



## Management Decision

Relationship between competitive strategy and construction organisation performance: The moderating role of organisational characteristics

Luqman Oyekunle Oyewobi Abimbola Olukemi Windapo James Olabode Bamidele Rotimi Richard Ajayi Jimoh

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# Relationship between competitive strategy and construction organisation performance

## The moderating role of organisational characteristics

Luqman Oyekunle Oyewobi

*Department of Quantity Surveying,  
Federal University of Technology, Minna, Nigeria*

Abimbola Olukemi Windapo

*Department of Construction Economics and Management,  
University of Cape Town, Cape Town, South Africa*

James Olabode Bamidele Rotimi

*School of Engineering, Auckland University of Technology,  
Auckland, New Zealand, and*

Richard Ajayi Jimoh

*Department of Building, Federal University of Technology, Minna, Nigeria*

### Abstract

**Purpose** – The purpose of this paper is to examine the possible moderating role of organisational characteristics (organisational structure, management style and decision-making style) in the relationship between strategy and organisational performance among large construction organisations in South Africa.

**Design/methodology/approach** – The study adopted a quantitative research approach using a questionnaire survey to obtain data from 72 large construction organisations in South Africa. Using hierarchical multiple regression, the paper examines the relationship between the constructs discussed in the study.

**Findings** – The internal characteristics of the organisation form the vital basis for achieving optimal performance. The results obtained from the analysis revealed that decision-making style directly influences the measure of organisational effectiveness, while it could also be inferred that organisational characteristics partly moderate the relationship between competitive strategy and organisational performance. The findings indicate that internal characteristics is one of the means through which organisational strategic factors and contextual aspects are organised to achieve greater organisational performance levels.

**Originality/value** – The findings have theoretical implications for strategic management literature in construction as it extends the scope of research on strategic management from assessing a set of individual management practices to evaluating a complex mechanism that connects internal characteristics and competitive advantage. It is believed that this study will contribute positively to the role of organisational characteristics in the competitive strategy-performance relationships in large construction organisations in South Africa and to the ongoing discussion on emerging strategic management issues in construction.

**Keywords** Business, South Africa, Strategy, Performance, Organizational performance, Competitive strategy, Organizational characteristics, Large construction organizations

**Paper type** Research paper

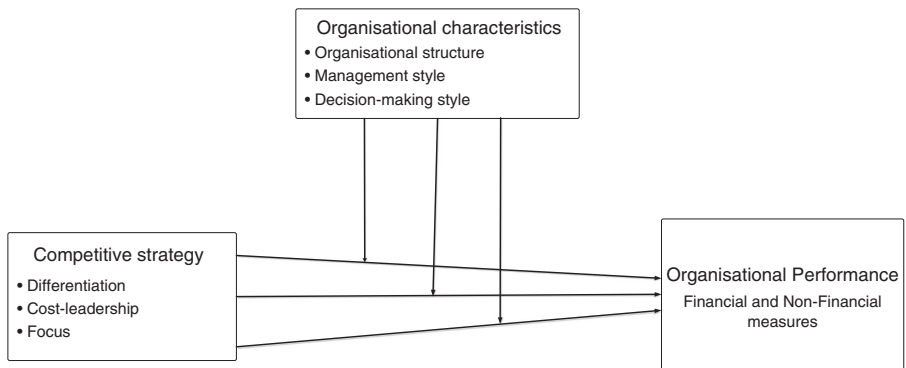


## Introduction

In a hypercompetitive and dynamic market place, organisations are continuously in search of opportunity to harness their characteristics in order to improve their performance and gain competitive advantage (Rudd *et al.*, 2008). This is because the responsiveness of an organisation to changes in the competitive environment is highly dependent on how well they align their characteristics with the strategy (Claver-Cortés *et al.*, 2012; Wilden *et al.*, 2013). This study considers organisational characteristic as the distinctive feature of an organisation that enables it to perform its statutory roles, take strategic decisions and get recognition as a business entity within the industry (Oyewobi, 2014). Organisational characteristic is viewed in this current study as the least tacit of concepts in the construction business, in spite of its significance in improving the performance of organisations. This study, therefore, intends to employ another perspective to organisational characteristics other than culture or leadership style in construction, which has received appreciable research attention (Chan and Chan, 2005; Limsila and Ogunlana, 2008; Ankrah *et al.*, 2009). Construction industry today like all other industries is facing increasingly intense competition in their business environment (Balatbat *et al.*, 2011). Competition stems from improved information systems and globalisation, coupled with the turbulent nature of the construction niche market. Construction organisations now struggle to survive in an ever-changing business environment (Yesil and Kaya, 2013). They strive to device means to be more competitively relevant, creative and innovative.

Different factors that affect the performance of organisations have been identified (e.g. Wilden *et al.*, 2013). Some of the factors that influence firm performance are the business strategy and organisational characteristics (decision-making style, organisational structure and management style) (Albaum *et al.*, 1995; Russ *et al.*, 1995; Giritli and Oraz, 2004; Ankrah *et al.*, 2009). The structure of an organisation as well as its style of management is key in configuring organisational resources, gaining competitive advantage and improving the firm's performance (Pertusa-Ortega *et al.*, 2010). Previous research studies (such as Guthrie and Datta, 1997; Li and Tan, 2013) have explored the fit between organisation's top managers (e.g. the chief executive officer (CEO)) and the organisation's competitive strategy. They found that a match between these two will result in improved organisational performance. However, considering the significant role played by organisational characteristics in developing an organisation's competitive strategy (Claver-Cortés *et al.*, 2012; Li and Tan, 2013), there is the need to align organisational characteristics with competitive strategy which researchers particularly in the construction management have not given much attention to. This study intends to explore how organisational characteristics will moderate the relationship between organisation's competitive strategy and performance and to ascertain how each generic strategy will influence the organisation's performance. This study strives to bridge this gap in the extant literature and contribute to the current discussion on strategic management in construction. Precisely, the study addresses how different organisational characteristics will influence different competitive strategies pursued by organisations to improve performance. This study presents a research conceptual model (Figure 1), relying on the theoretical underpinnings of generic competitive strategy (Porter, 1980, 1985), to establish the association between organisational characteristic and competitive strategy (Pertusa-Ortega, 2010; Claver-Cortés *et al.*, 2012) and those of contingency theory (Pertusa-Ortega, 2010; Gimzauskiene and Kloviene, 2011). The model is based on contingency perspectives to explore the strength, the nature of the association and the moderating effect of organisational characteristics on the strength of relationship

**Figure 1.**  
Conceptual model



between organisation's competitive strategy and organisational performance. This research hence empirically tests this model with survey data from 72 large construction organisations in South Africa. The classification of contractors in South Africa is determined by their financial and work capabilities. The financial capability is in terms of turnover, value of work completed and the amount of working capital at the disposal of the contractor to finance the project, while the work capability of contractor is ascertained by the largest contract executed and number of employees on the payroll. Therefore, any organisation that can tender for construction projects of R40 million and above, has annual turnover above R24 million and has employees above 100 is a large organisation (Grade 7-9).

The next section presents the theoretical underpinning of the study to examine the moderating effect of organisational characteristics on the strength of the relationship between organisations' performances. Then the study develops a set of theoretically grounded hypotheses to be tested empirically.

## Literature review and hypotheses development

### *Theoretical perspective and conceptual model*

There are different theoretical perspectives used in strategic management literature to explain the source of performance differentials in organisational performance. Hoskisson *et al.* (1999) contend that the development of theoretical approaches in the strategic management field of study has been dramatic over the years, and its focus can be likened to a swinging pendulum—swinging between an organisation's internal strengths, weaknesses, external opportunities and threats. Some of these perspectives directly or indirectly consider why there is heterogeneity in organisations' performance and how organisations select their strategies. Also, there is the interest in how organisations can achieve superior performance and attain a sustainable competitive advantage over industry rivals (Hawawini *et al.*, 2003; Bea and Haas, 2005).

Prominent among these theories in strategic management literature that has been used in explaining the variation in performance of organisations is the contingency theory (e.g. Pertusa-Ortega *et al.*, 2010; Wilden *et al.*, 2013; Ho, 2015). Researchers have employed contingency theory to examine the relationship between strategy, performance and competitive environment (Ho, 2015), and this perspective indicates that optimal organisational performance is contingent on strategy and organisational characteristics (structure, culture, management style and problem-solving style) among other elements (Garengo and Bititci, 2007; Pertusa-Ortega *et al.*, 2010; Wilden *et al.*, 2013). Literature also

identifies contingency theory as one of the theoretical perspectives employed by researchers in analysing how measures of performance enable a strategic fit to the environment (Gimzauskiene and Kloviene, 2011). For example, Hamilton and Shergill (1992) argue that changes in organisational strategy will alter organisational structure in such a way that strategy can be adequately formulated to achieve a higher performance. Chandler (1962) propounded an extensively used hypothesis on the relationship between structure strategy and their influence on performance. The main elements of this structural contingency theory include the organisational performance, strategy and organisational structure, and these core elements constitute some of the constructs considered by this study. However, Edelman *et al.* (2005) and Pertusa-Ortega *et al.* (2010) posit that it is established that organisational characteristic (structure) can moderate the relationship between competitive strategy and performance, but the impact is indirect. Furthermore, Dimmock (1999) confirms that a relationship exists between management style and competitive strategies, which invariably influences organisational performance. Hence, this research employs structural contingency theory to investigate how organisational characteristics impact organisational performance taking into cognisance the organisational strategy amongst other possible contingent factors. It is argued that contingency relationships exist among competitive strategies, organisational characteristics and organisational performance.

#### *Conceptual model and hypothesis development*

The study presents a conceptual model shown in Figure 1. Competitive strategies should be positively related to organisational performance. Although studies have revealed that the implementation of cost-leadership strategy and differentiation strategy positively influences performance in small and large organisations (Acquaah and Yasai-Ardekani, 2008; Acquaah, 2011; Agyapong and Boamah, 2013). Organisational researchers have also argued for multiple dimensions of organisational performance such as financial and non-financial measures (e.g. Wilden *et al.*, 2013). Therefore, the study argues that organisational performance can adopt either financial (e.g. market share growth) or non-financial measures (e.g. profitability or return on capital employed (ROCE)). Furthermore, it is possible that firms can excel in both dimensions, in only one, or neither. Accordingly, hypotheses are developed for both financial and non-financial measures of organisation performance.

#### *Organisational characteristics and performance*

Magnier-Watanabe and Senoo (2008) view organisational characteristics as attributes originating from both the management style adopted by the organisations, through its structure or strategy, and the organisational culture exemplified in the nature of its employees and relationship with the management. Baum and Wally (2003) assert that the relationship between strategy and organisational characteristics is complemented by strategy configuration and strategic fit, which is important in drawing conclusions about the moderating effect of the organisational characteristics on organisational performance. Different characteristics exhibited by organisations such as culture, structure or leadership style have been explored in literature, though many of these studies are either in the educational sector, manufacturing industry or marketing research domains, addressing the permanent structure of organisation (e.g. Goleman, 2000; Giritli and Oraz, 2004). Nonetheless, there are only few studies that directly focus on the construction industry (Lansley, 1987, 1994; Giritli and Oraz, 2004; Limsila and

Ogunlana, 2008). Construction organisations' characteristics are very unique in that they operate in an industry that is fragmented and project based (Giritli and Oraz, 2004). This is hinged on the fact that almost all construction works are awarded through a competitive tendering process which determines their success or failure in different competitive construction business environments (Ho, 2015), particularly in the South African context, where over 30 regulations that directly impact construction organisations' operation exist. These regulate the activities of the operators in the industry because of the decay and decline experienced by the construction industry in the past years (Construction Industry Development Board (cidb), 2004). Interventions from the South African government have given black people more economic power and opportunities and created strict regulatory frameworks and policies such as preferential procurement and the Broad-Based Black Economic Empowerment (BBBEE) charter. These policies and legislation (e.g. preferential procurement and Broad-Based Black Economic Empowerment Act) have led to uneven advantages amongst players in the industry and have reduced competition for contracts on part of the large indigenous and foreign contractors (cidb, 2004). The requirements of the regulatory policies and legislation constrain organisations in performing their business activities and influence the type of decisions taken by organisations (Phua, 2006). The presence of these regulations, as well as organisations' unique resources and capabilities, shapes the types of strategies construction organisations can adopt to attain optimal performance (Kale and Arditi, 2003; Phua, 2006). The Construction Industry Development Board (2012) seems to be cognisant of this, as it has called for construction organisations to develop an effective business and growth strategy to improve their competitiveness and efficiency in achieving superior performance. Developing and applying an effective strategy will allow construction organisations to match their internal fit (characteristics) to the rapidly changing business environment and attain sustained competitive advantage (Tan *et al.*, 2012; Wilden *et al.*, 2013).

This current study examines three key organisational characteristics – decision-making style, management style and organisational structure – which are acknowledged to have an impact on organisational performance (Lansley, 1987; Potosky and Ramakrishna, 2002). For instance, organisational theorists have examined the main relationship between strategy and structure, structure and performance and the link among strategy, structure and performance (Nandakumar *et al.*, 2010). The overall inferences drawn conclude that organisations must match structure and processes if the essence of business strategy is to achieve organisational goals (Bozkurt *et al.*, 2014). However, the relationship between strategy and performance is inconclusive and is moderated by many other organisational constructs. Also, structure exists within an organisation for management and control purposes. Hence, the style of management is an essential aspect of organisations.

Different variants of management or leadership style have been identified in literature to be prevalent in the construction industry; however, Lansley (1994) argues that success in construction is hinged on styles of management that are more authoritative and task oriented than in other industries. Uncertainties and complexities typify the business environment and as such require managers at all levels to make feasible decisions to survive in the turbulent market place. Decision making is the underlying activity influencing organisational performance, and as such, the quality of managers' decision is a key determinant element of organisational performance (Russ *et al.*, 1995). Managers make decisions that have significant impact on their organisation's performance. Penrose (1959/1995) and Burke and Steensma (1998) assert that organisational business performance is strongly and positively associated with the

effectiveness of managers' decision making. For this reason, this study posits that an assessment of the combined effects of these characteristics on the relationship between strategy and organisational performance may improve competitiveness of construction organisation. On this basis, we state hypothetically that organisational characteristics have a positive effect on organisational performance (Pertusa-Ortega *et al.*, 2010; Wilden *et al.*, 2013):

- H1. Organisational characteristics (organisational structure, management style and decision-making style) relate positively to organisational performance.

### *Competitive strategy and performance*

Competitive strategy is mainly the outcome of the pattern of decisions made by managers to guide an organisation on how to compete in the hypercompetitive business environment, by adding value to the processes that can influence organisational performance (Bozkurt *et al.*, 2014; Acquaah and Agyapong, 2015). This study considers Porter's generic typology as the dominant paradigm of competitive strategy (see Tansey *et al.*, 2014; Ho, 2015). This study argues that the idea underlying the concept of generic strategies is that competitive advantage is at the core of any strategy. Therefore, to achieve competitive advantage, this study posits that organisations need to make decisions, establish viable organisational structures and adopt good management styles to attain a desired competitive advantage and the scope within which it will achieve it. Porter (1980) identified that strategies for achieving above-average performance in any industry are cost leadership, differentiation and focus. Seedee (2012) argues that each of the generic strategies involves a basically different route to achieving performance, and organisations must decide what competitive advantage to pursue (cost leadership, differentiation or focus) to achieve above-industry performance. However, focus strategy has two variants – cost focus and differentiation focus. In Porter's view, organisations that develop, practice and sustain differentiation strategy will enjoy above-industry performance if their price premium surpasses the extra cost incurred in being unique. Construction organisations could differentiate through their product, the supply chain system, the tendering or bidding approach or through other means (Price, 2003). In fact, Li and Ling (2012), in a related study conducted to identify the critical strategies often employed by construction organisations in China, show that organisations are more likely to employ differentiation strategies to distinguish themselves from the industry competitors instead of pursuing a low-cost strategy or focus strategy. Similarly, they can also achieve above-industry performance if the organisation gains overall cost leadership and offers to execute construction work at comparable or at the lowest responsive prices than its competitors. However, organisations that intend to pursue either of these strategies, most especially in an industry that is project based, with each being unique, must bargain and take advantage of all possible sources of cost advantage, such as economies of scale, access to bulk purchase of material and proprietary technology (Gabrielsson *et al.*, 2015). The construction industry is very unique and clearly different from other industries because of its inherent characteristics (fragmentation), which hampers its performance (Beatham, 2003). The industry principally hinges on collaborative working relationships between teams of professional brought together in an ad hoc fashion for the realisation of clients' objectives (Anumba *et al.*, 2000). Although the existing literature in both construction and strategic management fields supports the idea that each of these three generic strategies influences organisational

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performance differently, and they are thus employed by organisations that desire to outperform their competitors (Kale and Ardit, 2002, 2003; Dikmen and Birgonul, 2003; Acquah and Agyapong, 2015). Following this line of argument, to examine the nature and pattern of the association between the variables, the study hypothesises as follows:

*H2.* Competitive strategies relate positively to organisational performance.

*H2a.* A differentiation strategy relates positively to organisational performance.

*H2b.* A cost-leadership strategy relates positively to organisational performance.

*H2c.* A focus strategy relates positively to organisational performance.

### *The moderating role of organisational characteristics*

The practices of strategic management are context specific, and they can influence organisational performance in various ways (Zheng *et al.*, 2010). In the field of strategy, there have been series of discussions on whether organisational characteristics influence performance or not. For instance, organisational characteristics (such as structure) influence organisational performance, but the nature of the relationship might depend upon the strategic circumstances confronting the organisation, and these are crucial issues for organisational practice and theory most especially in the construction industry (Giritli and Oraz, 2004; Ankrah *et al.*, 2009; Pertusa-Ortega *et al.*, 2010). A few research studies indicate that organisational characteristics may be influenced by competitive advantage, in order to have a successful implementation of strategies (Pertusa-Ortega *et al.*, 2010; Claver-Cortés *et al.*, 2012). Some strategy researchers (such as Pertusa-Ortega *et al.*, 2010; Claver-Cortés *et al.*, 2012) have shown that successful implementation of competitive strategies is contingent on organisational characteristics and that the effect can be stronger in large organisations, such as those examined in this study. Relationship between organisational characteristics, competitive strategy and organisation performance has been explored using the contingency approach (see Pertusa-Ortega *et al.*, 2010). However, it has also been established that the strategies that truly influences performance do not match planned ones by organisations. Barreto (2010), therefore, construed that effort of researchers in the strategic management field be geared towards the internal as well as external factors that may impede or provide opportunities for organisations to achieve their full capabilities. On this premise, this study contends that for organisations to achieve above-industry performance and realise benefit amass to competitive advantage, they must focus on aligning organisational characteristics and competitive strategy adopted by the organisation in the market place. Although Wilden *et al.* (2013) report that organisational performance based on contingency theoretical approach is hinged on the organisation's ability to achieve strategic fit with the business environment, there is a need to obtain and maintain internal fit between organisational characteristics and strategy to outperform industry competitors. On the contrary, Lenz (1981) argues that examining organisational characteristics and the coherence of organisational components with one another (strategy) is not that important as is the linkage between the elements of organisational characteristics, because no single strategy is applicable to every business, irrespective of the infrastructure and context of the environment (Chung *et al.*, 2012; Wilden *et al.*, 2013). Empirical evidence has shown that organisational characteristics (structure, decision-making style and management style) and strategies are related to company performance, but the impact on performance is complex, because some studies report a positive or direct relationship while some report negative or indirect relationship



(Russ *et al.*, 1995; Lavie, 2006; Pertusa-Ortega *et al.*, 2010; Nandakumar *et al.*, 2011). This inconclusiveness in the nature of relationship among the constructs constitutes a gap in the context of this research, because the degree to which large construction organisations can achieve superior performance by combining appropriate strategies and organisation characteristics is not known. In fact, Wilden *et al.* (2013) view organisational characteristic (structure) as a “contextual moderator” that is capable of defining the degree to which dynamic capabilities influence organisational performance. However, out of the few studies in construction management that have empirically investigated the impact of competitive strategy on organisational performance (e.g. Kale and Arditi, 2002, 2003; Dikmen and Birgonul, 2003), none have considered examining the relationship between competitive strategy and organisational characteristics, taking into cognisance several dimensions of both strategy and organisational characteristics at the same time. Meanwhile, our paper contended that the competitive strategy will be influenced by the organisation’s characteristics, which is a meta-resource the organisation has; this will increase the capability that will enable the organisation to develop a competitive strategy that permits it to obtain competitive advantages (Ortega, 2010). In view of the above and based on limited understanding of the circumstance under which organisational characteristics can moderate performance, this study hypothesises and empirically assesses a conceptual model that examines the contingency effects of organisational characteristics on the strength of relationship between competitive strategies and organisational performance. Little or no empirical research exists in the construction management literature that examines how organisational internal fit moderates these relationships. We therefore hypothesised the following:

- H3. Organisational characteristics moderate the strength of relationship between competitive strategies and organisational performance.

#### *Measuring organisational performance*

Organisational performance explains the degree to which organisations achieve their goals in every aspects of business. However, several methods have been used in conceptualising and measuring organisational performance (Ortega, 2010; Wilden *et al.*, 2013). Objective and subjective measures have been employed in the literature to establish the level of organisational performance (e.g. Yesil and Kaya, 2013; Wilden *et al.*, 2013). Yesil and Kaya (2013) reported that the measures of organisational performance have been a major subject of study among organisation theorists in the last three decades and business managers as well as strategy researchers who are still struggling with issues of performance measurement. Research efforts that examine the relationship between organisational characteristics, strategies and performance tend to use several performance measures. The current study is conducted within the construction management domain where several approaches to measuring the performance of construction organisation have been applied (e.g. Kale and Arditi, 2002, 2003; Phua, 2006; Tan *et al.*, 2012). In this study, objective financial measures and subjective measures have been used to determine the influence of strategy on organisational performance, although various organisational performance metrics abound in literature for use in evaluating the influence of business strategy and organisational characteristics on performance. Considering the advantages and disadvantages of the two opposing measures, this current research employs both subjective and objective measures of performance as in previous research (Jacobson, 1987; Nandakumar *et al.*, 2010). The subjective measurement variables used in this

study comprise market share, sales growth and profit margin. Other variables include profitability, people management (employment growth), employee turnover, financial management (financial ratios), capability, competent work force and growth in contract won/awarded. The objective variable is ROCE, which allows organisations to evaluate their overall performance, offers a target return for individual contract or project and enables the organisation to benchmark its performance with competitors.

## Research methods

### *Sample*

A convergent mixed methods approach was employed in conducting this research, but the results of the quantitative research approach using a questionnaire survey and pro forma document to obtain data from large construction organisations in South Africa are reported here. We selected our sample population of organisations for this study from the database of the Construction Industry Development Board (cidb) register of contractors in three major provinces (Gauteng, Kwazulu Natal and the Western Cape) of South Africa, which represents a large number of construction organisations operating in the industry, and this consists of the 577 large civil and building construction organisations. These three provinces were selected because almost 70 per cent of the public construction projects executed across South Africa in the last six years were carried out in these provinces (Statistics South Africa, 2012). We avoided small as well as those construction organisations that were not active in the construction market, as business processes relating to organisational characteristics or internal fit to achieve above-industry performance may differ across different classes, making organisation-wide generalisations difficult. Thus, we concentrated our attention on large construction organisations; these are organisations that can tender for projects whose value is above R40 million, have annual turnover above R24 million and have employees above 100. This category of construction organisations is considered to have established methods in allocating distinctive line of authority to members of the organisations, instead of following emergent strategies and less formalised responsibilities, as they are usually prevalent in small organisations.

A non-biased sampling technique was employed (Ankrah, 2007) in determining the sample size of 277 organisations that were surveyed. Out of the 30 construction organisation that were sampled during pilot survey, only 16 firms responded to this initial inquiry, representing a 53 per cent response rate. Data collected from the pilot survey were incorporated into the final data collected for the study, as suggested by Ankrah (2007), as there were differences in the questionnaire used for the final survey. Thereafter, senior managers or CEOs, where applicable, were considered as the major participants for this research, because it is believed they are likely to be more knowledgeable about the difficult construction industry terrain and have complete knowledge of the organisations' strategy and the strategic issues being investigated and the relevant processes underlying the development of strategies by considering the internal fit. Senior managers who have relevant positions within their respective organisations were sampled, and we guaranteed full anonymity should they participate in the survey. We stimulated the interest of CEOs/senior managers in partaking in the research through personal interactions with some of them at different fora organised by the cidb and through phone calls and subsequent e-mails as a reminder to participate in the survey. The data were collected using a web-based-administered survey because of the geographical spread of the companies involved in the study (Saunders *et al.*, 2009), and to improve the response rate, the managers were assured

that information provided by them would be handled confidentially. At the close of the survey, due to the length of the questionnaire and the high status of the respondents involved, we achieved a response rate of 26 per cent, amounting to 72 valid and usable responses (including the pilot study). Data obtained show that 75 per cent of the respondents were CEOs and 25 per cent were top managers in their respective companies. In addition, the results indicate that 63 per cent of the respondents have over 20 years of experience in the construction industry and 75 per cent had at least a degree qualification from construction-related programmes. These parameters were used to verify the correctness of the information provided, and therefore the study findings can be considered valid and reliable.

### *Questionnaire*

The variables used in measuring the constructs presented in the questionnaire for the research were derived from an extensive review of the literature, both within and outside the construction management research literature which permitted the authors to assess greater part of the analysed variables from valid scales. The content validity of the instrument was improved by sending the questionnaire to four academics and experts in questionnaire design to evaluate the extent to which the questions were comprehended and also to give expert opinion on the appropriateness of the suggested questions. The academics and experts provided useful and in-depth critiques of the questions and areas of possible improvements. Afterwards, the researcher's supervisors went through the questionnaire again to ensure that the improvement made by experts was effected and the questions raised were in line with the objectives of the study. To achieve population validity, the present research ensured the representativeness of the sample used by using a non-biased approach. The ecological validity, though not a major concern in quantitative research, was achieved through design of the questionnaire in such a way that there was no wrong or right answer. After a series of discussions and meetings, a clean copy of the questionnaire was made available, which was approved for the study. A pilot study was conducted in the study area to improve reliability and ensure the clarity of the questionnaire developed for the study. The pilot study participants consisted of 30 construction organisations that were randomly selected from the 277 companies before the main data collection. The response from the sampled respondents indicated that the questions were well understood, and no further improvements were made to the questionnaire.

In addition, the study adhered strictly to the guidelines provided by Podsakoff *et al.* (2003) on the design of questionnaire and also examined the convergent validity of the questionnaire by using factor analysis in determining the extent of correlation among the variables identified and the constructs used in the research; the significance of the factor loading and correlation results shows the existence of convergent validity (Hair *et al.*, 2010). The results of the factor analysis are presented in Tables I and II.

### *Dependent variable*

Organisational performance was measured as a multidimensional construct using financial data obtained from the organisations over a five-year period that were used to calculate the ROCE as well as subjective data obtained through survey, as the combination of different sources of data (primary and secondary) will minimise some of the problems often associated with common method bias (Nandakumar *et al.*, 2010; Wilden *et al.*, 2013). However, some researchers (Allen *et al.*, 2008; Pertusa-Ortega *et al.*, 2010)

		Factor loading		% variance explained	Cumulative %
		Factor 1	Factor 2		
<i>Decision-making style</i>					
Managers encourage employees to focus on key techniques and show independence and initiative in solving problem (directive)		0.826			
Management encourages analytic ideas and welcomes alternative approaches to problem solving (analytical)		0.703			
Managers strengthen creativity and encourage independent action (conceptual)		0.700			
Managers are aware of socio-cultural attitudes of the employee and they are being guided towards meaningful problem-solving strategies to create enabling environment (behavioural)		0.619		51	51
KMO = 0.60 and Bartlett's test of sphericity = 52.539, df = 6, $p = 0.00$					
<i>Management style</i>					
Participative management style					
Employees and managers present ideas, ask questions, listen and provide feedback		0.841			
Management recognises and rewards efficiency, excellence, openness, social skill and contribution to decisions		0.731			
Managers facilitate two-way communication, give room for employees to be heard and provide feedback during meetings		0.721		41	
Authoritative management style					
Employees tend to be more committed to goals when they are set by the management		0.841			
Management makes decisions in the best interests of employees after consultation		0.652			
Managers usually specify types of monitoring and require timely feedback, specific to their demand		0.547		14	45
KMO = 0.73 and Bartlett's test of sphericity = 104.197, df = 21, $p = 0.00$					
<i>Organisational structures</i>					
Mechanistic structure					
Management channels organisation's system to maintain healthy relationship with business environment		0.795			
The nature of the organisational structure encourages to improve strategy and delegation of authorities		0.738		45	
The organic approach					
Managers ensure integration and coordination of individual employee activities and align them to company's strategies		0.744			
Management controls how individual employee works or activities are spelt out		0.969		26	71
KMO = 0.60 and Bartlett's test of sphericity = 31.942, df = 6, $p = 0.00$					

**Table I.**  
Factor analysis  
result for the  
organisational  
characteristics  
constructs

	Factor loading		Eigenvalue	% variance explained	Cumulative %
	Factor 1	Factor 2			
<i>Differentiation strategy</i>					
On-schedule attributes					
Achieving on-schedule performance in construction operations	0.795				
Attempting to deliver constructed facilities ahead of schedule	0.782		1.271	31.784	
Quality attributes					
Achieving high quality beyond the requirements in the specifications		0.766			
Being highly responsive to client's request		0.751	1.155	28.873	60.657
KMO = 0.60 and Bartlett's test of sphericity = 4.163, df = 6, $p = 0.001$					
<i>Cost leadership strategy</i>					
Low-cost attributes					
Emphasis on tight control of selling/general/administrative expenses	0.906				
Emphasis on price competition (i.e. offering competitive price)	0.852		1.578	39.456	
Innovative attributes					
Emphasis on efficiency of securing raw materials (bargaining down the purchase price)		0.825			
Emphasis on operating efficiency		0.737	1.299	32.481	71.937
KMO = 0.6 and Bartlett's test of sphericity = 24.855, df = 6, $p = 0.00$					
<i>Focus strategy</i>					
Cost-advantage attributes					
Uniqueness of product (unique function or design)	0.872				
Offering specialty products tailored to a particular group of customers or users	0.837				
Targeting a clearly identified segment (i.e. focussing on a provincial region or specific group of customers)	0.692				
Offering products suitable for a high-price segment	0.63		2.336	58.397	58.397
KMO = 0.70 and Bartlett's test of sphericity = 52.749, df = 6, $p = 0.00$					

**Table II.**  
Factor analysis  
result for the  
constructs

consider subjective measures of performance as more appropriate in measuring organisational performance of organisations because they strengthen the generalisability of the findings. The subjective measures – self-reported measures of performance – were classified into two types. The first was competitor's effectiveness, which was defined by Nandakumar (2008) as the degree to which performance of an organisation has improved its competitive performance in terms of people management, productivity (the total turnover of the companies projects less all costs subcontracted or supplied by other parties), profitability, customer satisfaction, investment (measures of organisation's investment), financial management (financial ratios), capability, human resource

(competent work force) and market growth/share. The respondents were asked to rate the performance based on these items in the last five years. The second subjective performance was tagged as objective achievement, and this was described by Nandakumar (2008) as the degree to which an organisation has been able to achieve both its short-term and long-term performance objectives to reduce the challenges. This was measured with six items, and the respondents were requested to indicate the degree to which their organisations have been able to achieve their overall objectives in the last five years on a five-point Likert-type scale.

### *Independent variables*

*Organisational characteristics.* Measures of organisational characteristics namely organisational structure, decision-making style and management style (Lansley, 1987; Russ *et al.*, 1995; Amzat and Idris, 2012) were employed in this study. Organisational structure and decision-making style were measured with four items, while management style was estimated with six items. The respondents were asked to rate the influence of these characteristics on their organisations in the last five years. From Table I, it could be seen that organisational structure had Cronbach's  $\alpha$  values below the acceptable threshold (0.60-0.70). As a result, the measures of organisational structure were subjected to a data reduction process using factor analysis before being used for further analysis as recommended by Nandakumar (2008). Moreover, to measure the degree to which an organisation may, or may not, exhibit these internal fit, the study included factor analysis indicators that possess absolute value above 0.5 threshold (Field, 2013) as used by Nandakumar (2008). All the variables retained have a factor loading above the required threshold. This illustrates convergent validity where all the loadings exceeded a threshold of 0.65 as recommended by Hair *et al.* (2010). The results of the factor analysis are reported in Table I. However, the resulting Cronbach's  $\alpha$  statistics for organisational structure is 0.53 while that of management style and decision-making style is well above the 0.60-0.70 threshold range, and the Kaiser-Meyer-Olkin (KMO) statistic (range between 0.6 and 0.73) and Bartlett test for sphericity confirm the adequacy of the sample for factor analysis. The analysis indicates two factors – organisational structure and mechanistic structure – which explained 71 per cent of the variance. The mechanistic structure is based on establishing guidelines or standard procedures for operation, which allows the organisation to influence individual behaviour. The mechanistic approach is often associated with cost-leadership strategies (Govindarajan, 1988; Miller, 1988).

The organic approach. This loosely designed structure aims to create a favourable environment within an organisation, with few levels of hierarchy and a lot of flexibility (Homburg and Furst, 2005). An organic structure is beneficial to organisational performance in an uncertain, dynamic and complex environment, and differentiation strategies are typically linked to organic structures (Govindarajan, 1988; Miller, 1988; Martínez-León and Martínez-García, 2011).

Factor analysis also revealed two components for management style that explained 55 per cent variance, and these are regarded as participative and authoritative management styles.

Participative management style. Participative management is based on the belief that involving subordinates in the decision-making process motivates staff improves their commitment to the organisation, increases learning capabilities, and generates better ideas and decisions – ultimately improving performance (Somech, 2006; Amzat and Idris, 2012).

Authoritative management style. This is synonymous with an achievement-oriented style, where challenging goals are set, performance improvements are sought and emphasis is placed on performance excellence, and there is an expectation that subordinates will attain high standards (Baum and Wally, 2003; Yukl, 2006).

Factor analysis of the decision-making style clustered on one factor – directive decision-making style – that explained 51 per cent of the variance.

Directive decision-making style. This has been related to high performance where there are established rules for behaviour in team work, as it induces team members to devise ways of working effectively together to accomplish organisational objectives (Sagi *et al.*, 2002). Contingency theory points out that there is no one “correct” decision-making style, rather different styles will be appropriate for different companies in different contexts.

### *Competitive strategies*

The measures of competitive strategies were obtained from Kale and Ardit (2002), Nandakumar *et al.* (2010) and Pamulu (2010) studies. The scale evaluated the extent to which organisation emphasises or employs the features of business strategy defined in improving the performance of its organisation and achieve overall objectives compared to its industry competitors. The above measures were adapted for this research because of their ability to capture the extent to which the generic competitive strategies measured organisation strategic position, and this has been widely validated (Kale and Ardit 2002; Tansey *et al.*, 2014; Ho, 2015). Factor analysis was used to check if variables that experienced minor loss of information may be excluded. The results of Cronbach’s  $\alpha$ , KMO and Bartlett test statistics for competitive strategies variables fell within their acceptable thresholds. Table II shows the extracted factors for each of the generic strategies and the percentage of variance explained.

Two components were extracted from differentiation strategy and were referred to as on-schedule attributes and quality attributes. For cost-leadership strategy, two strategic behaviours were established from the clustered variables, and these were renamed low-cost attributes and innovative attributes. Only one factor was clustered for focus strategy variables, and this was tagged cost-advantage attribute.

## **Results and discussion**

Results obtained from the research survey are discussed and presented in the following sections. To determine the competitive strategy and organisational characteristics interaction variables, the comparative strategy and organisational characteristics variables were centred and multiplied. For instance, in creating the interaction between cost-leadership strategy and management style, both the centred variables of cost-leadership strategy and management style were multiplied. This was done to reduce the multicollinearity effects among the variables in the estimation process as it has been argued that de-meaning the variables before interacting them reduces the possibility of multicollinearity (Acquaah and Agyapong, 2015).

The study performed moderated regression in order to better understand the moderating effects of environmental factors on the constructs (decision-making style and competitive strategy) and organisational performance. Descriptive and Pearson’s product-moment correlation analytical techniques were used in establishing the nature of association among the variables. The study employed moderated hierarchical regression to test the predictive power of the set of variables used in the study

(organisational characteristics, strategies and performance) and to assess the relative contribution of each individual construct (Hair *et al.*, 2010). Hence, moderated regression was used to determine if there was a significant relationship between the dependent and the independent variables as identified in the hypotheses. The measures of performance were the dependent variables while organisational characteristics and competitive strategy were the independent variables moderated by the environmental dimensions (moderators) as stated above.

### Descriptive and reliability analysis

Table III shows the descriptive statistics and the Cronbach's  $\alpha$  for the research constructs used in this study. Descriptive statistics were used to represent the data in terms of central tendencies (through mean), as well as dispersion (through the standard deviation) in assessing the constructs used in the survey. These measures were used to generate a systematic understanding of the type of data. The Cronbach's  $\alpha$  was used to examine the internal consistency and the extent of co-variation among the items measuring each construct (Chew *et al.*, 2008). Although several authors have proposed that a minimum acceptable Cronbach's  $\alpha$  value is 0.7, Nandakumar (2008) recommended that 0.6 could be considered acceptable in exploratory research such as the present study. In an earlier study, Van de Ven and Ferry (1980) assert that a Cronbach's  $\alpha$  coefficient of 0.55 is acceptable for measuring broad constructs.

#### *The main and moderating effect of organisational characteristics*

The following hypotheses were tested to guide the direction of the study:

- H1.* Organisational characteristics (organisational structure, management style and decision-making style) relate positively to organisational performance.
- H2.* Competitive strategies relate positively to organisational performance.
- H2a.* A differentiation strategy relates positively to organisational performance.
- H2b.* A cost-leadership strategy relates positively to organisational performance.
- H2c.* A focus strategy relates positively to organisational performance.
- H3.* Organisational characteristics moderate the strength of relationship between competitive strategies and organisational performance.

Constructs	Measurement item	$\alpha$							Cronbach's $\alpha$
		value	Minimum	Maximum	Mean	SE	SD		
Organisational characteristic	1. Management style	0.75	1.25	5	3.82	0.11	0.94	0.750	
	2. Decision-making style	0.68	1.75	5	4.01	0.1	0.81	0.680	
	3. Organisational structure	0.53	1.5	5	3.92	0.1	0.87	0.530	
Competitive strategies	1. Differentiation	0.94	2	5	4.12	0.09	0.79	0.940	
	2. Cost leadership	0.78	1.63	5	3.97	0.1	0.85	0.775	
	3. Focus	0.84	2	5	4.04	0.1	0.85	0.842	
Organisational Performance	1. Objective achievement	0.78	2.75	5	4.16	0.09	0.8	0.784	
	2. Competitor's effectiveness	0.83	1.6	5	4.15	0.1	0.86	0.834	

**Table III.**  
Descriptive statistics and construct reliability



To test the hypotheses, all the variables for inclusion in the model were correlated. Table IV shows the correlation matrix for all the variables. In order to test the moderating effect of organisational characteristics on the strength of relationship between competitive strategies and organisational performance, a moderated hierarchical regression analysis was employed. This was used to examine the interactions between the variables included in the model. Dunlap and Kemery (1987) and Jaccard *et al.* (1990) suggested that a transformation that involved standardising the predictor variables is required prior to the formation of product terms. To this effect, the predictor variables were standardised before examining the interaction effects.

Moderated hierarchical regression was used to isolate the main effects of organisational characteristics on organisational performance and to separately examine how each competitive strategies interacted with the relationship between organisational characteristics and performance. The study's overall procedure for each of the response variables (measures of performance) was the same. Two steps were involved in the analysis. In the first step, a set of organisational characteristics were introduced in order to control any effect strategy might have on measure of performance. In the second step, the interaction variables were added; a significant effect at this point between strategy and organisational performance will give support to *H1*. Each of the measures of performance was represented by two models each in all the cases, and according to Jaccard *et al.* (1990), for a moderating or an interaction effect to be present, the difference between the  $R^2$  values in model 1 and 2 should be statistically significant.

*Effects of organisational characteristics on differentiation strategy and organisational performance*

*Main effects.* Model 1 for each measure of organisational performance in Table V explored the main effects of organisational characteristics on the relationship between strategy and organisational performance. From Table V, model 1, with ROCE as measure of performance, was significant ( $R^2 = 0.152, F = 3.008, p < 0.05$ ) and so also is model 3 in competitor's effectiveness of performance ( $R^2 = 0.132, F = 2.544, p < 0.05$ ). Specifically, decision-making style was found to be significantly linked to competitors measure of effectiveness in all the cases, with the coefficient ranging between ( $B = 0.307-316, p < 0.01$ ). However, all the models with objective achievement as measure of performance were insignificant at  $p < 0.1$ . In assessing only the main effects

	1	2	3	4	5	6	7	8	9
1 Decision-making style	1								
2 Management style	0.142	1							
3 Organisational structure	0.008	0.147	1						
4 Differentiation	0.035	0.001	0.169	1					
5 Cost leadership	-0.030	0.163	-0.114	0.209*	1				
6 Focus	0.115	0.030	0.034	0.109	0.111	1			
7 competitor's effectiveness	0.330**	0.180	-0.028	0.048	0.119	0.065	1		
8 Objective achievement	0.148	0.070	0.139	0.146	0.185	0.091	-0.052	1	
9 ROCE	0.147	-0.045	-0.127	-0.345**	0.120	-0.007	0.173	-0.077	1

**Notes:** ROCE, return on capital employed. \*,\*\*Correlation is significant at the 0.05 and 0.01 levels (2-tailed), respectively

**Table IV.**  
Correlation matrix  
for competitive  
strategies and  
performance  
measures

**Table V.**  
The main and moderating effects of organisational characteristics on differentiation strategy and organisational performance

Independent variables	ROCE		Competitor's effectiveness		Objective achievement	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Differentiation	-0.340***	-0.361***	0.047	-0.090	0.122	0.085
Decision-making style (DMS)	0.168	0.110	0.309***	0.329***	0.137	0.185
Management style (MGS)	-0.059	-0.100	0.145	0.176	0.034	0.042
Organisational structure (OGS)	-0.062	-0.177	-0.060	-0.112	0.112	0.150
Decision-making style × differentiation		-0.266**		0.167		0.250*
Management style × differentiation		0.098		0.210*		-0.210*
Organisational structure × differentiation			0.348***	0.232*		0.158
DMS × MGS × OGS			0.006	-0.265**		-0.223*
<i>R</i>	0.390	0.564	0.363	0.520	0.237	0.410
<i>R</i> <sup>2</sup>	0.152	0.318	0.132	0.271	0.056	0.168
$\Delta F$	3.008**	3.672***	2.544**	2.925***	0.993	1.594

**Notes:** ROCE, return on capital employed. \* $p < 0.10$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

model presented in Table V, the findings suggest that differentiation strategy is negatively related to financial measure of performance and has a statistically significant influence on performance. The positive sign of the regression coefficients when differentiation strategy was regressed against non-financial measures of performance indicates that performance increases for those organisations that employed subjective measures of performance relative to their competitors when they differentiate through either quality or completing projects on-schedule strategy. Particularly, the findings indicate that the relationship between differentiation strategy and performance is positive with non-financial measures of performance and negatively related to financial measures significantly. Hence, the results give support to *H1* as decision-making style was found to be positively and significant related to non-financial measure of performance, while the findings partially give support for *H2a*.

*Moderating effects.* In examining the moderating effects of organisational characteristics on the strength of relationship between differentiation strategy and organisational performance, the rule stated by Jaccard *et al.* (1990) was followed. As a set, the interaction between differentiation strategy and ROCE as well as competitors effectiveness measure could be said to be moderated by organisational characteristics. This was as a result of significant improvement in the  $R^2$  values as seen in model 2 for ROCE ( $R^2 = 0.318$ ,  $F = 3.672$ ,  $p < 0.01$ ) and competitor's effectiveness ( $R^2 = 0.271$ ,  $F = 2.925$ ,  $p < 0.01$ ) in Table V. Table V reveals that differentiation strategy interacted negatively with decision-making style ( $B = -0.266$ ,  $p < 0.01$ ) and positively with organisational structure ( $B = 0.348$ ,  $p < 0.01$ ) with respect to ROCE measure of performance to provide some support for the hypothesis. From model 2, with respect to competitor's effectiveness measures in Table V, it was the interaction between management style ( $B = 0.210$ ,  $p < 0.10$ ), organisational structure ( $B = 0.232$ ,  $p < 0.10$ ) and the combined effects of the organisational characteristics ( $B = -0.265$ ,  $p < 0.05$ ) and differentiation strategy that contributed to the significance of the model. However, the same interaction occurred between differentiation strategy, decision-making style ( $B = 0.250$ ,  $p < 0.10$ ), management style ( $B = -0.210$ ,  $p < 0.10$ ) and combined effects of organisational characteristics ( $B = -0.223$ ,  $p < 0.10$ ), but this was not significant enough to improve the  $R^2$  square

significantly. The inclusion of the interaction variables provides an explanatory contribution above that of the main effect models (1, 3 and 5) (e.g. for model 1  $\Delta R^2 = 0.166$ ,  $\Delta F = 3.672$ ,  $p < 0.001$ ). This suggests that moderating effects indeed exist which depicts that the internal fit of the organisation moderates the relationship between its competitive strategy and performance. This provide support for *H3*.

*Effects of organisational characteristics on cost-leadership strategy and performance*

*Main effects.* Table VI examines the main effects of organisational characteristics on the relationship between cost-leadership strategy and organisational performance. From Table VI, model 1, the ROCE as measure of performance, was insignificant ( $R^2 = 0.055$ ,  $F = 0.979$ ,  $p \neq 0.05$ ). However, decision-making style is significantly related to competitor’s effectiveness measure with the coefficient (*B*) ranging between) 0.316 and 343 ( $p < 0.01$ ). Cost leadership is found to be significantly related to objective achievement measures when the main effect was examined ( $\beta = 0.210$ ,  $p < 0.10$ ). The findings suggest that cost-leadership strategy is positively related to all the measures of performance and has a statistically significant influence on objective achievement as a performance measure. The positive sign of the regression coefficients between cost leadership and all measures of performance provides support for *H2b* that cost leadership is positively related to performance.

*Moderating effects.* In exploring the moderating effects of organisational characteristics on the strength of relationship between cost-leadership strategy and measures of organisational performance, moderated hierarchical regression was employed to show if an interaction effect exists, and if the interaction effect provides a significant change that is above and over the model for the main effect (Ortega, 2010). The introduction of the interaction terms shows that organisational structure has interaction effect on the relationship between cost-leadership strategy and objective achievement performance measure ( $B = 0.219$ ,  $p < 0.10$ ). The interaction between cost-leadership strategy and ROCE shows that the relationship was moderated by organisational characteristics, though insignificantly ( $\Delta R^2 = 0.015$ ,  $p \neq 0.10$ ). However, organisational characteristics (decision-making style) were found to have significant moderating effect on the strength of relationship between cost-leadership

Independent variables	ROCE		Competitor’s effectiveness		Objective achievement	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Cost leadership	0.126	0.104	0.104	0.088	0.210*	0.189
Decision-making style (DMS)	0.162	0.133	0.316***	0.343***	0.154	0.139
Management style (MGS)	-0.073	-0.081	0.123	0.145	-0.010	0.030
Organisational structure (OGS)	-0.103	-0.089	-0.037	-0.088	0.163	0.219*
Decision-making style × cost leadership		0.104		-0.120		0.023
Management style × cost leadership		-0.077		0.075		-0.146
Organisational structure × cost leadership		0.040		0.173		-0.029
DMS × MGS × OGS		-0.020		-0.173		-0.148
<i>R</i>	0.235	0.249	0.374	0.462	0.289	0.355
<i>R</i> <sup>2</sup>	0.055	0.062	0.140	0.213	0.083	0.126
$\Delta F$	0.979	0.521	2.276**	2.137**	1.524	1.138

**Notes:** ROCE, return on capital employed. \* $p < 0.10$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

**Table VI.**  
The main and moderating effects of organisational characteristics on cost-leadership strategy and performance

strategy and competitor's effectiveness measure of performance due to the significant improvement in the  $R^2$  square values as seen in model 4 for competitor's effectiveness ( $R^2 = 0.213$ ,  $F = 2.137$ ,  $p < 0.05$ ). Based on these findings, we suggest that interaction effects are indeed present as the introduction of the interaction terms provides an explanatory contribution over and above that of the main effect ( $\Delta R^2$ ) for all the moderated models. This therefore supports  $H3$  that states organisational characteristics moderate the strength of relationship between competitive strategies and organisational performance.

*Effects of organisational characteristics on focus strategy and performance*

*Main effects.* From Table VII, the results of models 1, 3 and 5 indicated the main effects of organisational characteristics on the relationship between focus strategy and organisational performance. The models 3 and 5 show that focus strategy is positively related to non-financial measures of performance, though insignificantly. However, the findings revealed that decision-making style exhibits significant interaction in the relationship between strategy and non-financial measure of performance with the coefficient ( $B$ ) ranging between 0.275 and 307 ( $p < 0.001$ ). In assessing only the main effects in model 1 and moderated effect in model 2 as shown in Table VII, the findings suggest that focus strategy is negatively related to financial measure of performance and positively related to performance as reflected by the signs of the regression coefficients. Hence, we conclude that the results partially give support for  $H2c$ .

*Moderating effects.* From Table VII, no moderation exists between measures of organisational performance and focus strategy. However, overall, it could be inferred that the moderation results gave support to  $H3$  that organisational characteristics moderate the relationship between competitive strategy and organisational performance as there is a change in the  $R^2$  values of the main effects and moderation effect for the three measures of performance presented here.

*Discussion of results*

The research examines the main effect and moderating effect of organisational characteristics on the strength of the relationship between competitive strategies and organisational performance. The findings from the main and moderated effects

**Table VII.**  
The main and moderating effects of organisational characteristics on focus strategy and performance

Independent variables	ROCE		Competitor's effectiveness		Objective achievement	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Focus	-0.020	-0.027	0.027	0.006	0.070	0.038
Decision-making style (DMS)	0.157	0.163	0.307***	0.275**	0.134	0.146
Management style (MGS)	-0.049	-0.023	0.143	0.161	0.030	0.068
Organisational structure (OGS)	-0.120	-0.140	-0.052	-0.009	0.131	0.137
Decision-making style × focus		-0.085		0.080		0.051
Management style × focus		0.100		-0.105		-0.002
Organisational structure × focus		0.062		-0.104		0.163
DMS × MGS × OGS		0.015		-0.197		-0.123
$R$	0.201	0.235	0.361	0.416	0.215	0.300
$R^2$	0.041	0.055	0.130	0.173	0.046	0.090
$\Delta F$	0.709	0.460	2.512**	1.647	0.815	0.622

**Notes:** ROCE, return on capital employed. \*\* $p < 0.05$ ; \*\*\* $p < 0.01$

indicated that differentiation strategy as well as focus strategy are negatively related to financial measures of organisational performance but positively related to non-financial measures. These findings are not in consonance with the empirical evidence given by Spencer *et al.* (2009) and Teeratansirikool *et al.* (2013) who posited that differentiation strategy influences organisational performance through financial measures. Nonetheless, the results were in tandem with assertion of Kale and Ardit (2003) and Hoque (2004) that subjective measures of performance are better predictors of organisations performance. On the contrary, cost leadership is positively related to all the measures of performance. This aligned well to Olson and Slater (2002) and Gosselin (2005) argument as cost-leadership organisations happened to be the only strategy that is positively related to financial performance measures. This gives the true picture of the construction industry where construction organisations are selected based on competitive price (Ho, 2015).

Some significant interactions exist among the measures of organisational characteristics (decision-making style, organisational structure and management style) and competitive strategies employed by the organisations. For instance, organisational structure is found to have an interacting effect on the relationship between cost-leadership strategy and objective achievement performance measure, a finding similar to those reported by Jogaratnam and Tse (2006) and by Tarigan (2005). Decision-making styles show interaction with both the main and moderated relationship between strategy and competitor's effectiveness measure of performance. These findings are in line with results from previous studies (such as Albaum *et al.*, 1995; Russ *et al.*, 1995) where management and decision-making styles were reported to have a significant relationship with organisational performance. In a related research, few authors found that certain organisational characteristics (such as structure and styles) had significant influence on organisational performance and that this indeed could enhance an organisation's competitive advantage (Lansley, 1994; Goll and Rasheed, 1997; Baum and Wally, 2003; Martínez-León and Martínez-García, 2011). The findings from the study also indicate that internal characteristics is one of the means through which organisational strategic factors and contextual are organised to achieve greater organisational performance levels. The factor analysis was used to identify some strategic behaviour and internal fit that will permit construction organisation to grow and sustain competitiveness to increase returns and satisfy its stakeholders (Tan *et al.*, 2012). Two components were extracted from differentiation strategy and were referred to as on-schedule attributes and quality attributes. For cost-leadership strategy, two strategic behaviours were established from the clustered variables, and these were renamed low-cost attributes and innovative attributes. Only one factor was clustered for focus strategy variables, and this was tagged as cost-advantage attribute. With respect to organisational characteristics, for management style, participative and authoritative traits were identified, and for organisational structure, organic and mechanistic structures were identified, while decision-making style extracted only one factor and the name remain unchanged. In summary, these results strengthen our argument that contingency relationships exist among competitive strategies, organisational characteristics and organisational performance.

## Conclusions

This study examines the moderating role of organisational characteristics on the relationship between competitive strategies and organisational performance. This study makes several contributions to the literature on strategy and organisational characteristics in the construction context. First, this study considers organisational

characteristics relating to the development of competitive strategies. Decision-making style and organisational structure appear to have interaction effects on the measures of organisational performance and strategy, while such interaction effect could not be established with management style; however, overall, it can be concluded that organisational characteristics moderate the relationship between competitive strategy and organisational performance. Second, this current study extends the evaluation of Porter's generic competitive strategies, providing empirical evidence that each of these three generic strategies influences organisational performance. These findings are consistent with the results of previous studies that focussed on a particular industry and also contribute to the literature that implementing multiple strategies results in higher performance.

The findings presented here have implications for both managers of construction organisations and researchers in strategic management. Based on the contingency theory, it is essential that managers must identify and define which of their strategic actions will guarantee above-industry performance within their organisation in a hypercompetitive environment like construction. This study also offers insight into internal fit (characteristics) that may help improve organisational performance and gives some suggestions on the performance results of developing different competitive strategies with different organisational characteristics. For instance, an organisation should adopt cost-leadership strategy when the structure is mechanistic and differentiation strategy when the structure is organic in nature. However, contingency theory indicates that there is no one "correct" decision-making style, rather different styles will be appropriate for different companies in different contexts.

The results of this study are limited by the fact that no comparative studies have been undertaken prior to this; the data used were cross-sectional and elicited from 72 large construction organisations. This research is based on South African construction industry. However, some of the variables and constructs used in this research have theoretical backing and have also been validated empirically in previous research; however, this is not an assurance that the measures used were faultless. It is therefore recommended that further studies should be conducted to assess the moderating effect of organisational characteristics on the relationship between competitive strategies and organisational performance in small- and medium-sized enterprises to enhance generalisation of findings. Moreover, environmental dimensions might also impact the relationship between organisational constructs, hence further research is required to evaluate the effects of different environmental dimensions (munificence, dynamism, etc.) on the relationship among strategies, organisational characteristics and performance. This may perhaps show how different strategies and organisational characteristics have an impact on performance in different contexts.

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**Further reading**

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**About the authors**

Dr Luqman Oyekunle Oyewobi is a Lecturer in the Department of Quantity Surveying, School of Environmental Technology, Federal University of Technology, Minna, Niger State, Nigeria. He holds Diploma, BTech (Hons) and MTech all in Quantity Surveying. He is a Corporate member of the Nigerian Institute of Quantity Surveyors and also a Registered Quantity Surveyor with the Quantity Surveyors Registration Board of Nigeria. He recently completed his PhD in Construction Economics and Management from the Department of Construction Economics and Management, University of Cape Town, South Africa, and his research interests include organisational development, performance measurement, strategic performance management and general area of construction management. Dr Luqman Oyekunle Oyewobi is the corresponding author and can be contacted at: oywluq001@myuct.ac.za

Dr Abimbola Olukemi Windapo is a PhD holder and a Senior Lecturer in the Department of Construction Economics and Management, University of Cape Town, South Africa. Dr Windapo is a Fellow at the Nigerian Institute of Builders and a Register Builder with the Council of Registered Builders of Nigeria (CORBON). She is a Registered Construction Project Manager with the South African Council for the Project and Construction management Profession (SACPCMP). She has more than 26 years of experience in the construction industry. Dr Windapo has practiced in and written, lectured and researched on building regulations, construction innovation, planning, contractor development and project performance.

Dr James Olabode Bamidele Rotimi has a background in construction management and publishes in the general area of construction projects and post-disaster reconstruction management. He is a Senior Lecturer and Programme Leader for the Masters in Construction Management Programme at the Auckland University of Technology, New Zealand. James has extensive tertiary teaching and research experience and is currently the Editor of the *International Journal of Construction Supply Chain Management*.

Dr Richard Ajayi Jimoh is a Senior Lecturer in the Department of Building, Federal University of Technology, Minna, Niger State, Nigeria. Dr Jimoh is a Corporate Member of the Nigerian Institute of Building and a Registered Builder with the Council of Registered Builders of Nigeria (CORBON). He has more than ten years of experience in both teaching and practicing in the construction industry. Dr Jimoh has practised in and lectured and researched on sustainable housing and social housing development.

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