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Contextual Factors and Organizational Performance: A Validity and Reliability Approach

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Abstract:

Organizational performance has been the attention of a lot of current organizational studies around the world. Different factors have been identified by different scholars as been contributory to performance level in organizations but there are misconceptions in the area of measures and scales. This study therefore sought to provide a validated instrument to aid research efforts in the area of contextual factors and organizational performance. After an initial questionnaire administration, the data was teste using validity and reliability tools. It was established that the contextual factors and organizational scale was fit for application in other studies as all scientific conditions were met. The study also provides direction for industrial considerations in the area of contextual factors and organizational performance.

Keywords: contextual factors, organizational performance, validity, reliability

1. Introduction

The discourse on organizational performance has received attention from policy makers, researchers and managers in the past years. Different views exist however of what constitutes organizational performance in the 21st century. In Middle-East, several concepts constitute organizational performance, such as business model effectiveness, efficiency, and outcomes (Almatrooshi, Singh, & Farouk, 2016; Boyatzis & Ratti, 2009). Kipleting (2017) reports that performance is seen as an umbrella term for all concepts that consider the success of a firm and its activities. Performance thus can refer to actual results or outputs of certain activities, how an activity is carried out, or an ability to achieve results eventually. The dynamic and constantly changing Nigerian consumer goods business environment creates challenges as well as opportunities for consumer goods businesses (Akpan, Ikon, Chukwunonye & Nneka, 2016). The performance of firms in the Nigerian consumer goods sector is affected by factors environmental factors such as low sales, high production, low capital utilization, lack of foreign exchange to source needed inputs, poor power supply, low quality of goods and services and multiple taxation among others (Adeoye & Elegunde, 2012). These divergent views and opinions show that organizational performance is very critical to the viability of an organization and thus has been given considerable attention by managers of organizations and other key stakeholders. As organizations go through different phases of development, they get well equipped and ready to adopt strategies to keep them abreast of developments that will enhance their performance.

Efforts have been made by researchers to carryout out studies on factors that determine organizational performance (Durán-Vázquez, Lorenzo-Valdés & Moreno-Quezada 2012; Likar, Kopa & Fatur, 2014; Nybakk & Jenssen, 2012; Oke, Walumbwa & Myers, 2012; Yen, 2013). There are still evidences to show that there is lack of consensus as to the right metrics, variables indicators to be adopted to in measuring organizational performance. It is very important at this point to provide a direction for the measure of organizational performance from a Nigerian context. Studies of this nature

are important because they provide managers and researchers with the awareness of different variables that can impact organizational performance given particular contexts.

It is true that the study of organizational performance has been an age long practice, yet very little has been done with reference to contextual factors (intellectual capital, innovation, strategic leadership knowledge management and core competences) in the Nigerian consumer goods sector. Due to this, an appropriate scale is lacking on the study between these contextual factors and performance in the Nigerian consumer goods sector. The objective of this study was to develop and validate appropriate scales for contextual factors and organizational performance in the Nigerian consumer goods sector. This is expected to serve as a model for researcher and policy makers who will want to lay their hands on a valid result for decision making.

2. Literature Review

2.1 Contextual Factors

Contextual factors are seen as variables that have specific functions within the context of an organization or a research domain. They may have universal implications, yet they are critical to the context in which they used at a particular point in time. Hence using them in different contexts may connote different meanings. Contextual factors are attributes of the firm such as size (which is measured by sales, or profit, or by the number of employees), the stage of its life-cycle (infancy, growth, maturity, or decline), number of years of existence, ownership form and structure (foreign-owned or domestic firm), and the nature of the industry it belongs to (Dhanya, & Sam, 2012; Rosemann, Recker, & Flender, 2008). Given that contexts are different based on geography, sector, industry and even organization, contextual factors are factors that can be seen in practice in an organization, sector, industry or location within a given period of time. While organizations are in constant search of strategies to improve their performance, empirically, researchers are being made to provide the best indices for the determinant of performance of organizations. What is obtainable in a particular sector, industry or country might not be the same in another sector with respect to performance. The reason for this is that activities differs from across sectors and industry even in the same country. Thus, authors have provided different determinants of organizational performance based on the different sectors.

Ariguzo, Egwakhe and Adefulu (2019) sees entrepreneurial orientation, social networks, entrepreneurial mindset, and trust as export-preneurial behaviours that determine performance among export-based businesses in Nigeria. Ukenna, Makinde, Akinlabi and Asikhia (2019) used (entrepreneurial mindset, entrepreneurial culture, and entrepreneurial orientation as strategic entrepreneurship measures to determine the performance of selected small business in Lagos, Oyo and Ogun States. Ibhiedu and Asikhia (2019) used strategic leadership, strategic planning, strategy implementation, strategic control and strategic evaluation as strategic orientation variables to determine organizational performance in the Nigerian banking sector. Almatrooshi, Singh, and Farouk (2016), proposed cognitive intelligence, emotional intelligence and social intelligence as leadership competences to determine a positive change in organizational performance. Organizational performance can also be determined using organizational alignment, organizational capabilities, industry structure, organizational resources and leadership based on the Turkish manufacturing sector (Tasliyan, Eren & Yucel, 2018). Al-Tit (2017) adopted organization culture and supply chain management to predict performance of organizations in the manufacturing sector of Jordan.

Having seen the above measures used to determine organizational performance in different sectors, this study adopts specific determinants of organizational performance which are referred to as contextual factors. These factors are given as intellectual capital, innovation, strategic leadership knowledge management and core competences.

2.2 Organizational performance

Organizational performance connotes the extent to which an organization takes advantage of tangible and intangible resources to achieve its goals (Wheelen, Hunger, Hoffman, & Bamford, 2015). Nnabuike (2009) sees organizational performance as setting up a structure or mending an already existing one to suit the organizational environment and the demands of technology. Moullin (2007) perceives organizational performance as, a measure which is used by organizations so that they are able to manage their efficiency well, and deliver their worth to shareholders and clients. Cho, and Dansereau (2010) in their own view sees organizational performance in relation to the organization's goals and objectives. Tomal and Jones (2015) refer to organizational performance as the actual results or outputs of an organization as measured against that organization's intended outputs. Since organizational performance is a multidimensional concept, it seeks to measure companies' achievement of the objectives proposed for different stakeholders in a given period (Richard, Devinney, Yip & Johnson, 2009).

While the most commonly used measures of organizational performance today include financial and non-financial performance indicators (Hilman, & Kaliappen, 2014), this study focuses in the non-financial aspect. Organizational performance as a variable have been measured non-financially in different ways by different researchers, thus providing unclear directions. Asikhia (2010) used sales growth, gaining new technology/expert, market share position, profitability, return on investment and incremental turnover to measure organizational performance in selected small and medium scale businesses in Nigeria. Nwankwere (2017) measured organizational performance using sales growth, firm survival, firm efficiency, and competitive advantage in the manufacturing sector of Nigeria. Also, in the oil and gas sector of Nigeria, performance is measured using firm profitability, market share, and sales growth (Asikhia & Arokodare, 2019). Similarly, Adeoye, Egwakhe and Adefulu (2019) used competitive advantage, revenue growth, firms' profitability and organisational effectiveness to measure organizational performance among selected private firms in Lagos and Ogun states. Based on the

variables and measures used above to measure organizational performance, this study focuses on the use of market share, sales growth, profitability, organizational effectiveness, competitive advantage.

3. Methodology

This study adopted a survey approach using a questionnaire formulated from literature, sample was selected purposively for the purpose of validation of scales on conceptual factors and organizational performance. The questionnaire is divided into four sections, these are sections A, B, C and D. Section A focuses on the demographic information of the respondents, section B is on the independent variables, section C is on the dependent variables while section D focuses on the moderating variables. The purpose of using questionnaire survey is because of the direct response, feedback and the literacy level of the proposed respondents (Zikmund, Babin, Carr, & Griffin, 2010). The table below shows the conceptual sources of ideas in the research instrument. The response structure was as follows: Very High (VH) = 6; High (H) = 5; Moderately High (MH) = 4; Moderately Low (ML) = 3; Low (L) = 2; Very Low (VL) = 1.

The sample selected was given as 60 from Patterson Zochonis, Iupeju Lagos, Nigeria. Comrey and Lee (1992) stated in his guide to sample sizes: 100 as poor, 200 as fair, 300 as good, 500 as very good, and 1000 or more as excellent. Their position was supported by Pearson and Mundform (2010) in their study on recommended sample size. However, others studies such as Guadagnoli and Velicer (1988) stated that solutions with correlation coefficients > 0.80 require smaller sample sizes while Sapnas and Zeller (2002) argued that even 50 cases may be adequate for factor analysis. Therefore, on the basis of the assertion of Sapnas and Zeller (2002), our sample size for this validation is adequate. The validation was considered necessary in order to determine the willingness of the respondents, to have a foreknowledge of the reactions of the respondents and to ascertain the reliability of the questionnaire as well as provide direction for further research in similar domains with similar variables. The data was analysed using Statistical Package Social Sciences (SPSS) version 24 for validity and reliability. The data was tested for validity using Exploratory factor analysis was employed using Kaiser-Meyer Olkin (KMO) value of 0.7 and Bartlett's Test of Sphericity with p-value < 0.05. while reliability values were computed using Cronbach alpha coefficients $\alpha > 0.7$. the average variance extracted (AVE) was computed using the excel model sheet provided by Michaël Korchia, marketing professor at BEM Bordeaux Management School.

4.0. Results and Discussion

The test for validity using exploratory factor analysis provides the following results which will be discussed variable by variable.

4.1 Validity

Table 1: Validity Results

S/N	Variables	No of ITEMS	MO	BARTLETT CHI-SQUARE	SIG	AVE	Composite Reliability
A	Contextual Factors						
1	Intellectual Capital	5	0.837	119.977	0.000	0.725	0.927
2	Innovation	5	0.801	123.798	0.000	0.696	0.918
3	Strategic Leadership	5	0.669	144.177	0.000	0.757	0.938
4	Knowledge Management	5	0.981	133.689	0.000	0.607	0.883
5	Core Competence	5	0.650	119.977	0.000	0.725	0.927
B	Organizational Performance						
6	Market Share	5	0.701	123.798	0.000	0.696	0.918
7	Sales Growth	5	0.937	129.977	0.000	0.725	0.927
8	Profitability	5	0.704	128.826	0.000	0.841	0.964
9	Organizational Effectiveness	5	0.777	124.204	0.000	0.737	0.933
10	Competitive Advantage	5	0.677	141.073	0.000	0.529	0.844
		50					

Source: Research Study (2019)

Validity is the degree to which a measuring instrument measures what it is designed to measure (Asika, 2005; Saunders & Rojon, 2014). Validity explains how well the collected data covers the actual area of investigation (Ghauri & Gronhaug, 2005). Four types of validity are recognized namely: construct validity, content validity, face validity and criterion-related validity (Oluwatayo, 2012). The validity of measurement for this instrument was ascertained using the construct validity and content validity. The content validity was to ensure that the items and domains of the instrument are appropriate and comprehensive relative to its intended measurement concept(s), population and use since we are dealing with the consumer goods sector of Nigerian, a content validity test will be necessary to ensure that the instrument fits into the context of study. while the construct validity, confirms that relationships among variables and concepts conform to a prior hypothesis concerning logical relationships that should exist with other measures (Muijs, 2004). This is necessary because there is need to establish that a logical relationship exists between contextual factors and organizational performance.

Content validity was attained by giving other researchers the questionnaire items to ascertain whether they adequately cover the domain of the construct. The research instrument was also certified by superiors and experts in the field of strategic management to ensure validity of questionnaire items. Sample validity was upheld to guarantee the inclusion of all

variables under investigation in the questionnaire. The observation, suggestion and corrections were taken into view and necessary adjustments were made thus providing an all-ready questionnaire subject to construct validation.

Construct validity is necessary so that the ability of a research instrument to measure abstract concepts can be determined. Therefore, factor analysis according to Duodu and Amankwah (2011) is a construct validity technique used in accessing the quality of questionnaire. Exploratory factor analysis was employed using Kaiser-Meyer Olkin (KMO) and Bartlett's Test of Sphericity with p -value < 0.05 . KMO and Bartlett's Test of Sphericity is a measure of sampling adequacy that is recommended to check the case to variable ratio for the analysis being conducted. According to Comrey and Lee (1992) validity test that is 0.60 and above is good for the study. Thus, the validity test of the variables employed in this study are 0.60 and above. Furthermore, the principal component method of factor analysis was used in order to establish the Average Variance Extracted (AVE) > 0.05 as an additional evidence of convergent validity and complete construct validation (Alumran, Hou, Sun, Yousef, & Hurst, 2014). This further helped to show how the values of each indicator disperse from the main data. The formula is to evaluate the sum of square against the number of indicators. It can be seen that the KMO validity values are above 0.6 which is adjudged to be a good measure of the sampling adequacy. The closer they are to 1 the better but they are good and acceptable since they are above 0.6. With this, we can accept that the measures support the validity of the constructs. Furthermore, looking at the AVE we can see that the average variance extracted for each of the variables is above 0.5 which gives more credence to the research instrument in that the items were able to fit into the measure of the objectives therefore the instrument can be used for data collation in similar studies.

4.2 Reliability

Table 2 Reliability Statistics

S/N	Variables	No of ITEMS	CRONBACH ALPHA
A	Contextual Factors		
1	Intellectual Capital	5	0.748
2	Innovation	5	0.765
3	Strategic Leadership	5	0.809
4	Knowledge Management	5	0.760
5	Core Competence	5	0.748
B	Organizational Performance		
6	Market Share	5	0.765
7	Sales Growth	5	0.748
8	Profitability	5	0.877
9	Organizational Effectiveness	5	0.765
10	Competitive Advantage	5	0.880
		50	

Source: Research Study (2019).

Reliability concerns the extent to which a measurement of a phenomenon provides stable and consistent result (Carmines & Zeller, 1979). Reliability is also concerned with repeatability. For example, a scale or test is said to be reliable if repeat measurement made by it under constant conditions will give the same result (Moser & Kalton, 1989). While reliability is important for testing the instrument of a study, it is not sufficient unless combined with validity. This implies that for a test to be reliable, it also needs to be valid (Wilson, 2010). Reliability is the degree of internal consistency or dependability of the research instrument (Mohajan, 2017). A high degree of consistency and similarity of results indicates a high degree of reliability. It is linked to the stability of the data. The closer Cronbach alpha is to 1, the higher the internal consistency reliability. The degree of stability is positively correlated with the degree of reliability. Higher degree of stability results in higher degree of reliability and this means that the results are repeatable. An instrument is considered reliable if the Cronbach's Alpha value of its scales are or above 0.7 (Nunnally, 1978).

The results from the tables above showed the reliability of the instrument (Cronbach's $\alpha > 0.7$) and the manipulation checks were valid. In other words, the results indicated that the sets of questionnaires which were used in this study are highly reliable and valid. The aim of the reliability as a quality criterion is to minimize errors and give stable results of data collection. Thus, based on the validity and reliability measures, the instrument on contextual factors and organizational performance in the consumer goods sector of Nigeria is valid. It should therefore be noted that an instrument is considered valid and reliable when all scientific conditions for decision making has been met and satisfied (Ariguzo, 2019).

5.0 Conclusion and Recommendations

Based on the validity and reliability analysis, it was established that the self-structured research scale on contextual factors and organizational performance is fit having met all scientific conditions. We can therefore conclude that a logical linkage exists between contextual factors and organizational performance based on the validity and reliability results although this is subject to further studies and scrutiny. The scale can be used in other studies either based on modification to suit the context of that study. However, it should be noted that an exploratory factor analysis needs to be done and then the results compared to that of this study for proper decision making. Conversely, if the scale is to be used as it is, the researcher is expected to provide the validity results of this in his study and conduct a confirmatory factor analysis in order to ensure that this scale as it fits into the context of the study.

This study should serve as a lead for future studies to explore all the possible factors that influence findings related to the relationship between contextual factors and organisational performance in other sectors.

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Appendix

Contextual Factors Scale

A	Intellectual Capital	VH (6)	H (5)	MH (4)	ML (3)	L (2)	VL (1)
1	Level of Human capital						
2	Level of Structural Capital						
3	Level of Social Capital						
4	Level of Spiritual capital						
5	Level of Knowledge Property						
KMO	BARTLETT TEST	SIG	AVE	Composite Reliability			C. Alpha
0.837	119.977	0.000	0.725	0.927			0.748

B	Innovation	VH (6)	H (5)	MH (4)	ML (3)	L (2)	VL (1)
1	Process efficiency						
2	Service efficiency						
3	Market efficacy						
4	Technological capability						
5	Continuous improvement rate						
KMO	BARTLETT TEST	SIG	AVE	Composite Reliability			C. Alpha
0.801	123.798	0.000	0.696	0.918			0.765

C	Strategic Leadership	VH (6)	H (5)	MH (4)	ML (3)	L (2)	VL (1)
1	Strategic direction						
2	Development of Human Capital						
3	Share vision						

4	Level of Flexibility						
5	State of Self-Awareness						
KMO	BARTLETT TEST	SIG	AVE	Composite Reliability			C. Alpha
0.669	144.177	0.000	0.757	0.938			0.809

D	Knowledge Management	VH (6)	H (5)	MH (4)	ML (3)	L (2)	VL (1)
1	Creation						
2	Utilization						
3	Transfer						
4	Internalization						
5	Storage						
KMO	BARTLETT TEST	SIG	AVE	Composite Reliability			C. Alpha
0.981	133.689	0.000	0.607	0.883			0.760

E	Core Competence	VH (6)	H (5)	MH (4)	ML (3)	L (2)	VL (1)
1	Unique resources						
2	Workforce cohesion						
3	Capabilities						
4	Collaboration						
5	Task coordination						
KMO	BARTLETT TEST	SIG	AVE	Composite Reliability			C. Alpha
0.650	119.977	0.000	0.725	0.927			0.748

Organizational Performance Scale

A	Market share	VH (6)	H (5)	MH (4)	ML (3)	L (2)	VL (1)
1	Operational efficiency compared to competitors						
2	Customer service relative to competition.						
3	Revenue compared to competitors						
4	Growth compared to competitors						
5	Number of people willing to patronize						
KMO	BARTLETT TEST	SIG	AVE	Composite Reliability			C. Alpha
0.701	123.798	0.000	0.696	0.918			0.765

B	Sales Growth	VH (6)	H (5)	MH (4)	ML (3)	L (2)	VL (1)
1	2014						
2	2015						
3	2016						
4	2017						
5	2018						
KMO	BARTLETT TEST	SIG	AVE	Composite Reliability			C. Alpha
0.937	129.977	0.000	0.725	0.927			0.748

C	Profitability	VH (6)	H (5)	MH (4)	ML (3)	L (2)	VL (1)
1	2014						
2	2015						
3	2016						
4	2017						
5	2018						
KMO	BARTLETT TEST	SIG	AVE	Composite Reliability			C. Alpha
0.704	128.826	0.000	0.841	0.964			0.877

D	Organizational Effectiveness	VH (6)	H (5)	MH (4)	ML (3)	L (2)	VL (1)
1	Commitment to organizational goals						
2	Focus on new products						
3	Meeting targets						
4	Conformance to specifications						
5	Openness to learning						
KMO	BARTLETT TEST	SIG	AVE	Composite Reliability			C. Alpha
0.777	124.204	0.000	0.737	0.933			0.765

E	Competitive Advantage	VH (6)	H (5)	MH (4)	ML (3)	L (2)	VL (1)
1	Cost Leadership						
2	Product standardization						
3	Expansion into new market						
4	Market Control						
5	Product differentiation						
KMO	BARTLETT TEST	SIG	AVE	Composite Reliability			C. Alpha
0.677	141.073	0.000	0.529	0.844			0.880