitmore, R.M. 1987. *Construction prices: the market effect*, The University of Salford.
- Skitmore, R.M. 1989. *Contract bidding in construction: strategic management and modelling*. Longman Scientific and Technical, Harlow.
- Skitmore, R.M., Runeson, G., Xinling Chang. 2006 Construction price formation: full-cost pricing or neoclassical microeconomic theory? *Construction Management and Economics* **24**(7) 773-84.

- Smyth, H.J. 1985 *Property Companies and the Construction Industry in Britain*, Cambridge University Press, Cambridge.
- Smyth, H.J. 2000. *Marketing and selling construction services*. Blackwell Science, Oxford.
- Smyth, H.J. 2004. Competencies for improving construction performance: theories and practice for developing capacity. *The International Journal of Construction Management* 4(1) 41-56.
- Smyth, H.J. 2005. Procurement push and marketing pull in supply chain management: the conceptual contribution of relationship marketing as a driver in project financial performance. *Journal of Financial Management of Property and Construction*, 10(1) 33-44.
- Smyth, H.J. 2006a. Competition. *Commercial management of projects: defining the discipline*. D. Lowe and R. Leiringer (eds). Blackwell, Oxford.
- Smyth, H.J. 2006b Measuring, developing and managing trust in the relationship, *Management of complex projects: a relationship approach*. S.D. Pryke, H.J. Smyth (eds). Blackwell, Oxford.
- Smyth, H.J., Morris, P.W.G. and Cooke-Davies, T. (2006) Understanding Project Management: philosophical and methodological issues, *Proceedings of Euram 2006*, May 17-20, BI Management School, Oslo.
- Storbacka, K., Strandvik, T. and Grönroos, C. 1994. Managing customer relationships for profit: the dynamics of relationship quality, *International Journal of Service Industry Management* 5(5) 21-38.
- Tavistock Institute of Human Relations. 1966. *Interdependence and uncertainty: a study of the building industry*. Tavistock Publications, London.

- Tung-Zong Cang and Wildt, A.R. 1994. Price, product information and purchase intention: an empirical study. *Journal of the Academy of Marketing Science*, **Winter**, 16-27.
- Walker, AW, 1967. How to price industrial products. *Harvard Business Review* **45**,. 38–45.
- Wilson, R.M.S., Gilligan, C., 1997. *Strategic Marketing Management* 2nd Ed., Butterworth Heinemann, Oxford.
- Winch, G.M. 2002. *Managing construction projects*. Blackwell, Oxford.

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 teams 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.