

Knowledge Management, Entrepreneurial Orientation and Firm Performance: The Role of Organizational Culture

Mukhtar Shehu Aliyu¹, Halilu Bello Rogo² & Rosli Mahmood³

¹ Department of Business Administration, Faculty of Social and Management Science, Northwest University, Kano, Nigeria

² Department of Economics and Management Science, Nigerian Police Academy, Wudil, Kano, Nigeria

³ School of Business Management, College of Business, Universiti Utara Malaysia, Malaysia

Correspondence: Mukhtar Shehu Aliyu, Department of Business Administration, Faculty of Social and Management Science, Northwest University, Kano, Nigeria. Tel: 23-480-2385-5156. E-mail: aliyumukhtarshehu@gmail.com

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Abstract

The objective of the study is to examine the mediating effects of organizational culture on the relationship between knowledge management (KM), entrepreneurial orientation (EO) and business performance of small and medium enterprises (SMEs) in Nigeria. The role of SME toward the economic growth of Nigeria is enormous; it is a major source of employment, a means for poverty alleviation, an avenue for upliftment of living standard as well as making available different goods and services. Based on theoretical consideration, a model is proposed to examine these relationships, which is intended towards resolving the inconsistencies found in the contemporary literature regarding the relationship between KM, EO and business performance. A structured questionnaire adopted from the previous studies to ascertain the responses of the respondents. A survey research design was adopted and self-administered questionnaires were used to collect the data from 640 owner/managers of SMEs. The analysis was conducted using SPSS version 20, the major findings of the study indicated that knowledge management and entrepreneurial orientation has a significant and positive relationship with business performance, and organizational culture is found to partially mediate the relationship between knowledge management, entrepreneurial orientation and business performance. The owner/managers, regulatory agencies, government, and other stakeholders will benefit from the study findings, and future research suggestions provided.

Keywords: knowledge management, entrepreneurial orientation, organizational culture, business performance, SMEs

1. Introduction

Knowledge management (KM) and entrepreneurial orientation (EO) are considered to be among the most popular common strategies for organizational growth and survival in the present competitive environment (Al-Swidi & Mahmood, 2012; Jabeen, Shehu, Mahmood, & Kofar, 2014). The strategic relevance of KM and EO serves to attract the growing attention of a number of academic and practitioners over the last few decades. Empirically, many studies supported the significant impact of KM (Gold et al., 2001; Leea et al., 2005; Jantarung & Usshawanitchakit, 2008; Daud & Yusuf, 2010; Al-Hakim & Hassan, 2011; Aslam, 2013) and EO (Wiklund & Shepherd, 2003; Khalid et al., 2009; Idar & Mahmood, 2011; Fatoki, 2012; Bakar & Mahmood, 2014; Shehu & Mahmood, 2014a) on the organizational performance. Arising from this, some other researches dispute that not all KM activities were successful (Fattahiyan et al., 2012; Abiola, 2013; Streiger et al., 2014) whereas others questioned the suitability of entrepreneurial orientation strategy for organizational effectiveness (Lechner & Gudmundson, 2014; Filser & Eggers, 2014; Anderson, 2010; Su, 2011). Kaplan and Norton (2000) reported that 70 to 90% of the global organizations experienced failure in issues relating to strategic implementation. Based on the inappropriateness in organizational strategy implementation, the literature of contingency and organizational change theories proposed that the mismatch between the strategy and the organizational culture to be one of the main reasons for failure. Therefore, it is basically agreed that, for any organization to achieve its intended goal, there should be a match between organizational culture and strategy. However, in order to resolve the

inconsistency of the findings regarding the association of KM, EO and organizational performance, some prior studies recommended that many influential organizational variables should be investigated. Jabeen et al., (2014) suggested a mediating variable inclusion in KM-OP relationship. Similarly, Shehu and Mahmood (2014c), Wiklund and Shepherd (2005) suggested that other variables should be incorporated in the EO and organizational performance relationship to resolve the inconclusive findings. This study aims to examine the effects of the organizational culture (OC) on the relationship between knowledge management (TQM) practices, entrepreneurial orientation (EO) and the organizational performance of small and medium enterprises within the context of Nigeria.

2. Literature Review

2.1 Knowledge Management and Organizational Performance

Knowledge management and organizational performance relationships has been widely studied, and there appear to have an inconclusive results. The study of Kalling (2003) builds distinction between three instances of knowledge, namely knowledge development, utilization and capitalization. Three knowledge ventures within the European manufacturing multinational company were used. This empirical study indicates that though knowledge development is frequent phenomenon, the utilization of it is not so common. Even when knowledge is utilized; it may not always lead to profit achievement. Leea, Sangjea and Kang (2005) investigated knowledge management performance index (KMPI), using both qualitative and quantitative methods. The sample frame consisted of one hundred and one firms in South Korea and the outcome of their findings indicated a strong linkage between KM performance and the overall performance. Additionally, Egbu, Hari and Renukappa (2005) undertook a study on KM for sustainable competitiveness in SMEs. The study was undertaken using interview and with a sample from construction firms. The result shows that small firms can benefit from operational KM practices for sustainable competitiveness. Darroch (2005) quantitatively examined the significance of knowledge management as a coordinating mechanism to improve innovation and overall firm performance using a sample of four hundred and forty three firms across several sectors, Correlation analysis indicated that firms with effective management of knowledge are likely to be more innovative. However, results do not confirm a positive relationship between knowledge management and overall firm performance.

Lin and Lee (2005) assessed the influence of organizational learning factors and knowledge management process on e-business adoption. Their findings indicated that organizational learning factors and KM process are related to the level of e-business adoption. However, knowledge sharing did not significantly relate to e-business adoption system level. Marques, Simon and Magrys (2007) investigated the association between knowledge management practices and firm performance of two hundred and twenty two Spanish firms in biotechnology and telecommunication industries. They employed the competence- based view of the firm and focuses on the importance of knowledge management as a sustainable competitive advantage. They applies a factor analysis with a subsequent correlation analysis between factor loadings and a variety of firm performance measures, and find positive relationships between knowledge management and firm performance. Choi, Lee and Yoo (2010) examined information technology and transactive memory system on knowledge sharing, application and team performance. They found that IT support in organizations has a positive impact on the development of TMS in teams, and that both TMS and IT support have a positive influence on knowledge sharing and knowledge application. Further, knowledge sharing has a positive impact on knowledge application, which has a direct impact on team performance. Additionally, knowledge sharing does not have impact on team performance, and team performance was fully mediated by knowledge application. However, Nawaz, Hassan and Shaukat (2014) argued on the influence of three knowledge management practice of knowledge acquisition, dissemination and responsiveness to knowledge on innovation and firm performance. Data is collected from four hundred and seven manufacturing organizations listed in Karachi stock exchange. Correlation and regression analysis were used for data analysis. The result shows a positive and significant relationship between the study variables, innovation was found to partially mediate the association between knowledge management practices and firm performance. The study of Jabeen et al., (2014) which investigated the impact of total quality management, knowledge management and business performance of Nigerian SMEs reported a significant positive effect of KM and BP. However, Manafi and Subramanian (2015) established a positive relationship between knowledge sharing and human resource management practice in the Malaysian universities. Based on these arguments; the following hypothesis formulated:

H1: KM practices positively impact the organizational performance in Nigerian SMEs.

2.2 Entrepreneurial Orientation and Organizational Performance

Despite the popularity and the scholarly attention given to the entrepreneurial orientation (EO) construct, there has been no single accepted explanation which is agreed by the teeming researchers, hence, it has been widely debated in the literature on the nature of the EO construct and its dimensionality (Zahra, 1993; Idar & Mahmood, 2011; Al-Swidi & Mahood, 2012; Shehu & Mahmood, 2014d). The earlier conceptualization of Miller and Khandwala's (1977) and Miller's (1983) work provide a strong literature base on what EO construct have is all about. Miller's (1983) description of the construct was applied to a numerous of organizational processes; other authors such as Lumpkin and Dess (1996) constrained the construct to new entry. More specifically, Lumpkin and Dess (1996) defined the entrepreneurial orientation (EO) as the process and decision-making activities that lead to new businesses or developments. Similarly, Covin et al. (2006) defines EO to be the construct representing the organizational entrepreneurial abilities. From another perspective, Miller and Friesen (1982) named the differentiation of organization over its rivals and superior growth as the clear and immediate results of EO.

Several studies examined the relationship between entrepreneurial orientation and performance of organization is found to produce mixed findings: relationship with firm performance and the possible outcomes are: The finding of Wiklund and Shepherd (2003) reported a significant and positive association between entrepreneurial orientation and performance. Idar and Mahmood (2011) in a study on entrepreneurial and marketing orientation relationship to performance from SME perspective, reported a significant association between EO and performance, and also between market orientation and performance, MO was found to partially mediate between EO to performance. Sharma and Dave (2011) investigated entrepreneurial orientation and performance Level, using a sample of three hundred and nineteen small and medium scale family owned business of Chhattisgarh. They found a strong and positive association between EO and firm performance. Osman, Rashid, Ahmad and Hussian (2011) considered and reviewed a number of past studies on entrepreneurial orientation and organizational performance. Some of the studies reviewed include that of Wiklund and Shepherd in 2005 as well as that of Fairoz, Hirobuni and Tanaka (2010). All the studies confirmed strong and significant linkages between EO and firm performance. The summary of their findings indicated that entrepreneurial orientation assists small businesses to achieve higher performance and also allow them to focus on existing and emerging needs which will result to product market innovation and creativity. Ben Brik, Rettab and Mellahi (2011) surveyed two thousand two hundred firms from Dubai Chamber of commerce and industry, through mail questionnaire. The finding of the study reported a significant and positive relationship between market orientation and business performance. Musa, Abd Ghani and Ahmad (2011) examined the relationship between entrepreneurial orientation (EO) and firm performance and also the role of market orientation (MO) as a moderating variable in Malaysia. The finding of the study suggests that entrepreneurial orientation and market orientation moderates each other.

Al-Swidi and Mahmood (2012) reported a positive association between TQM, EO and organizational performance. The finding of Ndubisi and Iftikhar (2012) from Pakistan with a sample of hundred and twenty four SMEs is also in line with the previous entrepreneurial orientation studies. However, the following studies established significant positive relationship between EO and Performance, Fatoki (2012), Junaidu, Wang and Yen (2012), Arief, Thoyib, Sudiro and Rohman (2013), Prato, Wee, Syahchari, Tyaznugraha, and Hadiatifitri (2013), Rosenbusch, Rauch and Bausch (2013), Mahmood and Hanafi (2013), Shukri Bakar and Mahmood (2014) investigated transformational leadership and corporate entrepreneurship to performance relationship of higher education institutions in Malaysia, using a questionnaire survey with two hundred and forty six valid responses. The finding indicated a significant and positive relationship between corporate entrepreneurship and performance; corporate entrepreneurship partially mediated transformational leadership and performance.

In contrast, Runyan, Droge and Swinney (2008) in their study, which examined entrepreneurial orientation and small business orientation relationship to performance, which employed a sample of two hundred and sixty seven small business owners from eleven small and medium firms. Structural equation modeling was used for data analysis, they reported a mixed finding. Entrepreneurial orientation predicted the performance of younger firms; whereas small business orientation was found to predict the performance of the old group of firms. Arbaugh, Cox and Camp (2009) in their study a multi-country study across seventeen countries and in four continents with one thousand and forty five firms. The results show a mixed findings as entrepreneurial orientation was positively to net worth (financial performance), while entrepreneurial orientation was negatively related to return on sales. Similarly, the study of Frank, Kessler and Fink (2010) on entrepreneurial orientation and business performance with a sample of eighty five SMEs from electric and electronic industry was chosen using survey questionnaire. The finding shows a low correlation between business performance and

entrepreneurial orientation. Anderson (2010) in his seminal work employed a sample of one hundred and seventy two SMEs from the manufacturing sector in Sweden. He asserted that previous studies were short of considering other factors of entrepreneurial orientation to performance relationship like perceptual performance data, common method biases, as well as survival bias. The result from this study indicated a negative relationship between entrepreneurial orientation to performance in terms of growth and profitability. Tang, Tang, Marino Zhang and Li (2008) reported an inverted U-shape relationship between entrepreneurial orientation and performance relationship among Chinese ventures. Additionally, Su, Xie and Li (2011) study established a mixed curvilinear entrepreneurial orientation to performance findings. The relationship between entrepreneurial orientations to performance is found to be an inverse U-shape in new ventures, whereas, such relationship was found to be positive in established firms. Based on this argument, the study proposes:

H2: EO practices positively impact the organizational performance in Nigerian SMEs.

2.3 Organizational Culture and Organizational Performance

There are a lot of organizational culture studies found in the literature, and it appears to have produced a mixed findings. Berson, Oreg and Dvir (2005) finding indicated that organizational culture is a good mediator on the relationship between CEO values and organizational performance. The study of Xenikuo and Simosi (2006) reported that cultural orientation had a direct effect on the overall business performance. However, Ngo and Loi (2008) reported a significant association of adaptability culture, human resources, marketing culture on performance of multinational firm operating in Hong Kong. Naor, Goldstein and Schroeder (2008) result indicated a positive relationship between culture, infrastructure and performance. Similarly, the study of Liu (2009) assessed the relationship between organizational culture and new service delivery performance, using a face-to-face interview with one hundred and ninety two business managers. Correlation was used for data analysis, the outcome of the study indicated that there is strong complementary relationships among innovative culture, supportive culture, market orientated culture, learning culture, customer communication with new service delivery performance.

The study of Eker and Eker (2009) argued on organizational culture and performance of Turkish manufacturing sector. Their finding indicated that firms with flexible culture tend to use non-financial performance, while firm with control tend to use performance measurement system for monitoring. The finding of Luczak, Mohan and Hill (2010) is in support of previous studies establishing a positive relationship between culture and performance. Shah et al., (2011) examined the influential role of culture on leadership effectiveness and organizational performance in Pakistan. Their findings indicated a significant and positive association of culture and performance. Similarly, Slater, Olson and Finnegan (2011) in their study of business strategy, culture, and performance found that cultural orientation play a role in creating superior performance, evidencing significant and positive relationship between culture and performance.

Yazici (2011) surveyed project manager; engineers; and executive from seventy six US firms. The finding indicated that a clan or group culture facilitate a cohesive, high performing team work environment, which result in improved project and business performance. Mujeeb and Ahmad (2011) empirically tested the association between component of organizational culture and performance management practices, and reported significant and positive association between elements of organizational culture and performance management practices. Similarly, Chow (2012) examined the role of organizational culture in the human resource to performance link, used a sample of two hundred and forty three Hong Kong and Taiwanese firm operating in Guangdong, China. The finding indicated that organizational culture mediated the relationship between human resources and performance relationship. This finding is similar to Duke and Edet (2012) which surveyed ninety nine non-governmental organizational out of one hundred and thirty two operating in Nigeria. The results of ordinary least square (OLS) reveal a positive association between organizational culture and organizational performance.

Some studies however, reported a negative relationship between organizational culture and firm performance. Gleason et al., (2000) reported significant negative relationship between culture, capital and performance. Lee, Yoon, Kim and Kang (2006) investigated the effects of market-oriented culture and marketing strategy on firm performance with one hundred and twenty samples of businesses using the survey as an instrument. The result found that MO culture does not affect firm performance. Navarro and Moya (2007) investigated learning culture using survey questionnaire and structural equation modeling. The sample collected made up of two hundred and sixty nine SMEs in two sectors that is the Spanish optometry sector and the Spanish telecommunications sector respectively. They reported a negative association between the culture of these two sectors and market orientation to performance. Additionally, Zainol (2010) examined cultural background and firm performance of Indigenous Malay family business using sample of SMEs from Kuala Lumpur and Selangor were used, with

survey questionnaire and a multiple linear regression for data analysis. The finding of the study reported that EO is not a mediator of the relationship between cultural background and firm performance. Karyeija (2012) finding shows a negative association between culture and performance. Nwibere (2013) investigated the effect of corporate culture dimensions (competitive, entrepreneurial, bureaucratic and consensual cultures) on managerial leadership style (democratic, autocratic and laissez-faire), using seven major oil development companies. They reported mixed findings competitive, entrepreneurial and consensual corporate cultures have significant and positive effects on democratic leadership style. Similarly, entrepreneurial and consensual corporate cultures have significant and positive effects on laissez-faire leadership style. Bureaucratic and consensual organizational culture was found to have significant and positive influence on autocratic leadership style. In the same vein, bureaucratic organizational culture has a perfect negative association with democratic and laissez-faire leadership styles. Competitive organizational culture was reported to have a negative association with autocratic and laissez-faire leadership styles; entrepreneurial organizational culture has a negative correlation with autocratic leadership styles. Shehu and Mahmood (2014d) argued on organizational culture's impact on SME performance in Nigeria, and they established a negative association between organizational culture and performance. Based on this argument, this study seeks to propose the following hypothesis: Based on these arguments, we proposed:

H3: OC mediates the relationship between KM practices and organizational performance of Nigerian SMEs.

H4: OC mediates the relationship between EO and organizational performance of Nigerian SMEs.

3. Research Method

3.1 Sample and Data Collection

The data is collected by means of a hand delivery survey questionnaire completed by owner/managers of SMEs systematically selected from the list of registered SMEs in Kano-Nigeria. Despite, the limitations in the use of questionnaire based research, the benefits arising from cost savings, convenience, anonymity, and reduced interview bias seem to outweigh the limitations (Shehu & Mahmood, 2014e; Sekaran & Bougie, 2010; Idar & Mahmood, 2011). There is also the risk of common-method bias using self-report data, and as such the results of this study should be viewed as presenting the owner/managers' perceptions which could provide the most precise assessment of the conditions with a firm (Lyon et al., 2000). A total of 640 owner/managers from the sampling frame were sent with the questionnaires and 511 usable responses were returned giving a response rate of 79.8 percent, making the response rate to be adequate. There is also an issue of non-response bias which is pertinent to a survey method of data collection. Non response bias exists when there are significant differences between the answers of those who have responded and those who do not respond. This study followed the convention of comparing the respondents of the first wave with those of the second wave (Armstrong & Overton, 1977). The early group consisted of 321 responses whereas the final group consisted of 190 responses. The result of the t-tests performed on the responses of these two groups shows that there are no statistically significant differences on demographic characteristics. Thus, it can be concluded that there is no significant non-response bias in the present study.

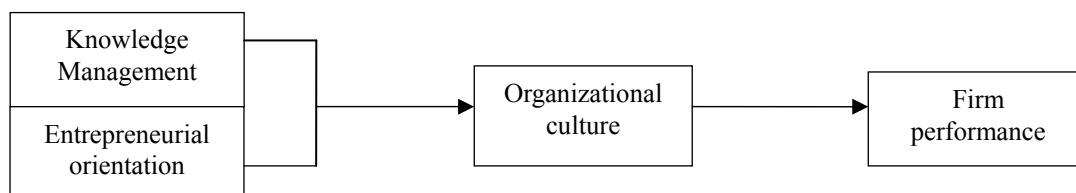


Figure 1. Research framework

4. Variable and Measures

4.1 Knowledge Management

Knowledge management with single dimension was adapted from the work of Wang, Hult, Ketchen and Ahmad (2009). The items were used in previous studies of Hansen et al. (1989), Liebowitz et al. (1998) Olivera (2000), Anand et al. (1998), Nonaka and Takeuchi (1995), Davenport et al. (1998). The previous studies of Sabri (2005), Janepuengporn and Ussahawanitchakit (2008), Ahmadi and Ahmadi (2011), Anvari et al. (2011), Janepuengporn and Ussahawanitchakit (2011) also used a uni-dimensional Knowledge management construct. The KM questions reflect issues in knowledge creation, sharing and utilization.

4.2 Entrepreneurial Orientation

This study uses Entrepreneurial orientation as a single construct adapted from Idar and Mahmood (2011), which is supported in the previous studies of Ricard et al. (2009), Clercq et al. (2010), Al-Swidi and Mahmood (2012), Mahmood and Hanafi (2013), Shehu and Mahmood (2014d). The response of this nine-item questionnaire uses a five point Likert scale on which the owner/managers have to indicate the extent to which the items represent their firm's strategy. The EO questionnaire made up of three sub-dimensions; innovativeness, pro-activeness and risk-taking.

4.3 Organization Culture

Organizational culture with eighteen items was adapted from the work of Al-Swidi and Mahmood (2012). All the items were treated as one-dimensional construct as in Al-Swidi and Mahmood (2012). The items were initially used by Denisons (1990, 2000). Empirical evidence has shown that the previous studies of Berson et al. (2005), Alavi et al. (2005), Ngo and Lai (2008) Ezirim et al. (2010), Shehu and Mahmood (2014) all used organizational culture construct as uni-dimensional.

4.4 Organizational Performance

Performance can be viewed from the objective and or subjective respectively. Some previous studies, suggested the use of objective measures. It has been generally agreed that objective measures of performance are more appropriate than subjective evaluation. Hence, collecting objective data is very difficult largely because owner/managers are not ready to pass their information to outsiders. In addition, they may provide biased evaluation of their firm's performance (Sapienza et al., 1988). Therefore, a subjective approach is employed in this study where the performance of the firm is measured by the perception of the owner/managers providing responses to the survey, adopted from the study of Suliyanto and Rahab (2012).

5. Results and Discussions

5.1 Reliability and Validity

Reliability and validity tests were conducted in order to ensure error free and valid instrument for the conduct of this study. The instrument used in this study was from different sources. The most common measure of internal consistency is the Cronbach alpha coefficients. A value of 0.6 is considered as average, 0.7 and above considered as good reliability value (Hair et al., 2010; Tabachnick & Fidell, 2014). Hence, all the measures possess a good reliability value ranging from 0.771 to 0.939. Table 1 below provides a summary of reliability test based on the Cronbach Alpha values of more than 0.7 which is higher than that recommended by Hair et al. (2006); Sekaran and Bougie (2010). Therefore, all the constructs were deemed to have adequate reliability.

Table 1. Reliability scores of variables

Variable	Number of Items	Cronbach's Alpha
Knowledge management	14	0.811
Entrepreneurial orientation	9	0.771
Organizational culture	18	0.923
Performance	6	0.939

The study variables were validated through a factor analysis. Prior to performing the analysis, the suitability of the data was assessed through two tests; Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's Test of Sphericity. The KMO has to be more than 0.50 and Bartlett's Test of Sphericity has to be significant. The KMO values for KM is 0.623 EO 0.835 and OC is 0.705 respectively, which can be considered as between middling and meritorious (Kaiser, 1974) and Bartlett's Tests of Sphericity, which were significant at $p < .000$ Bartlett. Hence, the data was adequate for further analysis.

5.2 Sample Characteristics

The respondent profile is illustrated in Table 2 below. From the table, it can be seen that the owner/managers of SMEs were predominantly male with percent compared to only 9 percent for their female counterparts. The owner/managers of Nigerian SMEs had obtained a senior secondary school certificate qualification and below with 34.2 percent, and only 2 percent had obtained a PhD degree. As regards to the number of employees, about 58.5 percent of the firms have employees between 10-49, and only 5.4 percent have less than 10 employees. The Table below 2 indicated that most of the SMEs have between 5-10 years in operation, with about 37.3 percent,

whereas only 2 percent have a record for more than 30 years and above in operation.

Table 2. Profile of respondents

Demographic variables	Categories	Frequency	Percentage
Gender	Male	91	91
	Female	9	9
Education	SSCE	153	34.2
	Diploma/NCE	96	21.4
	HND/Degree	140	31.3
	Master Degree	50	11.2
	PhD	9	2
Number of Employees	Less than 10	24	5.4
	Between 10-49	262	58.5
	Between 50-199	162	36.1
	Below 5 years	71	15.8
Years in Operation	Between 5-10 years	167	37.3
	Between 11-15 years	105	23.4
	Between 16-20 years	66	14.7
	Between 21-25 years	20	4.5
	Between 26-30 years	10	2.2
	30 years and above	9	2

5.3 Test of Hypotheses

The relationship between KM and performance was tested using regression analysis (H_1) and also EO to performance (H_2). The regression analysis result in Table 3 indicates that KM is positively and significantly related to performance. This finding supports H_1 . Similarly, finding indicated that EO has a significant positive relationship to performance, thus (H_2) also supported.

Table 3. Regression of KM and EO

	Beta	t-value	Sig
KM	.441	9.897	.000
EO	.132	2.952	.000

The mediating effect of OC on the relationship between KM and performance was tested based on a regression procedure specified by Baron and Kenny (1986). According to this procedure, the variable can be considered as mediator when the following conditions are met: (1) there is a significant relationship between independent (predictor) and dependent (criterion) variables; (2) the variation of the independent variable significantly accounts for the variation in the mediator variable; (3) the variation in the mediator variable significantly accounts for the variation in the dependent variable, and; (4) when the previous conditions are controlled, the previously significant relationship between independent and dependent variable no longer exists (Baron & Kenny, 1986).

5.4 Mediation Test

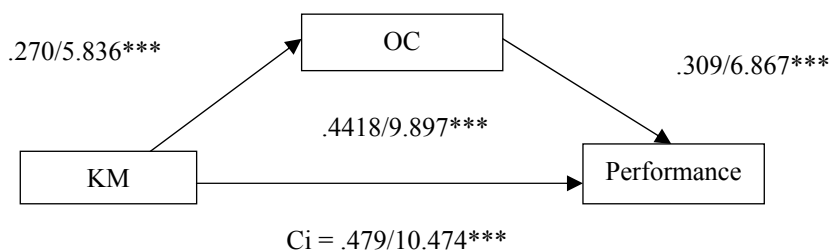


Figure 2. Mediation of OC on the relationship between KM and OP

As regard to the mediating effect of organizational culture on the relationship between knowledge management and performance. Baron and Kenney's (1986) criteria for mediation was followed. The first step (Path a) was assessed through the regression analysis and report an $R^2 = .177$, $P < .000$. The first requirement, a significant relationship was established between the independent variable (knowledge management) and dependent variable (performance) with ($\beta = .4418$, $t = 9.897$). Next, the second requirement Path a (knowledge management to organizational culture) was assessed through a regression analysis and indicated a significant relationship ($\beta = .270$, $t = 5.836$). The third criterion for mediation, Path b (organization culture to firm performance) the result of the regression analysis shows ($\beta = .309$, $t = 9.897$). The last criteria is about regressing independent variable and mediating variable against dependent variable, here knowledge management and organizational culture were regressed together against firm performance, regression analysis indicated a significant relationship ($\beta = .479$, $t = 10.474$). It was concluded that H3 is supported.

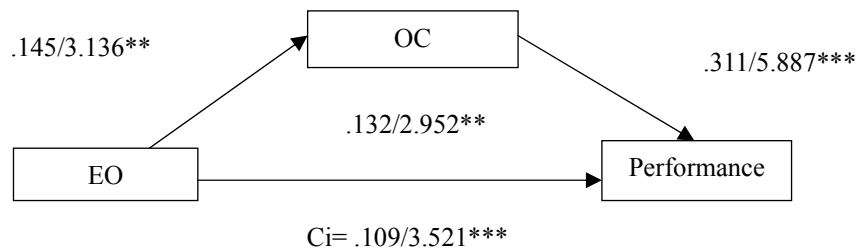


Figure 3. Mediation of OC on the relationship between EO and OP

As regard to the mediating effect of organizational culture on the relationship between entrepreneurial orientation and firm performance. Baron and Kenney's (1986) criteria for mediation was followed. The first step (Path a) was assessed through the regression analysis and report an $R^2 = .155$, $P < .000$. The first requirement, a significant relationship was established between the independent variable (entrepreneurial orientation) and dependent variable (firm performance) with ($\beta = .132$, $t = 2.952$). Next, the second requirement Path a (entrepreneurial orientation to organizational culture) was assessed through a regression analysis and indicated a significant relationship ($\beta = .145$, $t = 3.136$). The third criterion for mediation, Path b (organization culture to firm performance) the result of the regression analysis shows ($\beta = .311$, $t = 5.887$). The last criteria is about regressing independent variable and mediating variable against dependent variable, here entrepreneurial orientation and organizational culture were regressed together against firm performance, regression analysis indicated a significant relationship ($\beta = .109$, $t = 3.521$). It was concluded H₄ supported.

Table 4. Summary of the result of mediation test of knowledge management, entrepreneurial orientation, organizational culture and performance

Variable	A		B		C		c ⁱ		Decision
	Std. Beta	T-value	Std. Beta	T-value	Std. Beta	T-value	Std. Beta	T-value	
KM	.270	5.836	.309	6.867	.4418	9.897	.479	10.474	Partial Mediation
EO	.145	3.136	.311	5.887	.132	2.952	.109	3.521	Partial Mediation

6. Discussions

The findings of this study are consistent with that of the previous studies that established a significant and positive relationship of KM and OP. Hou and Chien (2010) afound support on the relationship between market knowledge management and business performance. Other studies with similar findings on the positive relationship between knowledge management and firm performance includes: Theriou et al. (2011), Chen et al. (2011), Janepuengporn and Ussahawanitchakit (2011), Al-Hakim and Hassan (2011), Sandhwalla and Dalcher (2011), Kharabsheh, Magableh and Sawadha (2012), Davood and Morteza (2012). However, the study of Al-Dhaafri and Al-Swidi (2014) found a significant and positive association of EO and OP. This is equally support by the study of Shukri Bakar and Mahmood (2014) which reported significant and positive relationship between corporate entrepreneurship and performance of academic public higher education in Malaysia. Other studies in support of this finding includes: Wang and Yen (2012), Arief et al. (2013), Shehu and Mahmood (2014)

respectively. Regarding the mediating effect of OC on the relationship between KM and EO, this indicated a partial mediation between KM, EO and OP. This is in line with the finding of Shah et al. (2011), Mujeeb and Ahmad (2011) and Sakro (2012) respectively.

6.1 Managerial Implications

The useful implications of this study can be seen that there is continuous need for resources and time investment in KM and EO initiatives for improve SME performance. Additional, this study pinpoints the relevance of organizational culture in future strategy implementation. Finally, the finding from the study will help SME owner/managers in understanding the nature and relevance of the study variables to their firms; policy-makers such as the small and medium enterprise development agency (SMEDAN) of Nigeria tend it benefit also from the outcome of the current study.

6.2 Limitations, Conclusions and Future Research Directions

The present study has some main limitation: First, this study use a subjective performance measure from the perspective of managers. Hence, there is the possibility of bias (Thornton, 1968). Secondly, the study uses a cross-sectional research design which only allows a data gathering at a point in time. Therefore, a cross sectional research design cannot allow and notice the dynamic and the changing nature of the association due to the interaction among various study variables.

The present study investigated the relationship of KM and EO on OP of SMEs in Nigeria, with the mediating role of OC. The finding established a significant and positive association of KM, EO and OP, whereas, no mediating effect is found between the studies constructs.

However, the use of a longitudinal and case study is suggested for a better investigation of the impact of KM, EO strategies. Future studies may also measure the performance of organization using objective measures. Additionally, future research should consider other organizational variables that might provide a match between strategy and organizational environment in the light of contingency theory. Future studies may introduce any suitable moderating and or mediating variable between strategy and performance relationships.

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