A case study of hybrid strategies to create value for a contracting business in the education sector in England and Wales

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Abstract

The emergence of service-dominant (S-D) logic offers a new perspective to conceptualise and practise marketing. The application of the service marketing principles to add value to construction businesses and their customers is not apparent. However, arguably, successful strategies that can retain and satisfy customers implicitly adopt these principles. A case of a construction firm adopting successful hybrid strategies is studied. Through an interpretive inquiry approach, that captures multiple views from project participants as key informants and the authors as participant observers, strategic programmes are evaluated according to the four core principles of S-D logic. The strategic programmes in the case were found to create value by 1) developing new skills and knowledge, building relationships to leverage skills and close the knowledge gaps; 2) enhancing interactions through engaging customers early, and creating and enriching dialogues through personal contacts, the use of BIM technologies and social networks; 3) strengthening many-to-many relationships by integrating the supply chain upstream and downstream and 4) assisting individual customers to define their value propositions and evaluate them through free self-service systems, and products and services enquiries. Further research is needed to assess how customers value the various co-creation elements identified in the paper in order to build up the evidence for applying the generic value co-creation principles to marketing in construction.

Keywords: value co-creation, S-D logic, hybrid strategies, case study, construction marketing

1 Introduction

Marketing as an academic discipline has gone through several significant stages of development in the last century. Traditionally, it is viewed as the activities associated with exchange of goods. A group of marketing scholars such as Christian Grönroos (e.g. 1978) and Evert Gummesson (e.g. 1995) started challenging the traditional views in the late 70s. They argued that activities in relation to developing, maintaining and enhancing relationships between market participants during both the production and consumption processes are more crucial than those associated with exchange alone. The latest theoretical development, namely S-D logic, proposed by Stephen Vargo and Robert Lusch (e.g. 2004) perceives skills and knowledge as the basis for all exchange and the presence of goods and money in the exchange masks the nature of exchange. One important feature of S-D logic is its explanatory power of value creation. The conceptual advancement of marketing and market management is evident.

The lack of awareness of business opportunities to apply advanced marketing concepts to generate business, develop competitive advantage and create value has been identified by scholars in a number of books in the construction or project marketing domain, e.g. Hillebrandt and Cannon (1990), Pettinger (1998), Cova et al. (2002) and Smyth (2014). In the same vein, construction firms have been criticised as placing too much focus on bid management although practitioners generally argue that it is due to the discontinuous and unpredictable nature of the project business. Smyth (2014) advocates the importance of focusing marketing on strategic front end activities. He identified that there is very limited research into the interrelationships and interplay between marketing and the development of integrated solutions in asset specific markets. The knowledge of how value is created by

those integrated solutions is limited, possibly due to the lack of such cases in construction and the lack of access to their development by researchers.

A unique case of a construction firm is identified that adopts framework contracting and pre-designed schools as its integrated solution. The authors argue that the value co-creation principles in S-D logic have been implicitly applied. Capturing multiple views from key informants and the authors as participant observers, an interpretive inquiry was carried out to explain how value is created in the case of successful hybrid strategies adoption. Further research can be developed to test whether the added valued elements identified in this study contribute to any customer value.

2 The theoretical shift of marketing paradigm

Marketing as a discipline is founded on the distribution and exchange of goods. The concepts of marketing evolves through four periods with different schools of thoughts including 1) goods centred model of exchange pre-1900, 2) commodities and functional focused descriptive models between 1900-1950, 3) marketing as a decision-making function with the focus on customer and embedded value between 1950-1980, and 4) marketing as a continuous social and economic process to better serve customers post-1980 as analysed by Vargo and Lusch (2006). During the first three periods, marketing is mainly considered as a function of economic exchange with goods as the primary concern of the transaction. This is goods-dominant (G-D) logic. This view contrasts with service-dominant (S-D) logic, which gradually developed after 1980 and which focuses on service exchange. The singular term "service" in S-D logic is distinguished from "services" by Vargo and Lusch (2008) – the founders of S-D logic. “Service” refers to the process of doing something beneficial for

another party, while “services” refers to specific types of service. Thus, services are also intermediate products like goods (Vargo et al., 2008). The fundamental difference between the G-D logic and S-D logic is that the former considers the material goods as the operand resources, whereas the latter perceives the application of skills and knowledge as the operant resources that drive the value creation process. These definitions bring value and value creation in the heart of service into focus.

G-D logic assumes the market orientation is pre-defined. The frame of reference for marketing goods is marketing mix (MM) or 4Ps proposed by McCarthy (1960). The MM approach involves matching the 4Ps, i.e. product, place, promotion and price, as elements with pre-defined market needs. Booms and Bitner (1980) add three more elements to improve the explanatory ability of MM: people, process, physical evidence. Further Ps such as productivity and quality, are added in due course (Lovelock and Wirtz, 2007). Even so, the MM is still an inadequate concept for three main reasons. First, it is assumed that customers buy goods or services rather than offerings that render service, which creates value (Gummesson, 1995). Second, MM fails to recognise marketing as an innovating or adaptive force (Day and Montgomery 1999). Third, it does not take the continuous nature of relationships amongst marketing actors into account (Sheth and Parvatiyar, 2000). G-D logic isolates buying from consuming. The former process focuses on the exchange value and the latter on value-in-use. The separation of buying from consuming has been criticised for easily creating a negative impact on customers' internal value-generating processes and on customer satisfaction, high marketing cost and revenue losses (Grönroos, 2006).

Starting in the late 70s, many marketing scholars moved away from pure goods as well as services marketing to service marketing. The Nordic School, referring to relationship

marketing scholars from Nordic countries, argued the importance of establishing, maintaining and strengthening relationships between the consumer and service provider during both the production and consumption processes (e.g. Gronroos, 1978; Gummesson, 1977). Interactions between service providers and customers were considered to be the core of marketing although the concept of value-in-use is implicit in the original relationship marketing concept (Fern and Brown, 1984). In relationship marketing, the nature of exchange is not transactional but relational. Achrol and Kotler (1999) broadened the view of market relationship further by suggesting that it is not limited to a two-party dyadic relationship but many-to-many relationship forming a network. Relationship marketing was considered to be super-ordinate of product marketing. The conceptual development together with other concepts such as business-to-business marketing gradually forms their own sub-disciplines of marketing. As argued by Vargo and Lusch (2008) in a commentary paper, the development of those new marketing sub-disciplines exposes the limitation of G-D logic as a reference framework. S-D logic, on the contrary, provides the opportunity to capture and integrate those diverging marketing concepts as the meaning and process of value co-creation are the common themes across the various sub-disciplines.

S-D logic assumes all market participants (i.e. supplier and consumers), processes and resources are interacting to co-create value. The co-creation of value occurs through the integration of existing operant resources and those from the service systems. Depending on the system's environment, the resources may encompass employees, shareholders, suppliers, assets, funds etc. Irrespective of any particular industry sector, the co-creation of value is a continuous process as long as new knowledge is generated and exchanged in the interacting service systems constituting the market. Table 1 contrasts the views of G-D and S-D logics. Vargo and Lusch establishes ten foundational premises (FPs) as the basis for a general theory

(Vargo and Lusch, 2004; Vargo and Lusch, 2006; Vargo and Lusch, 2008). Lusch and Vargo (2014) have later recognised that all the ten FPs to describe the S-D logic can be derived from four core FPs, i.e. FP1 - Service is the fundamental basis of exchange, FP6 - The customer is always a co-creator of value, FP9 - All social and economic actors are resource integrators, and FP10 - Value is always uniquely and phenomenological determined by the beneficiary. They essentially forms the axioms of S-D logic. As a general concept, FPs are further developed recently by the founders of S-D logic (Vargo and Lusch, 2016). In their latest conceptual paper, 4 FPs (i.e. FP4, FP6, FP7, FP8) are amended by replacing key terms such as *"customer"* to *"actor"* and *"competitive advantage"* to *"strategic benefits"* to emphasis the interdependence in service-for-service exchanges. More importantly, the development and use of *institutions* under a number of disciplines such as economics, political science and sociology are reviewed in the paper to develop the concepts of *institutions* - comprising rules, norms and practice, etc. that enable collaboration, and *institutional arrangements* - the interdependent set of institutions in S-D logic. An additional axiom, FP11 - Value co-creation is coordinated through actor-generated institutions and institutional arrangement, is added to complete the narrative for value co-creation process that involves co-creating "institutionalised solutions" by actors in a service eco-system (Lusch and Vargo 2014).

Table 1: Contrasting views of G-D and S-D logics

	Goods-dominant logic	Service-dominant logic
Primary unit of exchange	People exchange for goods. These goods serve primarily as operand resources.	People exchange to acquire the benefits of specialized competences (knowledge and skills), or services. Knowledge and skills are operant resources.
Role of goods	Goods are operand resources and end products. Marketers take matter and change its form, place, time, and possession.	Goods are transmitters of operant resources (embedded knowledge); they are intermediate "products" that are used by other operant resources (customers) as appliances in value-creation processes.
Marketing strategy	Focus on the marketing mix, e.g. meeting 4P's comprising product, price, promotion and place	Focus on value co-creation through beneficial application of operant resources, co-creating value proposition, co-creating conversation and dialogue and co-creating value processes and networks
Role of customer	The customer is the recipient of goods and is an operand resource.	The customer is a co-creator of service and an operant resource.
Determination and meaning of value	Value is determined by the producer. It is embedded in the operand resource and is defined in terms of "exchange value".	Value is perceived and determined by the consumer on the basis of "value in use". Service provider can only make value propositions.
Firm-customer interaction	Customers are acted on to create transactions with resources.	Customers are active participants in relational exchanges and co-production.
Source of economic growth	Wealth is obtained from surplus tangible resources and goods.	Wealth is obtained through the application and exchange of specialized knowledge and skills.

(Adapted from Vargo and Lusch (2006)

Table 2: S-D logic foundational premises

FPs	Foundational Premise	Explanation
FP1*	**Service is the fundamental basis of exchange**	**The application of operant resources (knowledge and skills), "service", as defined in S-D logic, is the basis for all exchange. Service is exchanged for service.**
FP2	Indirect exchange masks the fundamental basis of exchange	Because service is provided through complex combinations of goods, money, and institutions, the service basis of exchange is not always apparent.
FP3	Goods are a distribution mechanism for service provision	Goods (both durable and non-durable) derive their value through use - the service they provide.
FP4	Operant resources are the fundamental source of strategic benefit	Value co-co-creation through service provision is primary whereas the relative competitiveness is secondary.
FP5	All economies are service economies	Service (singular) is only now becoming more apparent with increased specialisation and outsourcing.
FP6*	**Value is co-created by multiple actors always including the beneficiary**	**Implies value creation is interactional amongst a whole host of actors.**
FP7	Actors cannot deliver value but can participate in the creation and offering of value propositions	Actors can offer their applied resources for value creation and collaboratively (interactively) create value following acceptance of value propositions, but cannot create and/or deliver value independently.
FP8	A service-centred view is inherently beneficiary oriented and relational	Because service is defined in terms of beneficiary determined benefit and is co-created it is inherently beneficiary oriented and relational.
FP9*	**All social and economic actors are resource integrators**	**Implies the relationship presence in value creation is many-to-many (i.e. network).**
FP10*	**Value is always uniquely and phenomenologically determined by the beneficiary**	**Value is idiosyncratic, experiential, contextual, and meaning laden.**
FP11*	**Value co-creation is coordinated through actor-generated institutions and institutional arrangements**	**Involves co-creating "institutionalised solutions" by actors in a service eco-system.**

(Adapted from Vargo and Lusch (2016))

*** - Axiom status**

Vargo and Lusch (2008) suggested that the lack of understanding of the difference between services and service, and the value creation process may mislead marketers to focus on changing the unit of output from tangible goods to intangible services instead of providing service. Evidence suggests that the S-D logic is only loosely adopted to formulate marketing strategies in project business. Research on the utilisation of S-D logic in project-centric businesses is limited (cf. Smyth, 2014 p.229-252). The authors argue that successful marketing strategies, which have implicitly adopted the principles of S-D logic, exist in project-centric construction businesses. However, these initiatives have not been publicised due to the practitioners' lack of awareness. A case study of a construction firm is used in this paper to explain how its strategies were adopted to create value using Vargo and Lusch's axioms of S-D logic. In the case, the firm adopts a hybrid strategy in its school offerings which is a rather new concept to the construction industry. The emergence of hybrid strategy in the project domain is reviewed in the next section.

3 Practical shift in project procurement

Construction firms have been criticised for an over-reliance on bid management as a reactive approach and of paying little attention to marketing management, i.e. practical application of marketing orientation and techniques within an organisation and management of its marketing resources (e.g. Hillebrandt and Cannon, 1990; Skitmore and Smyth, 2007). The emphasis on bid management is arguably a sensible response to how competition is set in construction. Under a traditional procurement approach, the scope for construction firms to create value other than offering a lower cost than their competitors is limited because, more often than not, building projects are predefined by clients with the help of their consultants. Moreover, the lowest bid is normally the most favoured selection criterion in competitive

bidding (Palaneeswaran and Kumaraswamy, 2000). Previous research suggests that a construction firms' competitiveness is closely linked to its competitiveness at project level (Drew and Skitmore, 1992). This gives a solid ground for research into bidding performance (e.g. Drew and Skitmore, 1992, 1997) as a proxy of a firm's competitiveness. The application of such research is however limited to firms seeking projects through competitive bidding.

The detrimental effects a traditional dyadic relationship has on trust between building clients and construction firms have long been identified in influential government commissioned reports regarding the critical issues facing the industry, such as Latham (1994) and Egan (1998). Public clients in the UK have gradually recognised the relationship between the cost and quality for buildings procured through a transactional approach and have adopted alternative approaches to procure works. One popular approach involves the use of framework agreements to develop long-term relationships. In contrast to a traditional contractual arrangement, a framework agreement (also known as an umbrella agreement) does not lead to a contractual decision but an agreed framework for future contracts (cf. Mouzas and Furmston 2008). Thus, it is not a supply or service contract but merely an agreement to fast track supplier selection for a fixed term. Its use to procure public works is seen by many as an important step to move away from procuring price driven assets to value driven assets through building long-term relationship with suppliers. However, there is a lack of evidence to suggest frameworks provide a consistent relational contracting vehicle, or that they will lead to relationship marketing in the management of projects. According to Smyth and Edkins (2007), relational contracting is an externally market induced change that requires adjustment of behaviour or market interfaces whereas relationship marketing is an internally induced change that leads to proactive interactions with other parties and add value as a result of the interactions. The authors empirically analysed the relationships present in projects

procured through Private Public Partnerships and the Public Finance Initiative as the relational contracting vehicles and concluded that pro-active management of relationships is not evident in the private sector.

Apart from the implications of relational contracting to relationship management, there is a lack of understanding on how construction firms strategically respond to this new competition mode, i.e. frameworks in this study. In a literature review on competitiveness in construction, Flanagan et al. (2007) suggest new business or contract modes such as competitions on the basis of develop, design and build, which can potentially increase an individual firm's competitiveness in different ways, e.g. through differentiating themselves by creating innovative solutions. Porter's generic theory on competitive strategy has been previously used to describe the source of competitive advantages for construction firms (e.g. Betts and Ofori, 1992). With reference to Porter's generic framework, firms may pursue a cost leadership strategy to achieve cost advantage on a large portion of the market, a differentiation strategy to differentiate their product or service offering on a large portion of the market, or a market niche strategy to focus either on the advantages in a particular segment of the market. Porter hypothesises that successful firms are either cost leaders or differentiated leaving the others "stuck in the middle" (Porter 1980). Despite the popularity of Porter's work, the "stuck in the middle" hypothesis has been a major topic of debate for a long time. Research subsequent to Porter's framework established that low cost and differentiation orientation can be compatible and can co-exist (e.g. Kale and Arditi, 2002), either concurrently or sequentially with hybrid strategies (cf. Nizar, 2008). One example of such hybrid strategies is mass customization (MC). The common objective for MC is to meet individual customer needs without sacrificing the product or service efficiency although divergence is present in the understanding of MC (cf. Nizar, 2008 p.15-18; Piller, 2004;

Kaplan and Haenlein, 2006). MC is different from mass production, as a cost advantage strategy, in that heterogeneous products are being produced to meet customers' preferences. It is also different from tailored production, as a differentiation strategy, in that the production cost is closely controlled to the level of standardised products. Table 3 illustrates a comparison of the focus, benefits and issues between mass production, tailored production and mass customization strategies. Studies on the use of hybrid strategies such as mass customization in the industry are rare. In this regard, the paper aims to contribute to closing this gap, by using the lens of the S-D logic, how value is co-created through a unique approach to marketing integrated solutions.

Table 3: Comparison of the focus, benefits and issues amongst mass production, tailored production and mass customization strategies

Tailored Strategy	**Mass Production Strategy**	**Mass Customisation Strategy**
Focus: • A unique product and service for an individual customer	Focus: • Selling low-cost, standardised products to large, homogeneous markets	Focus: • Gaining market share by fulfilling customer wants and needs
Benefits: • Tailor to what customer needs and wants • Create market niches	Benefits: • Stable products • Predictable cost of production • Low cost	Benefits: • Ability to respond quickly to changing customer needs • Filling the niches • Market takeover • Technology-intensive products that stimulates continuous innovation • Low cost, high profits • Attention to core competence • Better channel management
Issues: • High cost • Cost is less predictable • Quality control can	Issues: • Disregard for many customer needs and wants • Disgruntled, disloyal	Issues: • May disregard for customer needs and wants if customer is excluded in the value

be difficult	customers • Opening of market niches • Segment retreat and avoidance • High capital investment	creation process • High capital investment (without a priori mass production capacity)

(Adapted from Pine, 1993, p.128)

4 Case Study Approach

While our theoretical understanding of market relationships has already advanced, there is a lack of practical examples in construction that characterise the advancing theory and provide evidence of advances in practice. The main theme for the study is value co-creation. The authors argue that value co-creation principles under S-D logic have been implicitly applied in construction. The study thus provides evidence of proactive market management through the lens of S-D logic in practice, contrasting with what has been previously concluded, e.g. the disjoint between relational contracting and proactive relationship management (Smyth and Edkins, 2007).

Construction projects are typically complex in nature involving many participants and operations. Information regarding the development of strategy within a construction business is difficult to obtain potentially due to lacking a systematic documentation of it or its confidential nature. Although there are many examples of frameworks in the UK, the development of pre-designed schools as a market response is unique. A case study approach is chosen, as a design frame, because it facilitates the development of a detailed understanding of the complexity and uniqueness of a specific topic, programme, policy, institution or system through insights coming from multiple perspectives (cf. Simons, 2009, p. 21). The particular case in this study needs a general frame of reference so that the theoretical model can pave the way to a large number of future cases. S-D logic as a

converging concept with axioms (Lusch and Vargo, 2014; Vargo and Lusch, 2016) was applied to explain how value is co-created by the strategic response of a contractor. Vargo and Lusch's first four axioms are used to interpret the case. The new axiom FP11 is not applied in the analysis due to the complexity in the structure of intuitions and institutional arrangements. The development of understanding would require a separate inquiry to define and analyse the use and development of individual institutions and their relationships in the case.

To establish the boundary for the case (i.e. a case of added value or value creation), the performance outcomes of the school projects procured through the national framework were compared against those of the non-housing category and industry. Average scores of historical key performance indicators (KPIs) were used for the comparison. Although the use of key performance indicators (KPIs) has been criticised as a rather snapshot measurement of satisfaction (e.g. Smyth, 2014), the authors argue that the evaluation of the performance across a number of projects over a period of time can be a good indicator on how well the customer expectations are met. The superiority of the performance of the national frameworks over the non-housing and industry average can provide some evidence of added value through the case. The performance outcome data for schools procured through individually designed national framework school programme (NFS) are further compared with those for schools procured through pre-designed school programme (PDS) to see if there are any differences between the two strategic programmes.

4.1 Case Study Design

Thomas (2011) classified case study research according to 1) *Subject*, 2) *Purpose*, 3) *Approach* and 4) *Process*. His typology approach to case study research is applied to explain

this case study design (See Figure 1). First, the *subject*, i.e. the choice of focus, for this case study is the "strategic programmes", the object (i.e. the analytical frame) is "value co-creation" and the analysis of the circumstances of the subject (i.e. something potentially could give the explanation) is the four core FPs of the S-D logic. The *purpose* of the study is to offer explanations on how the two strategic programmes contribute to value co-creation. Four research questions are set corresponding to each core FP (see Table 2) to offer the explanations, they are 1) FP1: How are skills and knowledge developed in the programmes? 2) FP6: How are interactions created between the Contractor and the customers in the programmes? 3) FP9: How are many-to-many relationships created in the programmes? and 4) FP10: How are the programmes enabling individual customers to define value to suit their needs?

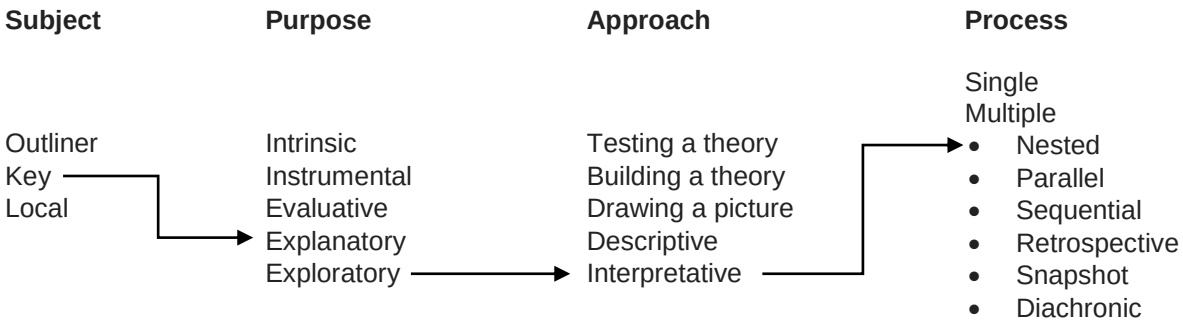

Figure 1: Mapping out the case study design using typology approach by Thomas (2011)

The authors were the researchers of a 3-year research project in which the Contractor was the leading party. They were aware of the unique nature of the programmes that demands their in-depth understanding to offer appropriate explanations. As the process of value co-creation is networked in context and value is uniquely defined by an individual, the authors argue that objective data required for a positivist study do not exist. The *approach* of inquiry assume our knowledge of reality (i.e. value co-creation in the case), is based on a social construction

of human interactions. An interpretative inquiry was therefore employed to capture the perspectives of different key informants. The authors are aware that the interactions between them and the key informants may have changed each other's perceptions. So, key informants' views were contrasted and examined in the lens of S-D logic. The authors acted as participant observers, relied on their professional background to evaluate the procurement approach, developed the experience-near perspective through various interactions with the Contractor during the project period, and applied S-D principles to generate inductive inferences.

The case study uses multiple data sources including both primary and secondary data collected through exchanges between the researchers and the key informants to develop and verify the alternative ways to analyse the programmes. An in-depth understanding of the Contractor's market management on the state school market segment was developed through an analysis of data collected: 1) Interviewing key informants on a one-to-one basis including the framework coordinator and framework product director that are involved in the programme level development and overseeing project delivery, 2) Evaluating documented evidence from both in-house data and published data including the performance indicators and marketing information, and 3) Observing the marketing and product development activities such as the programme level product design and development meetings as impartial observers. The Contractor also directly compiled some of the primary data used to compare findings from secondary sources according to the requirements of the case study. To ensure the case study represents the reality accurately, the draft case study report has been circulated to the key informants including the product director of the Contractor who is in charge of the framework products and services and the chief strategy officer of the Framework Procurer.

The case is concerned with a contractor's strategic response to the change in competition environment. Two nested units of analysis, i.e. NFS and PDS, are used in the *process* as they are the programmes created at a strategic level to specifically address the primary school customer needs. The two units are essential as together they form a wider case of strategic programmes that preserves the integrity or wholeness from the wider case.

5 Analysis

5.1.1 Background of the case

The Contractor is a largest company delivering construction contracting services, residential development and property support in the UK. Their clientele includes the government, local authorities, and numerous long-term private sector clients. Like many contracting organisations, the Contractor's business development and marketing are resourced through market segmentation. Figure 2 illustrates the market segments the contractor adopted for its construction arm. The education market is further divided into six market segments, including primary schools, which is the focus of this case study.

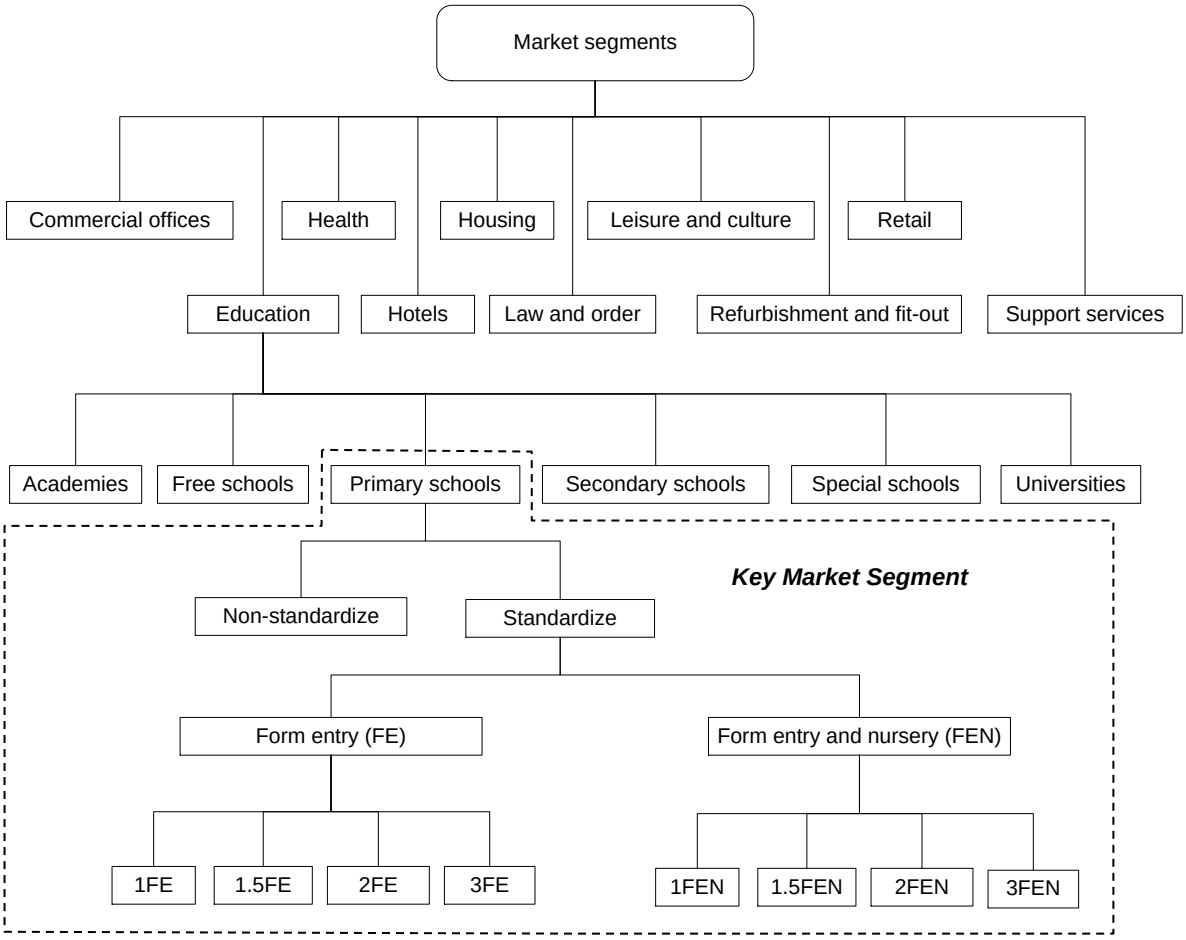

Figure 2: Key market segment for the case study

The Contractor's marketing and business development strategies in response to the change in competition from traditional tendering to frameworks can be grouped in three stances. The first stance concerns survival through bid management. Like other contractors who had been active in the school construction market, the Contractor bid for various frameworks to ensure its continuous presence in the state school market. For instance, the Contractor previously bid for the Education Funding Agency (EFA) regional frameworks and is currently one of the few suppliers for two of the six regional frameworks. The second stance sees the Contractor to focus on customer relationship management (CRM) with an aim to retain customers and satisfy them. The strategic programme to deliver individually designed schools under the national procurement framework (i.e. NFS) is the focus in this study. The Contractor was

chosen to be the sole supplier for one OJEU compliant national framework that is open to any publicly funded project which is £2 million and above in value. The national framework was designed by a company, which is owned by six local authorities in England, i.e. the Framework Procurer. Under the national framework approach to procure schools, the framework agreement is formed between the Framework Procurer and the Contractor. Any prospective school client who wants to use the framework will enter into an access agreement with the Framework Procurer at no cost. A separate delivery agreement, i.e. construction contract such as NEC3, is subsequently formed between the Contractor and the school client prior to construction. The monopoly power within the framework significantly increases the Contractor's chance to secure work although competitions exist amongst various frameworks, e.g. EFA regional framework. The third stance is the result of the long-term relationship built between the Contractor and the Framework Procurer. Taking the full advantage of the relationship, a joint venture was formed to develop pre-designed school products collaboratively. The Contractor and the Framework Procurer envisioned that PDS can produce schools that better meet the customer needs. It was designed as an alternative approach to deliver schools under NFS. The pre-designed schools are modelled from successfully completed projects that are branded as schools that provide certainty of programme, cost and quality.

5.1.2 Justification of the case selected

The first national framework, which is not covered in the KPI analysis due to lack of structured record of the performance indicators, started in 2008. The current framework is the third in a row. Also, there are a number of repeated school orders from the same local councils throughout the period. The continuation of the relationships through framework and repeated school orders are a good indication of customer retention and repeat business.

5.1.2.1 Comparison with Non-housing Category and Industry

A total of the 69 contracts under the national frameworks were awarded via Frameworks 2 and 3 from 2010 to 2014. The KPIs recorded were compared with those published by the Constructing Excellence (CE), a UK based membership body aiming to improve industry performance for the same period (Glenigan Constructing Insight et al., 2014). Average values for seven common KPIs, i.e. "Predictability Cost - Design (Pre-construction)", "Predictability Cost - Construction", "Predictability Time - Design (Pre-construction)", "Predictability Time - Construction", "Client Satisfaction - Product", "Client Satisfaction - Service" and "Client Satisfaction - Defects", are shown on Table 4. Unfortunately, CE's analyses do not differentiate the education sector. The closest category, non-housing, was adopted for the comparison instead. Table 5 shows the comparison of performance of the national frameworks vis-à-vis the non-housing category and industry using different indicators. The national frameworks outperform the industry and non-housing category in terms of time and cost predictability with 100% of all related targets achieved. The exception is the results in 2010, where the national framework underperforms the industry and non-housing category in terms of "Client Satisfaction - Product" and "Client Satisfaction - Defects". The national frameworks perform slightly better than all the other averages. The performance output evaluation gives evidence that the national frameworks deliver added value to its customers.

Table 4: Target descriptions of performance indicators for framework

KPI Area	Performance Indicator	Target
Time	Predictability - Time - Pre-Construction	Score of 0% or less, with 0% indicating completion on programme (after accounting for the effects of any client agreed changes), and a minus % indicating completion earlier than programmed.
	Predictability - Time - Construction	Score of 0% or less, with 0% indicating (clause 12) completion on programme (after accounting for the effects of any client agreed changes), and a minus % indicating completion earlier than programmed.
Cost	Predictability - Cost - Pre-Construction	Score of 0% or less, with 0% indicating completion on budget/cost (after accounting for the effects of any client agreed changes), and a minus % indicating completion less than budget/cost.
	Predictability - Cost - Construction	Score of 0% or less, with 0% indicating completion on cost (after accounting for the effects of any client agreed changes), and a minus % indicating completion less than cost.
Quality	Client Satisfaction – Defects	8/10 (Client score)
	Client Satisfaction – Product	8/10 (Client score)
	Client Satisfaction – Service	8/10 (Client score)

Table 5: Year on year KPI comparison amongst national frameworks, non-housing and industry averages

Key performance indicator	Industry				Non-housing				National Frameworks			
	2010	2011	2012	2013/ 14	2010	2011	2012	2013/ 14	2010	2011	2012	2013/ 14
Client Satisfaction - Product (%)	87	87	83	82	88	87	83	83	73	95	88	93
Client Satisfaction - Service (%)	82	80	75	75	85	78	74	77	91	100	88	86
Predictability Cost - Design (%)	67	79	79	79	73	80	79	81	100	100	100	100
Predictability Cost - Construction (%)	47	59	58	57	56	60	60	57	100	100	100	100
Predictability Time - Design (%)	69	51	48	52	61	52	49	52	100	100	100	100
Predictability Time - Construction (%)	57	60	42	67	61	60	46	67	100	100	100	100
Defects - Impact at Handover (%)	75	68	74	71	76	67	72	72	64	94	92	92

5.1.2.2 Comparison between NFS and PDS

Majority of the cases are procured under NFS. A total of 13 out of 69 cases are incomplete cases with some values of the indicators missing mainly due to customers failing to return the KPI questionnaires. Those recorded indicators from the incomplete cases were used to compute the averages for comparison as they are measurements based on factual information and thus are not affected by the missing indicators. The indicators related to “Predictability” and “Client Satisfaction” were extracted from the KPI records for the comparison as shown on Table 6. Both individually designed and pre-designed schools achieved 100% for the

“Predictability” indicators suggesting that all products met the targets for time and cost both for pre-construction and construction. As meeting targets on time and cost is fundamental to the local authorities, the result shows that both NFS and PDS fulfilled the functional needs of the local authorities. Although both NFS and PDS achieve very high averages for all the “Client Satisfaction” indicators, PDS 's average score is generally marginally higher than individually designed school's with regard to the satisfaction for the product, service and defects (i.e. impact at handover) suggesting that PDS can potentially satisfy the customer more than NFS. In fact, PDS almost achieved 100% for all “Predictability” and “Client Satisfaction” indicators.

Table 6: Comparison between NFS and PDS

KPI	National Frameworks		NFS		PDS	
	% Achieved	No. of Cases	% Achieved	No. of Cases	% Achieved	No. of Cases
Time Predictability - Preconstruction	100	69	100	56	100	13
Time Predictability - Construction	100	69	100	56	100	13
Cost Predictability - Preconstruction	100	69	100	56	100	13
Cost Predictability - Construction	100	69	100	56	100	13
Client Satisfaction - Defects	87	54	86	43*	92	11*
Client Satisfaction - Service	92	60	90	48*	100	12*
Client Satisfaction - Product	88	60	85	48*	100	12*
Client Satisfaction - Value for Money**	100	4*	100	2*	100	2
Client Satisfaction - Whole Life Performance**	100	4*	100	2*	100	2

Client Satisfaction - Settlement of Final Account**	100	4*	100	2*	100	2

Notes:

* - Some case(s) have not included the measurement due to lack of data

** - Performance indicators added to Framework 3. They are measured according to Client's score with a target is 8 out of 10.

5.1.3 Explanation of Value Co-creation from NFS and PDS programmes

5.1.3.1 How skills and knowledge are developed in the programmes

Construction clients generally require some capacity in project management to achieve their objectives due to the complex nature of construction. De-regulation and a number of recessions have delivered a loss of in-house technical capabilities to manage building projects in many local authorities. There is now a very limited number of staff employed by local authorities with project management experience to oversee procurement of schools. The development of in-house client capabilities is considered as a potential threat to the project business as argued by Smyth (2014). The loss of expertise, on the other hand, implies a resource requirement to be filled externally. According to the G-D logic, the objective of outsourcing is to reduce the transaction cost as it is most efficient to allow specialised professions to provide the "services" according to the principle of division of labour. So, the increasing reliance on external professionals to procure schools is viewed as an approach to reduce cost. The S-D logic gives an alternative explanation to the phenomenon; i.e. the continuous development of education needs demands increasingly refined specialisation in which the operant resource within the organisation is not sufficient to cater the needs and thus, requires the exchange of "service" (in singular form) in the market. Although the procurement of NFS simplifies the procedures to appoint a supplier, it still demands relevant knowledge to manage a construction contract. According to FP1, the application of

specialised skills and knowledge is the fundamental unit of exchange. Since the Framework Procurer specialises in framework contracting and has good knowledge of the customer needs, their skills and knowledge are the fundamental sources of the competitive advantage of the NFS. For instance, the Framework Procurer acknowledges the strict requirement for project transparency in the public sector, the performance measurement is designed to be updated frequently and reported live from a designated website. The Contractor leverages the specialist knowledge and skills of the Framework Procurer as their competitive advantage as they are the sole contractor of the national framework.

The skills and knowledge in the delivery of school projects through previous national frameworks allow the Contractor to develop an alternative business model together with the Framework Procurer. PDS was developed under a new business model for new products and services to the school market. New skills and knowledge have been developed through mass customising the school offerings. The tasks include standardising services and products, and their processes, and reconfiguring value chain concurrently. For instance, options for each model and parameters that govern the option development of the pre-designed models have been developed continuously to address what the customer wants and to preserve the customer cost orientation at the same time. The operant resources developed form the competitive advantage of the construction firm. The S-D logic perceives marketing as a continuous learning process at improving the operant resources (Vargo and Lusch, 2004). The products, services and processes for PDS are regularly reviewed by a central unit of the Contractor responsible for PDS development. PDS projects delivered through the MC strategy create an advantage for continuous improvement as the firm can learn through analysing the performance of products, services and processes more effectively as they are relatively standardised.

5.1.3.2 How interactions are created between the Contractor and the customers in the programmes

The G-D logic perceives that the value of exchange is embedded in the operand resource, or the product. A marketer's goal is to determine the offering to match with a pre-determined need. The inherently producer centric view on customer orientation does not accommodate the circumstance that a decision to exchange can be determined by a group of intermediary and ultimate customers with differences in their value. In the case of state primary school market, there is a lack of customer orientation as the body that uses the service, i.e., school teachers and students, is separated from the body that pays for the service, e.g. local councils and EFA. Managing the needs of the two groups of customers is challenging as often the priority of the latter group is on meeting the education targets or functional objectives such as the number of pupil places created and the cost per place, i.e. value-in-exchange, whereas the former group simply wants a good environment for effective teaching and learning, i.e. value-in-use.

According to FP6, the S-D logic considers beneficiaries, e.g. customers, are always the value co-creators. Firms cannot deliver value to customers but only offer value propositions. Thus, they can only create value through providing compelling propositions and school projects are merely the delivery channel in the exchange. The basis of exchange in the NFS delivery is the operant resource in selling school design and construction solutions and integrating various systems. The service is similar to individual school products procured by design and build method but the NFS route gives more scope for developing alternative value propositions together with the customers as the Contractor is not competing according to a rigid set of prescribed requirements. The integration then allows more scope for the Contractor to adopt one-to-one marketing (cf. Peppers and Rogers, 1999), i.e. to interact with the customers and

configure a product or service with a value proposition that best meets the customer needs. One-to-one marketing does have its limitation. In the situation where marketing is not initiated by customers nor executed under their control, there is a danger that it may end up delivering a customised product that fails to meet what the customers want (Wind and Rangaswamy, 2011). There is a risk of this happening for schools procured through NFS as well as other frameworks if the ultimate users are not actively involved in the value creation process.

The offering of PDS allows any national framework user to approach the Contractor directly to get familiar with the pre-designed products and services. Prospective customers can obtain a thorough understanding of the procurement process, product and service details, and price through the pre-designed school website. The Contractor, on the other hand, takes opportunities such as school project inquiries or education forums to promote PDS. In the first school project inquiry meeting as an example, a core part of the company presentation incorporates an explanation of the pre-designed products. The marketing team also makes use of visualisation through building information modelling (BIM) technology during the meeting to engage prospective school customers. By superimposing PDS BIM models to Google Earth 3D street map based on the address of the prospective school, the models help the customers to visualise the end-product on a virtual environment that they are familiar with. In addition, the team presents a 3D walk-through in the virtual environment on screen and makes use of virtual reality (VR) goggle to allow clients to view 3D images of the school from mobile phones. A subsequent visit to actual pre-designed schools in use can then be arranged to reinforce the customer experience further. The prospective customers are also encouraged to join a web community of PDS user for knowledge sharing. All these activities allow the Contractor to interact with the customers. The many interactions created are forms

of dialogue that set up a collaborative relationship with the customer according the S-D logic. They act as nodal points that can shape the client expectations and lead to client satisfaction as a result.

5.1.3.3 How many-to-many relationships are created in the programmes

The G-D logic sees firm's products to be standardised so as to maximize efficiency and make them more attractive or differentiated to channel them to different market segments. Relationships are merely a series of repeated transactions over a period of time. The framework option is seen by many as an attempt to reduce the transaction cost through serial bidding. It simplifies the complicated and costly advertising and selection procedures; it achieves economies of scale. While the interpretation is pragmatic and valid, it fails to capture the value of relationships and the inherent nature of relationship. The S-D paradigm perceives that relationships are embedded in the value creation process in parallel with the transaction and are extended further, e.g. through a contractual relationship such as warranties or a sleeping relationship (i.e. the relationship exists between the end of a formal relationship, e.g. the completion of a project, and the beginning of another formal relationship (cf. Hadjikhani, 1996). This view is particularly relevant to construction as building assets have a long life. FP9 of the S-D logic considers all economic and social actors as resource integrators implying the need to treat marketing as many-to-many relationships in the real world context (cf. Gummesson, 2006). S-D logic builds on relationship marketing through the term interactions. Here, the 30R’s in Gummesson's total relationship marketing (Gummesson, 2000 p.27-32) as shown in Table 7 is adopted to hypothesise the market relationships created in NFS and PDS and the scope for intense interactions between actors.

Table 7: 30R's of relationship marketing

Category	Relationships	
Classic market relationships	R1	The classic dyad - the relationship between the supplier and customer
	R2	The classic triad - the drama of the customer-supplier-competitor triangle
	R3	The classic network - distribution
Special market relationships	R4	Relationships via full-time marketers and part-time marketers
	R5	The service encounter
	R6	The many-headed customer and many-headed supplier
	R7	The relationship to the customer's customer
	R8	The close versus distant relationship
	R9	The relationship to dissatisfied customer
	R10	The monopoly relationship - customer or supplier as prisoner
	R11	The customer as "member"
	R12	The e-relationship
	R13	Parasocial relationships - relationships to brands and objects
	R14	The non-commercial relationship
	R15	The green relationship and CSR
	R16	The law-based relationship
	R17	The criminal network
Mega relationships	R18	Personal and social networks
	R19	Mega marketing - the real "customer" is not always found in the marketplace
	R20	Alliances change the market mechanisms
	R21	The knowledge relationship
	R22	Mega alliances change the basic conditions for marketing
	R23	The mass media relationship
Nano relationships	R24	Market mechanisms are brought inside the company
	R25	Internal customer relationships
	R26	Quality and customer orientation: the relationship between operations management and marketing
	R27	Internal marketing: relationships with the 'employee market'
	R28	Two-dimensional matrix relationship
	R29	The relationship to external providers of marketing service
	R30	The owner and financier relationship

(Source: Gummesson (2000))

Market relationships amongst key NFS players were hypothesised according to Gummesson's 30R's as shown in Figure 5. Figures 3 and 4 showing the relationships of key players for individual schools procured by traditional method and design and build method through competitive tendering are constructed to illustrate the difference in the relationship types created. First, mega relationships are created due to the presence of a new player, the Framework Procurer that set conditions of the relationships in the framework market. For instance, the many national frameworks designed by the Framework Procurer contain only

one supplier. Being one of the national framework suppliers that jointly delivered schools with the Framework Procurer significantly increases the continuity of work and lends opportunities to achieve economies of scale and scope (R20). Also, a knowledge relationship is established amongst the Contractor, the Framework Procurer, the Client and the Users (R21). This is particularly valuable as knowledge and skills form the basis to develop value propositions according to FP4 of the S-D logic. Second, the special market relationship is established between the Contractor and the users as the (intermediary) customer's customer (R7). In a B2B context, the ability to identify what the customer further downstream needs adds special value to the service. This is particularly important to the local authorities because they, as the framework users, are required to enter a development agreement with the users in the name of a school under a framework arrangement. The ability to create dialogues directly to the users to understand their needs significantly reduces the risks of underperforming product and service. This forms an essential value co-creation element in the process. The relationships described above help fostering interactions between the body of suppliers (i.e. the Contractor and the Framework Procurer) and the body of customers at

organisation and social levels and thus, create a stronger classic network (R3) as a result.

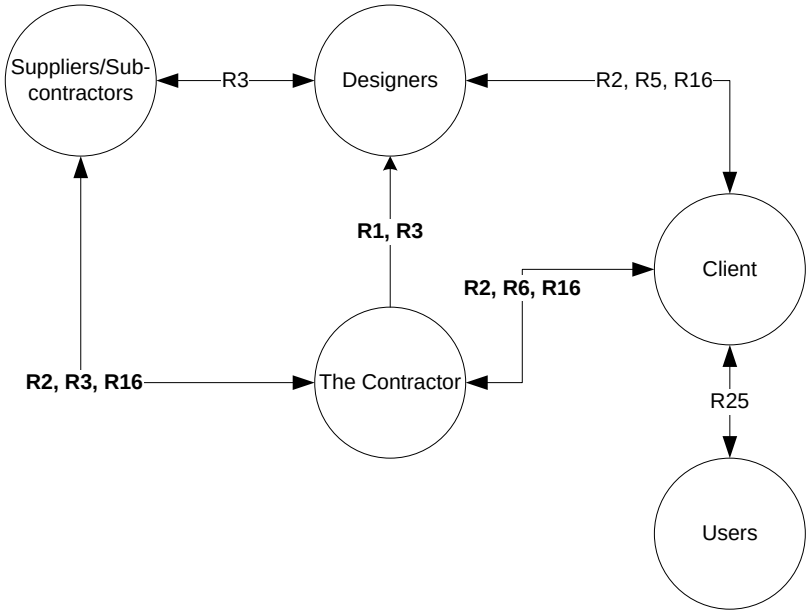

Figure 3: Market relationships amongst key players for individually designed schools procured by traditional method

Key for figures 2-5

Classic market relationships:
R1 – The classic dyad
R2 – The classic triad
R3 – The classic network
Special market relationships:
R5 – The service encounter
R6 – The many headed customers and suppliers
R7 – The relationship to the customer's customer
R15 – The green relationship and CSR
R16 – The law based relationship
Mega relationships:
R20 – Alliances change the market mechanisms
R21 – The knowledge relationship

Nano relationships:
R25 – Internal customer relationships
R26 – Quality and customer orientation

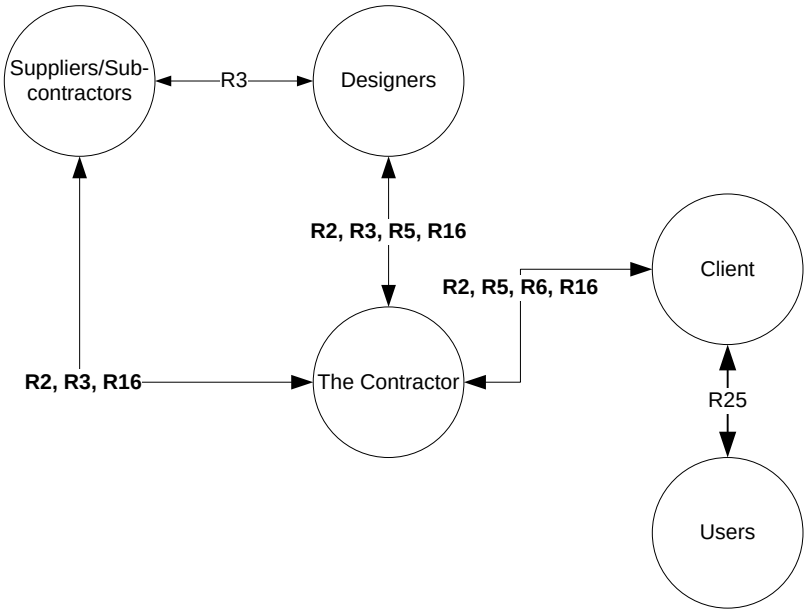

Figure 4: Market relationships amongst key players for individually designed schools procured by design and build method

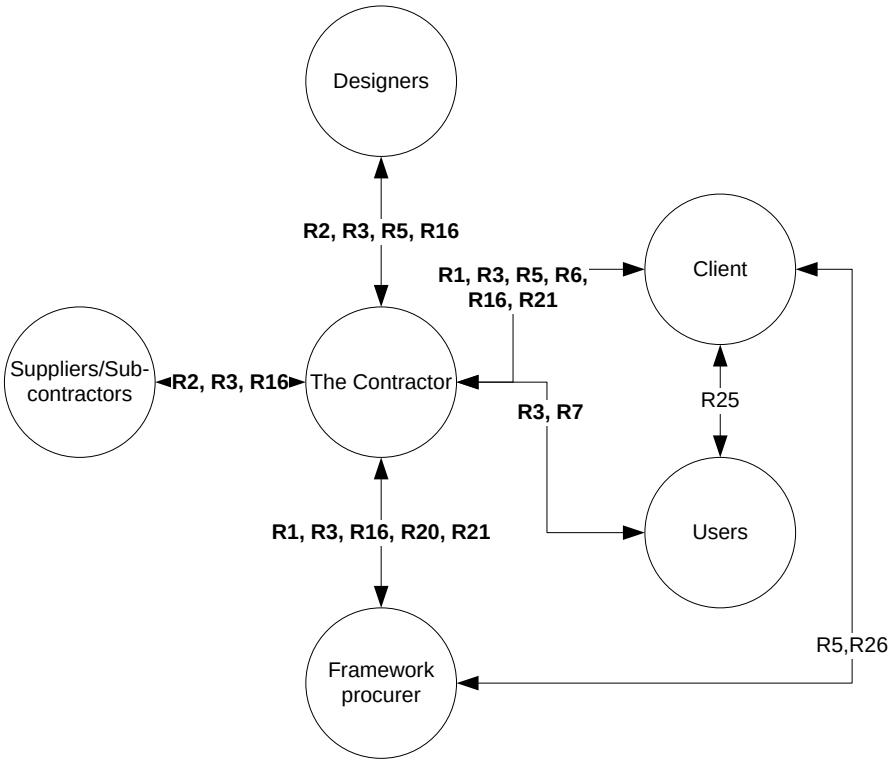

Figure 5: Market relationships amongst key players for NFS

The PDS is a direct outcome of the relationship created between the contractor and the Framework Procurer. Since PDS has been delivered through the national framework, the market relationships explained earlier largely apply to the delivery of PDS. The larger scope in PDS, however, allows the Contractor to exploit the benefit from streamlining the design and production process through standardisation supported by the partnerships with its suppliers. It also strengthens the tie between the body of suppliers and the body of customers further as the process involves decisions made jointly by the client and the users based on clearly detailed, illustrated and proved models.

Another aspect relates to the dialogues between the Contractor and the supply chain members. According to Figure 6, an additional strand of relationship has been developed by partnerships formed between the contractor and a number of suppliers and specialist sub-

contractors of the supply chain (R20). The partnerships are essential as various front-end service propositions offered to the customers as a major element of the customised marketing needs to be supported by rigorous processes designed and implemented at the back end through operational customisation. The strengthened relationship made it possible for the Contractor to guarantee some important attributes such as cost and duration of the PDS. The implication is significant as the risk associated with the value propositions is significantly reduced. The partnerships also help driving continuous improvement of PDS on product, service and process levels as well as development of organisational capabilities.

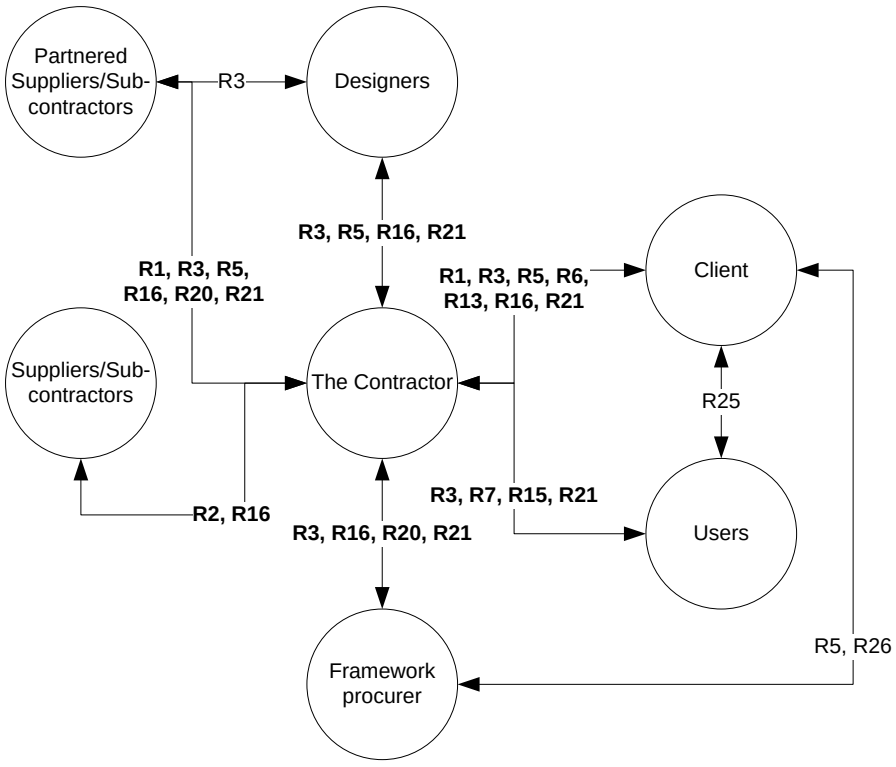

Figure 6: Market relationships amongst key players for PDS

5.1.3.4 How the programmes enable individual customers to define value to suit their needs

According to the G-D centred view, the reliance on price as the basis for exchange implies a simple objective to improve efficiency through minimising expenditure. This transactional approach to business often leads to the procurement of low capital cost-low value products. The S-D logic considers money and product as indirect exchanges. Those indirect exchanges mask the fundamental unit of exchange, i.e. service. The presence of many actors with specialised skills also masks the exchange due to a lack of interactions between actors. FP10 suggests only customers can determine the value, which implies that the exchange is customer-centric. In addition to the functional benefits that G-D centred view explains, the S-D centred view argues that the customer experience is of a higher order than the functional benefits in which the latter are only part of the overall experience.

Although there is no competition within the national framework, there is a constant pressure for the Contractor to prove the value of it, e.g. through demonstrating the savings created. For instance, the Contractor's fee was reduced from 3.5% in Framework 2 to 1.75% in Framework 3. The marketing information suggests that NFS creates a saving of 14%. According to the normative guides for business suggested by Vargo and Lusch (2006, p. 415) to embrace the S-D logic, it is essential for firms to "be transparent and make all information symmetric in the exchange process". Transparency is essential for customers in assessing their value proposition and their risk exposure no matter it is on an exchange or relational basis. To give the transparency of the performance, the Contractor has been providing regular performance updates showing the agreed indicators for its awarded projects since Framework 2, which commenced in 2010. The reporting process starts when a project order is received (i.e. during the pre-construction stage). Each report is updated monthly until project

completion. It is then updated 1 month, 3 months and 12 months after the handover. There is a dedicated webpage to show the latest performance report live and a dedicated coordinator to manage the performance data. The use of KPIs is not new but NFS's implementation differentiates it from others as it is relatively thorough, responsive and structured, which potentially gives a marginal advantage.

PDS has a completely different price offering in which the customers are in control to determine the price. This is customer centric. The cost for a pre-designed school is said to be "fixed" which means the base price published covers most elements on an all-inclusive lump sum basis. The customers can choose a design model according to their budget. As explained, PDS also allows customers to see the actual completed product as well as a very detailed model in proposal stage. This makes the customer experience a lot more tangible yet very different. Unlike design and build arrangement typically adopted for state school constructions in which customers have little control over detailed design, the PDS procurement process allow customers to take control of the exchange process while the Contractor proactively guides their choices through educating the customers and framing the choice options. The customers can personalise the models, i.e. customise certain confined features of the models in such a way that the efficiency benefit of standardisation is not sacrificed. Alternatively, they can have the pre-designed products changed to tailor their needs. To fully customise the schools, the benefit from the standardised design is compromised and the customers have to pay a premium, to meet their individual needs. Through the designated web-page, they can test various propositions quickly by choosing different options as the web-page provides focused information about the products such as cost and programme implications and share knowledge from actual user web community. The extra breadth and depth of information being accessible in an intuitive manner allows various

customers to develop their notions of the value-in-use. The customer can gain access to the products without the need to own them or pay for them from the outset of a school project.

6 Conclusions

The theoretical advancement of marketing as a discipline is evident in first, the emergence of diverse marketing sub-disciplines to explain new market relationships, and then the development of persuasive S-D logic as a converging concept focusing on value co-creation that links the marketing sub-disciplines. Although the application of new marketing concepts in construction marketing is not very apparent, successful programmes in terms of creating repeat business and customer satisfaction offer opportunities, such as NFS and PDS in the case, to inquire the presence of new market relationships and how value has been co-created. The interpretive inquiry in the lens of S-D logic found that first, deskilling of customers in state school markets provides opportunity for the Contractor to develop new skills and knowledge, build relationships to leverage this skills and knowledge gap, and create value as an outcome. Second, the hybrid strategic programmes enhance interactions, as the channel for value creation, by engaging customer early, and creating and enriching dialogues through personal contacts, the use of BIM technologies and social networks. Third, many-to-many relationships are strengthened under the programmes by integrating the supply chain both upstream through forming partnerships with suppliers, and downstream through engaging two groups of customers, the local authorities and end users. Finally, the programmes assist individual customers to define their value by improving the transparency of the products and services and guide the customers to evaluate the products and services through free self-service systems, and products and services inquiries.

It is not the aim of the paper to suggest a simplistic view that the use of hybrid strategies or any particular strategic programmes will lead to value creation. What the paper proposes to contribute to the construction management research and construction marketing practice is to use a convincing case to illustrate how strategies can be set to create value by applying the principles of S-D logic, e.g. focusing on skills and knowledge development, creating and enriching dialogues, strengthening networks, and guiding customers to self-evaluate products and services. Market relationships are hypothesised in this study with reference to Gummesson's 30R's for NFS and PDS. The proxy is not the subject for examination in the paper but is very important to strengthen the level of understanding of the interplay. Further work, it is suggested, can be done using social network analysis techniques to verify the relationships and assess the intensity of the relationships. The result will develop an insight about the value network. The explanation of the service-for-service exchange in this study is restricted by the views of the key informants from the Contractor and the Framework Procurement, and the authors as participating observers. A more thorough study on the service ecosystem for state primary school market can be done by a further inquiry that integrates the perspective of other actors in particular that of the customers.

Acknowledgement

This research was supported by a research grant from the UK Technology Strategy Board (TSB- now Innovate UK) under the Rethinking the Build Process Programme (Project No: 101343). The authors would like to thank the editors and reviewers for the many useful comments and recommendations suggested to improve the paper.

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