

Human Factor Related Constructs to Accompany Extant Construction Business Marketing Frameworks

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Abstract

Marketing is playing a key role in overcoming growth, survival and profitability challenges facing many businesses today. However, the application of marketing in the construction industry is challenged by lack of human factor constructs in extant construction marketing frameworks. This paper adopts the Technology Acceptance Model, the Theory of Planned Behaviour and the Typology of Strategy Model in examining relevant human factors to ascertain their effect on marketing in the construction industry. Findings reveal that factors such as acceptance, behaviour and strategic orientation are human related factors that greatly affect marketing in construction. Again, evidences point at construction education as the culprit of the human factor challenges confronting marketing in construction. This paper, therefore, proposes human factor constructs based on appropriate theoretical lens to accompany existing constructs of construction marketing frameworks. The result of the amalgamation will be a construction marketing framework that is capable of achieving holistic and comprehensive examination of construction marketing issues. The constructs combines human behaviour, growth orientation and behaviour in an integrated fashion to achieve its objectives. Construction marketing and management researchers will find this framework useful for investigating marketing related issues in the construction industry by providing a new direction to construction marketing research.

Keywords

Construction marketing, construction education, framework, human factors, marketing.

1. Introduction

Business growth, survival in the face of competition and maintaining profitability are the major challenges in the business environment of the 21st century. The construction industry, for instance, is typically characterized by extreme competitiveness, high uncertainty and risks, and generally low profit margins (Ofori, 2012; Schaufelberger 2009; Mochtar and Arditi, 2001). The only known solution to these challenges has been marketing (Kotler and Keller, 2012; Arditi *et al.*, 2008) and that has made marketing a top priority in many industries. This is important in every business because business survival and a desire for greater profitability is the key objective of most businesses. This objective in the view of Arditi *et al.* (2008), appear to have given construction marketing its greatest impetus. However, there exists an uphill struggle towards the utilization of marketing in the construction industry. There are indications that seek to suggest that

human factors in construction are directly and indirectly the heart of the problem.

1.1 Human Factor, Construction Marketing and the antecedent

The application of marketing in the construction industry has not seen any marked improvement for many decades. Notable among the reasons for this situation is the continuous reliance on general marketing models by the construction industry. Arditi *et al.* (2008) contends that mainstream marketing, which was mostly developed for the manufacturing industry, provides little help to the construction industry. The reason for this lies in the difficulty with which general marketing principles can be applied in the construction industry. Arditi and Davis (1988) and Peck (1994) highlighted the difficulties of applying traditional marketing techniques in the construction industry due to the peculiarities of the industry. It has been argued that the way marketing is used in the construction industry needs serious improvement (Arditi 1985; Arditi and Mochtar 2000), in order to produce beneficial results. These stance are motivated by the widely accepted view that the distinctive business environment of construction makes the assumption that marketing approaches used in other commercial settings will necessarily work in the industry inappropriate (Morgan, 1990).

To overcome these difficulties Smyth (1999) proposes the application of a combination of existing marketing theories from industries, which share one or more characteristics with the construction industry. Winter and Preece (2000) also share the opinion that a combination of marketing theories would be appropriate for the industry. The authors recommend a combination of industrial and service marketing theories to construction. It appears the existence of such frameworks have not provided an end to the problem. The marriage of both industrial and service marketing theories have resulted in some construction marketing frameworks, yet their utilization in the construction industry continuous to remain an uphill struggle with little to no success.

A subtle factor that has escaped the attention of construction marketing researchers is the focus of construction education (Yankah *et al.*, 2016) and the effect it has on human factors on marketing in construction (Yankah *et al.*, 2017). The human factor challenges that confront marketing in construction includes: reluctance to adoption and integration of marketing in construction businesses, misconceptions and misperceptions and lack of understanding about marketing in construction, beliefs in the industry, lack of in house marketing expertise, marketing resource constraints and engineers' paradigm (Yankah *et al.*, 2017). All of these challenges can be traced back to construction education as the cause.

In their study Hardy and Davies (1984) found that many construction firms exhibit an indifference attitude to marketing. Yisa *et al.* (1996) also notes that marketing, the science and business philosophy is taught as a serious subject to the cream of business managers and other professionals. Yisa *et al.* (1995) further noted that comparing to other construction management functions such as estimating, scheduling and cost control, literature on marketing in construction is very sparse. This, the authors believe is an indication that the industry's professionals are being educated without a systematic study of marketing which is an important aspect of management. Harris (1991) noted that professional education and training have always been streamlined and narrowed down to the production of highly scientifically trained professionals from the universities with little or no management training.

The net effect can be summed up by the import of the Social Cognitive Theory, which posits that:

—*Learning is largely an information-processing activity in which information about the structure of behaviour and about environmental events is transformed into symbolic representations that serves as guides for action* (Bandura, 1989, p. 51). This undoubtedly explains the reasons for the indifference attitude to marketing in the construction industry, largely due to lack of knowledge about marketing. As a result construction professionals and their management team lack relevant marketing skills which are indispensable for effective implementation of marketing in construction business.

Construction business managers appear to be deficient in general management skills and marketing skills in particular. Preece *at al.* (2003:52) contends that in construction businesses —... marketing is frequently carried out in a limited and fragmented fashion due to self-imposed constraints due to attitude and thinking, low levels of creativity, lack of management understanding... This attitude is created by construction education

as the Social Cognitive Theory advocates. This in the view of Pearce (1992) has created most popular belief in the industry that the most important part of the organization is the production side but not management of which marketing is a key component. As a result construction businesses turns to be good at looking for opportunities that fit their capabilities rather than adapting their capabilities to suit current and future market opportunities. It is therefore imperative for a framework for marketing of construction enterprise to capture relevant human factor constructs that can address the above issues.

2. Extant Construction Marketing Frameworks

The search for construction marketing models did not yield many results. The few construction industry specific construction marketing frameworks are summarized in Table 1. It can be observed after a quick perusal of Table 1 that most of the models are more of a strategy for specific applications than a business management function. It appears there are only three of the models that treat marketing as a business management function (Yisa *et al.*, 1996; McCaffer *et al.*, 2013; Macnamara, 2002). These models have latent constructs such as analysis, planning, implementation and evaluation, as shown in Table 2. The presence of these elements of the models gives it the characteristic of a business management function. Lacks of human factor elements are noticeable in these frameworks.

Table 1: Summary of Construction Marketing frameworks

Model/Framework	Constructs	Conceptualizations
1 The marketing process model McCaffer et al., (2013)	Market trends Market Analysis Company Analysis	It involves formulation of the business forecast based on market analysis and market trends. Then company analysis that provides information regarding the company's strength and weaknesses. The matching of the two exercises, results in a revised company policy.
2 Marketing activity selection model (Polat and Donmez, 2010)	Costs Benefits Risks	This model as an analytic decision support model. It is a four-level Analytical Network Process (ANP) model that can assist construction companies in prioritizing and thereby selecting the marketing activities in which they should invest. The model is based on the Modified Marketing Mix theory.
3 Marketing of engineering consultancy Macnamara (2002)	Analysis Plan formulation Implementation Monitor and feedback	The model links the firm's marketing system, from the marketing analysis and planning to implementation and monitoring, the business environment, companywide, in the market place, and nationally/globally. This is remarkable because marketing is basically the organization's interface with its environment.
3 Marketing Positions (Smyth, 2000)	Routinized Analytical Innovative	The model identifies the six basic market positions.
4 Idealized Conception of Marketing theory (Smyth, 2000)	Marketing mix Relationship marketing	The model compares marketing mix to relationship marketing as the two main extremes of construction marketing approach. It positions construction businesses that focus on tangible products (eg. Building components) and

		businesses that focus on intangible services (eg. Contracting and consultant services) at two extremes with speculative house building business as possessing attributes of both extremes.
5 The relationship Marketing Model (Smyth, 2000)	Perceived value Customer satisfaction Relationship strength Relationship longevity Relationship profitability	The relationship marketing model, provides the, _linkage between perceived value and resultant relationship profitability
6 Systems framework for marketing Yisa et al., (1996)	Planning Marketing activities Implementation Evaluation.	Model aims at improving the effectiveness of the marketing function within the construction enterprises. The model represents a clear and practical approach for formulating, implementing and evaluating corporate marketing programmes.
7 Modified Marketing Mix Theory Judd (1987)	Product Price Place Promotion People	It is based on the 4P's Marketing Theory with an extension for relationship marketing with the introduction of a fifth P- People. It achieves a marriage of transactional and relationship theories by the addition of the fifth P. It addresses the relationship network peculiar to construction. There are 25 activities under the Five parameters.

Source: Author's Literature Review

Table 2: Comparison of key constructs of construction marketing frameworks

Framework	Macnamara (2002)	MacCaffer <i>et al.</i> (2013)	Yisa <i>et al.</i> (1996)
Key model constructs	Analysis Plan formulation Implementation Monitor and feedback	Market trends Market Analysis Company Analysis	Planning Marketing activities Implementation Evaluation.

Source: Author's Literature Review

Since marketing is a business management function, its success depends largely on the human factor input. In construction, human factors can be a critical success factor or otherwise of marketing application in the management of construction businesses. The performance of analysis, planning, implementation and evaluation which are the key tenets of marketing in construction can greatly be affected by human factors required in performing those management processes (Preece *et al.*, 2003). The human factors such as acceptance of marketing, behaviour of management and growth orientation of construction business are specific human factor issues that can affect marketing in construction.

3. Towards Human Factor Based Construction Marketing constructs

3.1 Human Factor Related issues in Construction Marketing

A conceptual framework that can address the issues holistically must possess human factor attributes in addition to the usual management procedures. Kotler's (1984) definition of marketing as a human activity directed at satisfying needs and wants underscores the significant role of the human factors in evolved in construction business towards achieving the marketing objectives. It is therefore important for construction marketing models to include features such as acceptance of marketing as a necessary

business management functions by construction management team members, behaviour of construction members towards marketing and the strategic orientation of construction businesses.

This acceptance of marketing is influenced by the perceived usualness of marketing and the perceived ease of use of marketing (Venkatesh et al., 2003), as perceived by construction management team members. A favourable disposition of people in construction toward marketing will enhance its application. The Technology Acceptance Model (TAM) is a useful theoretical lens in this assessment. The need for acceptance construct in the framework is essential for a number of reasons. Notable amongst reasons is that marketing as a management function is at best considered as a new phenomenon and at worst it is considered not applicable. Pheng (1991) therefore observed that marketing has attracted only a little attention among construction contractors and professionals alike. Morgan and Bernicle (1991) noted that the U.K. construction industry has been slow in adopting marketing principles. This Morgan and Morgan (1990) believe is due to the fact that marketing is still a new phenomenon that is viewed with skepticism. This confirms that acceptance of marketing in construction is major human factor issue that cannot be overlooked in construction marketing frameworks.

Another human factor aspect that needs consideration in framework for marketing in construction is behaviour of construction manager and the people involved in construction which can also affects marketing of construction businesses. This is because the human (people involved in construction) needs to undertake activities (actions) that are necessary to satisfy needs and wants of customers. This further explains why the manager's behaviour is a critical success factor of marketing a construction business. Human behaviour is best explained within the Theory of Planned Behaviour.

A central factor in the Theory of Planned Behaviour is the individual's intention to perform a given behaviour. The theory, as outlined by Ajzen (1991), postulates three conceptually independent determinants of intention as a predictor of behaviour. The first is the attitude towards the behaviour which refers to the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question (Ajzen, 1991). The second predictor is the subjective norm which involves the perceived social pressure to perform or not to perform the behaviour. The third is the degree of perceived behavioural control which also entails the perceived ease or difficulty of performing the behaviour and is assumed to reflect past experience as well as anticipated impediments and obstacles (Ajzen, 1991).

Another area of greater concern is the strategic orientation of construction businesses. Owner/manager strategic intent has been proven to strongly affect the strategic intent of the overall firm. The owner/manager intent is conceptualized as *growth orientation*. „*Growth orientation*“ therefore represents the owner/manager's strategic intent of expanding the firm. This provides a more accurate representation of the owner's intent to grow and expand the firm rapidly or slowly. Firms with high levels of growth orientation have moreover been proven to be more successful in achieving actual firm growth than those with low levels of firm growth orientation (Bradley et al., 2011; Wiklund & Shepard, 2003).

Firm growth orientation is measured in accordance with Miles and Snow's Typology of Strategy (1978) and the measures are mostly adopted from Gundry & Welsh (2001). The statements had previously been referred to as the —Implementable attributes of planned growthl (Gundry & Welsh, 2001). The statements measure the owner/manager's intent for firm growth orientation through 15 statements. However, in a study by Smedley (2014), instead of one single construct of 15 factors, factor analysis divided the 15 factors into four different dimensions as: market expansion, technological change, search for financing, and organizational development.

The strategic choices of businesses are greatly influenced by its owners and managers (Bell et al., 2004; Havnes & Senneseth, 2001) who interpret the ever-altering external environment and implement actions accordingly (Håkansson & Snehota, 2006; Singh et al., 2008). According to Havnes & Senneseth (2001), the growth rate of businesses is highly dependent on the intentions of the owner. Businesses with the intent to grow and expand tend to adopt marketing as a way of overcoming the challenges of unforgiving

economic environment, which in turn leads them to substantially more rapid growth. This is confirmed by the argument by Kotler and Keller (2012:3) that: *financial success often depends on marketing ability*". This conveys an idea that business functions such as finance, operations, accounting and others are important but marketing is key to survival of the business enterprise (Kotler and Keller, 2012).

The authors justify this saying that the other business functions: *won't really matter without sufficient demand for products and services so the firm can make a profit*. (Kotler and Keller, 2012:3). This implies that construction business management functions such as estimating, scheduling, operations, production, cost control, quality control among others, which appears to be the most important construction management functions will not matter without sufficient demand for construction product and services the business has to offer. This is indispensable to enhancing construction business survival, growth and profitability, in order for the business set-up to stay in business.

This explains why construction businesses constantly seek ways to outbid their competitors and explore new and/or less crowded areas of construction that may provide more jobs and higher profits. To achieve that objectives marketing may help construction companies to differentiate themselves from their competitors, cultivate and/or keep clients, and thereby create competitive advantage (Kotler and Keller, 2012; Arditi *et al.* 2008; Chen and Mohamed 2008)

4. Constructs for Human Factor based framework

Human factor based conceptual framework should incorporate human factor based constructs that can introduce human factor issues that has potential to affect the marketing management of construction business. In Tables 3, a summary of the human factor aspects and their respective constructs that measure the particular human factor is given. Table 3 further indicates the theoretical foundations for the human factors and the relevant citations. The three human factor issues when combined with the constructs in existing construction marketing framework, the resultant human factor based framework will provide a holistic and comprehensive framework capable of dealing with challenges with marketing in the construction industry.

The existing framework has many components such as analysis, plan formulation, implementation, monitor and feedback (Evaluation). These are procedures that lack human factor input needed for their performance. These must therefore be combined with the human factor constructs in studying issues that relate to marketing as a management function in the operations of a construction business enterprise.

Table 3: Constructs for human factor based framework

Human factor	Latent constructs	Theoretical Foundation	References
Acceptance	Perceived usefulness of marketing Perceived ease of use of marketing	Technology Acceptance Model	Venkatesh et al., (2003).
Behaviour	Attitude towards the behaviour Subjective norms Behavioural control	Theory of Planned Behaviour	Ajzen, (1991)
Strategic Orientation	Market expansion Technological change Search for financing Organizational development	Theory of Typology of Strategy	Miles and Snow (1978)

Source: Author's Literature Review

5. Conclusions

The human factors are critical to the success of marketing in construction particularly because of the peculiar nature of construction education that places little emphasis on management and marketing

management in particular. This directly or indirectly affect marketing in construction in diverse ways. The conspicuous effect are: reluctance to adoption and integration of marketing in construction businesses, misconceptions and misperceptions and lack of understanding about marketing in construction, beliefs in the industry that marketing is not applicable in construction, lack of in house marketing expertise to undertake marketing activities, marketing resource constraints and engineers' paradigm. However, extant construction marketing frameworks do not take into account these human factor issues that affect marketing. The constructs in extant construction marketing frameworks are essentially management procedures and processes. Human factor constructs are nonexistent in such frameworks.

This paper has identified three key constructs that are relevant to marketing issues in construction. The three constructs - acceptance, behaviour and strategic orientation - are useful in bridging the human factor gaps in extant construction marketing frameworks. The three constructs when combined with constructs in existing construction marketing frameworks will result in a holistic and comprehensive construction marketing framework, with wider coverage of marketing issues.

Future research must focus on development of integrated human factor based model for marketing of construction businesses. In particular, development of variables for measuring human factor latent constructs in construction marketing offers fruitful avenues for future research.

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