

IMPACT OF ORGANISATIONAL STRUCTURE AND STRATEGIES ON CONSTRUCTION ORGANISATIONS' PERFORMANCE

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ABSTRACT

There is an age long interest that the strategic management literature requires a better understanding of how the structure and strategy of an organisation influence its corporate performance. This standing interest increases the number of studies on structure-strategy-performance trilogy, but yet the outcomes are inconclusive. This paper examines how organisational structure and strategies influence organisation's corporate performance, and investigate whether organisational structure has a moderating impact on the association between organisational performance and strategy. This is achieved by undertaking a Meta-analysis of literature on strategic management and explores the elements of organisational structure with respect to strategies and corporate performance. Based on the identified dimensions in literature, a questionnaire survey approach was adopted to obtain quantitative data from large construction organisations in South Africa. The data were analysed using correlation and regression analysis. The results revealed that organisational structure has an explanatory effect on the relationship between strategy and organisational corporate performance. The study provides a better understanding of the relationship between organisational structure, strategies and performance. It will also contribute to current discuss on the strategic planning practices in the global construction environment.

Keywords: construction organisation, organisational structure, corporate performance, strategies.

INTRODUCTION

Over the past few years, the constraints confronting the construction industry have been emphasised by both the practitioners and researchers. Construction industry is identified as a fragmented and complex industry sector that is faced with incessant challenges and huge demands due to

unstable government policies and the uncertain nature of the construction business environment where organisation operates (Egan, 1998; Beatham *et al.*, 2004; Balatbat *et al.*, 2011). Constantly, construction organisation functions in an industry that is characterised with marginal profit, competitive tendering procedure with fluctuating market conditions, and prolonged negotiation period to remain in business (Soetanto *et al.*, 2007). Many of these challenges requires effective and efficient strategies or long-term decision making processes which many construction organisations commonly lack to ensue forward thinking compared to other industries (Soetanto *et al.*, 2007). However, Hao *et al.* (2012) contend that businesses have persistently altered organisational structures in an attempt to achieve superior performance. Achieving superior business excellence is the major objective of many business organisations, and effective strategy formation and implementation have been identified as the key elements (Tavitiyaman *et al.*, 2012). Industrial organisational theory contends that implementation of strategies may be facilitated or impaired by organisational structure (Nahm *et al.*, 2003). This happens, as organisation tries to keep pace with the dynamic business external environment to explore new opportunities by drawing on organisation's strength to neutralise the external threats. Altinay and Altinay (2004) argue that implementation of relevant organisational structure is a prerequisite for achieving business strategic goals, and identifying fresh opportunities and translating business ideas into realities. Against this backdrop, this paper aims at investigating the structure-strategy-performance link in the context of large construction organisations. This is considered important due to role of construction sector in the economic development of a nation and its linkages with other sectors of the economy (Bowen *et al.*, 2007). The remaining part of this paper discusses the structure, strategy and organisational performance constructs. Following this is the methodology and methods of data collection, the discussion of results and lastly, conclusions drawn from the findings.

LITERATURE REVIEW

There is an age long interest that the strategic management literature requires a better understanding of how the structure and strategy of an organisation influence its corporate performance. This section of the paper review existing literature related to the structure-strategy-performance trilogy to put the paper in the right perspective.

Strategy

Strategy formulation and performance measurement has become topics of discussion in construction industry development literature for the past few decades (Junnonen, 1998; Beatham *et al.*, 2004). Since the Egan's report "Rethinking Construction" was published in 1998, the industry has become more proactive in their strategic thinking. O'Regan *et al.* (2008)

view strategy as an organisation main path of achieving overall corporate objectives and fundamental strategic goals which in return create long-term superior performance. This deliberate search for a course of actions that can lead to sustained competitive advantage requires alignment or strategic fit between organisational structure and strategies as well as business environment to achieve optimal performance. The turbulent nature and hyper-competitiveness of the construction business environment has led many construction organisations to consider strategies formulation and strategic thinking central to sustained competitive advantage and improved performance (Edum-Fortwe, 1995; Junnonen, 1998). This is entrenched by Porter (1985) that organisations are required to create competitive strategy so as to achieve better strategic-fit and obtain sustained competitive advantage in a market economy. Business or competitive strategy describes the foundation or ground upon which an organisation will compete. Competitiveness of an organisation depends on an organisations capabilities, resources, strengths, and weaknesses with respect to its market distinctive feature relative to its industry competitors. Kitching *et al.* (2009) affirm that the main motive of competitive strategy is to provide answers to two fundamental questions. These are; what business is the organisation doing? How do firms compete in the rapid changing environment? Thus, how an organisation attains a superior performance and sustains competitive advantage in relation to its strategy is the main focus of strategic management as a field of study. Therefore, managers are confronted with flood of ideas with different business dimensions that requires sixth sense and rational reasoning when formulating strategy (Barney, 2001; Priem and Butler, 2001; Brockman and Anthony, 2002). The strategies investigated in this paper are; Financial strategy (FS), Human Resources Strategy (HS) and Technology Strategy (TS). This is because of their contributions as one of the most strategic postures an organisation can adopt particularly in dynamic business environments to accomplish competitive advantage (Cheah and Garvin, 2004). There is no consensus from the previous findings on the impact of strategy on performance in strategic management literature, but O'Regan *et al.* (2008) report that extant literature reveals that positive relationship exist between strategic planning and strategy. This is consistent with the assertion of Miller and Cardinal (1994) who drew inferences from 26 previously published studies and conclude that positive relationship exist between strategy and performance. However, O'Regan *et al.* (2008) argue that there is no "clear cut" evidence on the influence of strategy on performance the way researchers expected Whereas some other studies report insignificant impact of strategies on performance (see O'Regan *et al.*, 2008).

Organisational performance

Performance measurement and management is considered by many organisations as an important activity to be done to keep organisation on track in achieving its strategic goals and objectives (see O'Regan *et al.*, 2008). David (2011) argues that strategy evaluation in terms of performance measurement is crucial to a healthy organisation; this will provide health checks and give the signal of potential constraints before the situation becomes worse. David asserted further that specious strategic direction can inflict untold hardship on an organisation, and this can be extremely difficult or impossible to reverse. This position, underscores some of the earlier studies that argue that lack of performance measurement may cause serious difficulties for organisations and disillusion among workers and managers (Wheelen and Hunger, 2000; Luu *et al.*, 2008). Especially, when there are no performance measurement data to establish meaningful and objective organisational comparison that will enhance effectiveness and efficiency of their efforts (Luu *et al.*, 2008). David (2011) sums up strategy evaluation or performance measurement to entail three basic activities: an examination of the underlying bases of organisation's strategic direction; comparison of the expected outcomes with the actual outcome; and taking of corrective measures to ensure that organisational performance falls in line with plans. This indicates that performance measures or measurement system must be related to activities originating from organisations strategic planning efforts (O'Regan *et al.*, 2008). Performance measurement may wear different look depending on angle from which it is measured, it may be evaluated from project, organisation, stakeholder or client's perspective (Yang *et al.*, 2010). Organisational performance can be measured using both financial and non-financial measures, but measures of performance in the past are financial driven with focus on accounting measure of performance such as profitability and return on investment (Isik, 2009). However, O'regan *et al.* (2008) assert that there is a paradigm shift towards all-inclusive measures of performance consisting of both financial and non-financial measures, recurrent and result measures. Isik and Skaik (2009) contend that when both measures of performance are monitored and aligned with organisation corporate strategies, it will enable organisations' identify where and how corporate and functional strategies are to be deployed in all business processes, activities and tasks to obtain effective strategic direction. This is also the view of Pun and White (2005), that measurements of performance by organisations play a very vital role in translating organisational corporate strategies into results. In addition, Phua (2006) asserts that performance of construction organisation is dependent on the dynamics of the industry and organisation specifics factors. However, evidence that exist in extant literature indicates incongruence in the findings of researchers on many of the factors that have influence on performance (Short *et al.*, 2002). Although, having access to objective performance data of organisations is becoming difficult and cautionary advice has been given when measuring performance of private organisations, especially when managers are not

well disposed to revealing detailed accounting data of their organisation's performance (Barney, 2011; Durand and Vargas, 2003; O'Regan *et al.*, 2008). Therefore, efforts should be intensified to investigate what drives organisation performance within the industry and organisation context. As a result, subject measures of performance or self-reporting performance measures such overall objective fulfilment/overall perceived performance is adopted (Nandakumar *et al.*, 2010; Garg *et al.*, 2003).

Organisational structure (OS)

Covin and Slevin (cited in Altinay and Altinay, 2004) view OS as the arrangement of workflow, line of communication, and delegation of authority or relationships within an organisation and they contend that it is important to organisation but not without its inherent impact on an organisation's business and operational activities. Robbin and DeCenzo (2005) argue that the OS performs a significant role in the achievement of organisations set objectives and accomplishment of its strategic goals and direction. Organisation's strategy becomes more relevant when it is in harmony with the objective mission, competitive environment and resources of the organisation. The believe "One cap fits all" is non-existence in an organisational structure design as no two firms are entirely similar and as such faces different challenges from its environment. Therefore, Burns and Stalkers (cited in Nandakumar *et al.*, 2010) explain how organisations leadership should structure their organisation to fit the dynamism and unpredictability of the environment and this relates to the contingency theory. Burns and Stalkers thus classify organisational structures into two basic types: organic and mechanistic structures. Nandakumar *et al.* (2010), accept that the classification provides an easily understood framework for organisational type that matches certain contexts of environmental change or stability. Mansoor *et al.* (2012) reportedly assert that performance effect of OS is moderated by changes in the environment and hence, conclude that to attain desired superior performance by an organisation adequate attention is required to have OS that can match the prevailing environment dynamism in place. These structures are characterised with different attributes such as control, communication, organisational knowledge, task, prestige, governance and values (Nandakumar *et al.*, 2010). Mansoor *et al.* (2012) contend that ideal organisational structure is a recipe for superior performance. Organisational structures are discussed in the extant literature with reference to two key factors; formalisation and centralisation (Bucic and Gudergan, 2004).

METHODOLOGY

This paper reports the result of pilot survey conducted as part of PhD research work. The research adopted previously validated and empirically

tested constructs on OS and performance (Nandakumar *et al.*, 2010), and corporate strategy (Cheah *et al.*, 2007). Internet-mediated approach was employed in administering the structured questionnaire among large construction organisations in South Africa. Close-ended questions were asked to explore and elicit information on organisational strategies and structure on a five-point likert scale. Both financial and non-financial performance data were also obtained. Out of 30 questionnaire surveys administered, sixteen valid responses were obtained from the participants of which chief executive officers and senior management employees of the organisations are the respondents with more than ten years' of work experience in their respective organisations. The data were analysed using descriptive statistics, correlation and regression analysis.

Analysis and discussion of results

Table 1 shows the results of descriptive statistics and correlation analysis among the constructs used for the study. The mean values range from 3.721 (TS) to 4.219 (OS). However, HS exhibits the highest deviation (0.6325) with OS having least deviation (0.46715). The correlation values range from -0.2 to 0.732, with HS and organisational having strong significant correlational relationship ($r = 0.732$, $p \leq 0.01$). TS also has high correlation with FS and HS but not significant at 95% confidence level. Table 2 presents the result of regression analysis to establish the relationship among the constructs; structure-strategy-performance. The results show no direct impact of OS on both financial and non-financial performance, this result falls in line with the findings of (Pertusa-Ortega *et al.*, 2010). However, the result indicates that OS has moderating effects on both technology and human resources strategy. This is result is consistent with the findings reported by Tavitiyaman *et al.* (2012) but in the context of hotel management.

Table 1: correlation matrix of research constructs

Correlation Matrix	Mean	Std. Deviation	1	2	3	4	5	6
Objective fulfilment	4.135	0.47185	-					
Financial strategy (FS)	3.806	0.58955	0.07	-				
Human resources strategy (HS)	3.972	0.63255	0.19	0.15	-			
Technology strategy (TS)	3.721	0.58388	0.14	0.45	0.442	-		
Organisational structure (OS)	4.219	0.46715	0.33	0.2	.732**	0.4	-	
Financial performance (FP)	-	-	0.23	-0.2	0.113	-0.4	0.2	-

** Correlation is significant at the 0.01 level (2-tailed).

Table 2: Regression analysis showing structure- corporate strategies-performance Relationship of organisations

Financial Performance					Non-Financial Performance			
	Model 1		Collinearity Stat.		Model 2		Collinearity Stat.	
Variables	β	t-value	Tolerance	VIF	β	t-value	Tolerance	VIF
constant	4796	0.41			2.71	1.959*		
<i>Main effect</i>								
FS	-425	-0.179	0.914	1.095	-0.1	-0.252	0.439	2.25
HS	1214	0.461	0.384	2.606	0.02	0.061	0.645	1.55
TS	-							
OS	4349	-1.883	0.694	1.44	0.4	0.934	0.449	2.23
R ²	2304	0.69	0.423	2.362	-0	-0.007	0.789	1.27
Adjusted R ²		0.387				0.111		
F-Model		0.037				-0.212		
		1.106				0.344		
	Model 3				Model 4			
constant	3328	2.109*			4.12	24.126***		
<i>Moderating effect</i>								
FS*OS	273.1	0.166	0.605	1.654	-0	-0.027	0.707	1.41
HS*OS	259.9	0.142**	0.477	2.098	-0.1	-0.358	0.562	1.78
TS*OS	-							
R ²	3019	-2.001*	0.596	1.678	0.32	0.874	0.583	1.72
Adjusted R ²		0.415				0.065		
F-Model		0.195				-0.169		
		1.889				0.277		

Note: * $p \leq 0.10$; ** $p \leq 0.05$; *** $p \leq 0.01$

The collinearity statistics shows that the data do not exhibit high multicollinearity which often decreases the size of multiple correlations. From Table 2, the tolerance is greater than 0.1 and Variance Inflation Factor (VIF) less than 10, then the data do not have multicollinearity problem which can hinder predictive ability of the models.

Conclusions

The paper examined the impact of corporate strategies and organisational structure on performance of construction organisations, and whether organisational structure has moderating effects on the relationship between the strategies and organisational performance. It was concluded thus, that organisational structure does not have direct impact on organisations performance, but has a moderating and explanatory effect on performance through strategies. This depicts that attention should be

given to organisational structure in formulating strategies. The results reported in this paper may be constrained due to the size of the data, this is believed will be validated by PhD output when completed.

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