



(RESEARCH ARTICLE)



Bivariate relationships among dimensions and determinants of organizational performance of local contractors in Kenya

Shadrack Mutungi Simon ^{1,*}, Titus Kivaa ² and Mugwima Njuguna ³

¹ Department of Construction Management, Jomo Kenyatta University of Agriculture & Technology, Kenya.

² Department of Construction Management, Jomo Kenyatta University of Agriculture & Technology, Kenya.

³ Centre for Urban Studies, Jomo Kenyatta University of Agriculture & Technology, Kenya.

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Abstract

The organizational performance of local contractors in Kenya remain poor. Little or no research has been done to improve this. The purpose of this research was to establish the bivariate relationships among the dimensions and determinants of organizational performance of local contractors in Kenya. A quantitative research strategy and a survey research design were adopted. The unit of observation comprised of contractors and consultants while the unit of analysis was the contractor. The sampling frame consisted of all NCA1 contractors, NCA2 contractors, NCA3 contractors, and consultants who had professionally interacted with these contractors in recent projects. A sample size of 604 was adopted. Simple random sampling was used to select the contractors. Questionnaires were administered both physically and online. Study variables have been measured perceptually. A response rate of 63% was achieved. All the 45 relationships among the dimensions of organizational performance were positive and significant at 0.01. All the 45 relationships among the determinants of organizational performance were positive and significant at 0.01. All the 100 relationships between the ten dimensions and ten determinants of organizational performance were positive and significant at 0.01 level. The three most dominant determinants of organizational performance were quality of service, organizational structure of the firm and suppliers effectiveness. Improved organizational performance of local contractors can be achieved by enhancing their internal and external environment.

Keywords: Determinants; Dimensions; Kenya; Local contractors; Organizational performance

1. Introduction

The organizational performance of local contractors in Kenya remain poor. Little or no research has been done to improve this. Organizational performance is arguably the most important criteria for measuring the success or failure of a firm. It has been defined as the extent to which an organization achieves its objectives or goals using a minimum amount of resources [1]. While some studies conducted on the subject of organizational performance among contractors seem to adopt a unidimensional rather than multidimensional approach in its evaluation, others tackle the aspects of dimensions and determinants separately [2]. This research not only considered multiple dimensions of organizational performance, it also evaluated both the organizational performance and its determinants simultaneously. Here in Kenya, researchers have concentrated on project performance rather than organizational performance [2]. The purpose of this research was therefore to establish the relationships among the dimensions and determinants of organizational performance of local contractors in Kenya through adopting a multidimensional approach.

* Corresponding author: Shadrack Mutungi Simon
Department of Construction Management, Jomo Kenyatta University of Agriculture & Technology, Kenya.

2. Literature review

2.1. Measuring Organizational Performance

Organizational performance can be measured both objectively and subjectively. The following indicators of measuring organizational performance have been highlighted by different researchers in their studies: Return on capital employed; Profitability; Interest cover; Return on value added; Ratio of value added; Growth; Repeat business; Planning effectiveness; Customer/Client satisfaction; Business efficiency; People; Environment; Organization competency; Schedule performance; Cost performance; Reliability; Safety; Labour efficiency; Rework; Technical ability; Training; Innovation; Stability; Efficiency; Effectiveness; Market share; Reputation; Development; Technological capability; Informatization; Employee satisfaction; Environment impact; Credit rating; Quality; Cash flow; Financial status; Internal business; Health and safety; Financial stability; Management capability; Productivity and Employee efficiency [3][4][5][6][7][8][9][10].

2.2. Dimensions of Organizational Performance

The following factors have been identified as the key dimensions through which organizational performance of contractors can be evaluated; Profitability, Client satisfaction, Growth, Technical capability, Business efficiency, Employee satisfaction, Financial stability, Quality of products, Managerial capability and Safety Performance. The rationale behind the selection of these ten dimensions in this study lies within three premises; (i) the need to incorporate both financial and non-financial aspects of organizational performance, (ii) compliance to the Balanced Scorecard concept developed by Kaplan and Norton [11] which considers four perspectives of organizational performance i.e. financial, customer, internal business, and learning and growth, and (iii) compliance to the 3-point approach advocated by Byremo [12] which recognizes financial and market performance, operational performance, and employee attitude and behaviour.

2.3. Determinants of Organizational Performance

The level of organizational performance depends on a number of factors which either affect it positively or negatively. The following factors have been highlighted by different authors as the common determinants of organizational performance; Firm resources; Innovation/information technology; Strategy/strategic planning; Corporate governance; Dynamic capabilities; Leadership; Firm size; Employee performance; Employee turnover; Quality; Organizational structure; Clients; Performance measurement; Suppliers; Business uncertainty; Competitors and Government support [13][4][14][15][16][17][18]. Ten major determinants were selected for this study based on their significance as evaluated in previous studies, the frequency with which they have been studied, relevance to contractors as reported in previous studies and the need to consider both internal and external environments in which local contractors operate.

3. Methodology

A quantitative research strategy and a survey research design were adopted. The unit of observation comprised of contractors and consultants while the unit of analysis was the contractor. The sampling frame consisted of all NCA1 contractors, NCA2 contractors, NCA3 contractors, and consultants who had professionally interacted with these contractors in recent projects. A sample size of 604 was adopted from a population of 2,854 contractors and consultants. Simple random sampling was used to select the contractors. Questionnaires were administered both physically and online. Study variables have been measured perceptually. A response rate of 63% was achieved. This was deemed to be sufficient based on the suggestion given by Mugenda and Mugenda [19]

4. Results

Three types of bivariate relationships were explored in this paper: (i) within dimensions of organizational performance; (ii) within determinants of organizational performance; and (iii) between dimensions and determinants of organizational performance. All these correlations do not imply causation but rather the degree of association between the analysed variables.

4.1. Correlation Matrix of the Dimensions of Organizational Performance

All the 45 relationships among the dimensions of organizational performance were positive and significant at 0.01. 36 of these relationships were strong, 8 were moderate and 1 was weak as seen in table 1. The strongest relationship ($r=0.794$) existed between 'Technical capability' (TC) and 'Business efficiency' (BE). The second strongest relationship ($r=0.784$) was between 'Growth' (GR) and 'Profitability' (PR) while the third strongest correlation ($r=0.773$) existed

between ‘Growth’ (GR) and ‘Employee satisfaction’ (ES). The weakest relationship ($r=0.393$) existed between ‘Profitability’ (PR) and ‘Safety performance’ (SP).

Table 1 Correlation Matrix of Dimensions of Organizational Performance

	PR	CS	GR	TC	BE	ES	FS	QP	MC	SP
PR	1.000									
CS	.622**	1.000								
GR	.784**	.661**	1.000							
TC	.596**	.719**	.750**	1.000						
BE	.663**	.729**	.753**	.794**	1.000					
ES	.622**	.686**	.773**	.667**	.765**	1.000				
FS	.651**	.675**	.738**	.718**	.761**	.722**	1.000			
QP	.528**	.738**	.587**	.694**	.728**	.658**	.691**	1.000		
MC	.546**	.752**	.601**	.658**	.700**	.720**	.707**	.791**	1.000	
SP	.393**	.579**	.527**	.678**	.626**	.559**	.544**	.617**	.617**	1.000

** . Correlation is significant at the 0.01 level (2-tailed).
Source: (Author, 2021)

4.2. Correlation Matrix of Determinants of Organizational Performance

There was a total of 45 correlations among the determinants of organizational performance. All these relationships were positive and significant at 0.01 as shown in table 2. Four of these relationships were very strong, 28 were strong, 9 were moderate and 4 were weak. The strongest relationship ($r=0.821$) existed between ‘Quality of service’ (QS) and ‘Organizational structure of the firm’ (OS). The second strongest relationship ($r=0.818$) was between ‘Quality of service’ (QS) and ‘Performance measurement practices’ (PM) while the third strongest correlation ($r=0.815$) existed between ‘Strategic planning practices’ (ST) and ‘Performance measurement practices’ (PM). The three weakest correlations ($r=0.348$, 0.339 and 0.315) were ‘Employee performance (EP) versus Government support’ (GS), ‘Performance measurement practices (PM) versus Government support’ (GS), and ‘Strategic planning practices (ST) versus Government support’ (GS).

Table 2 Correlation Matrix of Determinants of Organizational Performance

	ST	PM	QS	OS	CI	EP	CE	SE	CN	GS
ST	1.000									
PM	.815**	1.000								
QS	.776**	.818**	1.000							
OS	.755**	.804**	.821**	1.000						
CI	.591**	.666**	.688**	.726**	1.000					
EP	.692**	.738**	.767**	.788**	.664**	1.000				
CE	.549**	.572**	.638**	.643**	.695**	.619**	1.000			
SE	.636**	.686**	.748**	.758**	.749**	.747**	.764**	1.000		
CN	.575**	.692**	.703**	.680**	.675**	.650**	.627**	.701**	1.000	
GS	.315**	.339**	.382**	.400**	.573**	.348**	.498**	.482**	.414**	1.000

** . Correlation is significant at the 0.01 level (2-tailed).
Source: (Author, 2021)

4.3. Correlation Matrix between Dimensions of Organizational Performance and their Determinants

There were 100 relationships between the 10 dimensions and 10 determinants of organizational performance as shown in table 3. All the correlations were positive and significant at 0.01 level. 59 of these relationships were strong, 37 were moderate and 4 were weak. The strongest relationship ($r=0.781$) existed between 'Quality of service' (QS) and Managerial capability' (MC). The second strongest relationship ($r=0.778$) was between 'Strategic planning practices' (ST) and Managerial capability' (MC) while the third strongest correlation ($r=0.771$) existed between 'Organizational structure of the firm' (OS) and Managerial capability' (MC). The three weakest correlations ($r=0.348$, 0.332 and 0.303) were 'Government support' (GS) versus Managerial capability' (MC)', 'Government support' (GS) versus Quality of products (QP)', and 'Government support' (GS) versus Client satisfaction (CS) respectively.

The three most dominant determinants of organizational performance were 'Quality of service' (QS), 'Organizational structure of the firm' (OS) and 'Suppliers effectiveness' (SE) with mean correlations of 0.684, 0.680 and 0.659 respectively when compared to all the dimensions. The three least dominant determinants were 'Client effectiveness' (CE), 'Competition' (CN) and 'Government support' (GS) with mean correlations of 0.567, 0.557 and 0.412 respectively when compared to all the dimensions. It was possible to compute the means of the correlations since they were all significant to the same level.

Table 3 Correlation Matrix between Dimensions and Determinants of Organizational Performance

	ST	PM	QS	OS	CI	EP	CE	SE	CN	GS
PR	.561**	.554**	.577**	.587**	.590**	.441**	.532**	.601**	.551**	.356**
CS	.681**	.633**	.710**	.669**	.596**	.651**	.528**	.666**	.529**	.303**
GR	.593**	.606**	.647**	.661**	.743**	.546**	.619**	.686**	.590**	.500**
TC	.613**	.570**	.653**	.669**	.710**	.611**	.589**	.651**	.524**	.485**
BE	.662**	.633**	.702**	.709**	.695**	.653**	.613**	.715**	.578**	.426**
ES	.698**	.721**	.705**	.742**	.742**	.661**	.617**	.717**	.630**	.471**
FS	.650**	.620**	.688**	.665**	.659**	.585**	.569**	.669**	.547**	.453**
QP	.699**	.665**	.752**	.709**	.593**	.680**	.548**	.647**	.571**	.332**
MC	.778**	.736**	.781**	.771**	.596**	.706**	.550**	.686**	.582**	.348**
SP	.636**	.568**	.628**	.617**	.614**	.610**	.509**	.549**	.464**	.448**

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

Source: (Author, 2021)

5. Discussion

Well executed strategic planning has been associated with enhanced firm performance. A study done on 36 companies by Thune and House [20] established that formal planners outperformed their informal counterparts on all performance measures. Greenley [21] observed that strategic planning possesses intrinsic values and potential advantages which translate into enhanced organizational performance. The study by K'Obonyo and Arasa [16] revealed a positive significant relationship between strategic planning and organizational performance where the Pearson's correlation coefficient was 0.616 at $p<0.01$. Indeed all the processes of strategic planning were all positively related to the firm performance.

Adoption of performance measurement systems has also been tipped to improve organizational performance. indeed there is sufficient evidence to conclude that the use of performance measurement systems leads to improved capabilities within an organization, which then impact performance [22]. This research indeed established a positive relationship between performance measurement and all the dimensions of organizational performance.

A number of studies have been done in regard to organizational structures of firms. Chen and Huang [23] established that decentralized and informal structures were associated with high performance. Germain [24] noted that in stable environment, a formal organizational structure has a positive impact on performance while in a dynamic environment,

the effect is negative. Haid, Schroeder-Saulnier, Sims and Wang [25] noted that complex organizational structures often lead to ineffective implementation of the business strategy. A study by Yesil and Kaya [26] found no relationship between organizational culture dimensions and a firm's financial performance. Another study by Maduenyi, Oke, Fadeyi and Ajagbe [27] found a relationship between organizational structure and organizational performance though they did not explore the nature of the relationship. This study established that organizational performance was positively related to the following features of organizational structures; clarity of line of authority, flexibility, adequacy of delegation of authority, provision of stability and continuity, and documentation of the structure.

Innovativeness is an important ingredient to improved organizational performance due to the vast benefits associated with enhanced innovation. Varis and Littunen [28] asserted that the main reason why organizations engage in innovativeness is to enhance organization performance. Improvements in products and processes leads to more efficient and profitable firms [29]. A study by Calantone, Cavusgil and Zhao, [30] established a positive correlation between innovativeness and firm performance. A longitudinal study focusing on different industries in the U.S.A established that increased number of patents and product innovations had a significant influence on firm performance [31]. In a different study, market and product innovation were also found to impact positively on firm performance [32]. Though these previous studies were not undertaken in the construction industry context, the findings of this research were not any different. Contractor's innovativeness was found to affect all the dimensions of organizational performance positively.

It is expected that employee performance ought to be positively related to organizational performance. A study by Jones and Kato [33] established that employee involvement produces improved enterprise performance through improved discretionary effort by workers. Bakotić [34] did an extensive research on 40 Croatian companies involving 5806 employees in the process. The study found a stronger connection between job satisfaction and organizational performance than the vice versa. The implication of this was that job satisfaction influences organizational performance and not the vice versa. This relationship was found to be positive. Similarly, this research established that employee performance influences organizational performance positively.

6. Conclusion

The organizational performance of local contractors here in Kenya is dependent on the prevailing environment in which they exist. Due to the positive relationship between the dimensions and determinants of organizational performance, local contractors here in Kenya can achieve improved organizational performance by enhancing both their internal and external environment.

Recommendations

Local contractors here in Kenya need to develop strategies of enhancing the level of engagements with the clients. By doing so, they will be able to focus on the clients' needs during the execution of projects therefore ensuring success. This will not only enhance the client retention rate but also lead to acquisition of new clients. An increase in volume of work is a step towards improved organizational performance.

Local contractors need to be flexible towards adoption of emerging trends and methods in the construction industry. They have no option but to be innovative. This will improve not only the efficiency but the effectiveness of the projects they handle. Efficiency in projects ensures decrease in operational costs thereby improving their profit margins. A stable financial status is a critical factor in enhancing almost all the other dimensions of organizational performance.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors have declared that no conflict of interest

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