



ABSTRACT

In the current technology driven era, Small and Medium Scale enterprises (SMEs) have emerged as very essential economic catalyst in the development and industrialization bid of most developed and developing economies such as Nigeria. Given the economic realities in Nigeria, the

MEDIATING EFFECT OF ENTREPRENEURIAL COMPETENCIES ON THE RELATIONSHIP BETWEEN ENTREPRENEURIAL ORIENTATION AND SMALL AND MEDIUM SCALE ENTERPRISES (SMEs) PERFORMANCE IN NIGERIA

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Introduction

Small and Medium Scale Enterprises (SMEs) have emerged as very essential economic catalysts in the development and industrialization bid of most global economies International Finance Corporation (IFC, 2020). SMEs have been recognized as strategic engines of wealth creation and poverty alleviation. This is



country must constantly create new jobs and diversify the industrial and commercial sector to take advantage of human and natural resources through entrepreneurship. The present research aims to identify the role of entrepreneurial competencies on the relationship between entrepreneurial orientation and SMEs performance in Nigeria. Questionnaire was distributed to the owners/managers of registered SMEs in Kaduna State. Structural Equation Model was used to analyzed the data using Partial least Square Method (PLS 2). The result based on the findings shows that innovativeness has positive and significant effect on SMEs performance, just as risk taking and entrepreneurial competencies has positive and significant effect on the performance of SMEs. However, proactiveness and the performance of SMEs are not significantly related. On the mediation relationships, entrepreneurial competencies only mediate the relationship between risk taking and performance of SMEs. Therefore, the study conclude that entrepreneurial competencies do not mediate other relationships in the study. Furthermore, the study shows that innovativeness and risk-taking affect significantly and positively SMEs performance. Finally, the study recommends that SMEs owner/managers should attach more importance to the implementation of innovative and risk taking in order to increase their performance.

Keywords: Entrepreneurial orientation, entrepreneurial competencies, SMEs Performance.

according to the United Nations Industrial Development Organization (UNIDO, 2018) report, which states that SMEs account for over 90 per cent of enterprises in the world and are responsible for 50 to 60 per cent of employment. Similarly, according to (African Development



Bank (ADB), (2017) SMEs account for 58 per cent of employment in Africa and generate 33 per cent of the continent's Gross domestic product (GDP). Specifically, In Nigeria a recent report by the National Bureau of Statistics (NBS,2020) indicates Nigeria's SMEs contribute nearly 50 per cent of the country's GDP and account for over 80 per cent of employment in the country. No doubt, the sector is pivotal to Nigeria's growth including reducing poverty levels. However, the sector continues to be weighed down with challenges which ultimately impact the nations growth.

Despite all these, SMEs still suffer from a number of challenges that translates into costly and inefficient business operations, thus painting the country's performance poorly across two major surveys. In these surveys Nigeria is ranked 127 out of 138 countries in the Global Competitiveness Index (GCI) on the World Economic Forum Survey (WEF, 2017); and 169 out of 190 countries in Ease of Doing Business Index on the World Bank Survey (WB, 2017). As a consequence, Nigeria's 127th spot is behind other African countries: South Africa (47), Rwanda (52), Botswana (64), Morocco (70), and Namibia (84) respectively. On the other hand, other African Countries that are in a better position than Nigeria in terms of Global Competitive index and ease of doing business are Kenya (96), Ghana (114), Egypt (115), Cameroon (119) and Benin Republic (124), among others. Accordingly, Sekibo (2018) Chief Executive Officer of Heritage Bank at the 2nd US-Africa Trade & Investment Forum which took place in New York, USA, noted that most SMEs in Nigeria die within the first five years of existence, while another smaller percentage goes into extinction between the sixth and tenth year, with only 5 to 10 per cent surviving, thriving and growing into established corporate status.

Similarly, Forbes, (2019) report on Ease of doing business (EoDB) ranking which graded 161 countries drop Nigeria from 3rd to 14th



position in African with South Africa emerging 1st position in Africa. This ranking is coming despite the reforms by the Presidential Enabling Business Environment Council (PEBEC) and the various executive order 2016 is seen as a setback for Nigeria's push to create and sustain an enabling environment for SMEs subsector. Globally, other African countries that are in better position than Nigeria in the Forbes ranking are Botswana (83), Rwanda (90), Kenya (93), Ghana (94), Senegal (100) and Cape Verde (104) before Nigeria was rated 110th globally. Given these economic realities, SMEs still suffer with many challenges that have been responsible for the slow growth of businesses in Nigeria. In particular, these challenges include the unfavorable economic situation, lack of suitable government policies, higher operating costs, (Abdullahi & Sulaiman, 2015), insufficient entrepreneurial competencies and low productivity (Hussain, Ismail, & Akhtar, 2015) and mostly inappropriate and inefficient utilization of firm resources (Rauch & Hatak, 2016; Bloodgood, 2014). Also, the lack of understanding of how small and medium firms can develop their competencies and secure their future performance (Greer, Carr, & Hipp, 2016; Azadegan, Patel, & Parida, 2012). These all are the current prevailing issues related to the small firm performance which literature have attributed to the absence of entrepreneurial competencies which in turn could be the contributing factor to the growth and performance of SMEs in Nigeria.

Performance refers to the ability of an organization to achieve objectives such as high profit, quality product, large market share, good financial status and survival at predetermine time using relevant strategy for action (Obiwuru, Okwu, Akpa, & Nwankwere, 2011). Thus, Wang (2010) views performance as product accomplishment, results oriented and achievement in an organization. According to Patel and D'Souza, (2012), firm level entrepreneurship is a key that enhances



organizational performance of small businesses. In addition, performance of SMEs ensures the economic soundness particularly in developing countries where entrepreneurship research is scarce (Coder, Peake & Spiller, 2017; Hyder & Lussier, 2016). For this reason, there is an urgent need for conducting research in small businesses (Hashim, Raza, & Minai, 2018). Similar studies should be conducted possibly in developing countries (Ibrahim & Abu, 2020).

Entrepreneurial orientation (EO) refers to a firm's strategic organizational posture, capturing specific entrepreneurial aspects of decision-making styles, methods, and behavior (Zahra, Wright & Abdelgawad, 2014). Miller's (1983) identified three basic dimensions for EO namely, innovation, proactiveness and risk-taking while Lumpkin and Dess (1996) identified five dimensions of entrepreneurial orientation by adding two more dimension to include aggressiveness and autonomy to the first three. Nonetheless, different strategic orientation of businesses such as Market Orientation (MO), Learning Orientation (LO), Technology Orientation (TO) and Entrepreneurial Orientation (EO) have gained considerable attention from both management and management scholars (Hakala, 2011; Chrisna, 2014) but among these strategic orientation EO has been noted as a key ingredient for organizational success and has been found to lead to higher firm performance (Wiklund & Shepherd, 2005; Soininem, 2012). Similarly, EO has a direct impact on the ability to collect and use information from market and increases the market orientation of the firm (Long, 2013). None the less, (Wales, Gupta and Mousa 2011; Brinchmann 2011; Man, and Lau, 2000) state that most of EO studies were conducted in developed economies and very little studies were conducted in developing countries like Nigeria. Hence, there is a need for research to explore more on the relationship between EO and firm performance (Rezaei & Ortt, 2018). Therefore, this study



conceptualizes entrepreneurial orientation with the first three dimensions postulated by Miller (1983) and suggested by Mahmood & Hanafi (2013). This is because for SMEs to be successful it requires the business manager to be more innovative, proactive and be a risktaker to have advantage over the market rivals.

Entrepreneurial Competencies (EC) are attributes such as skills and knowledge that employees invest on the job in order to achieve high performance for the firm (Gerli, Gubitta, & Tognazzo, 2011). However, they also consist of attributes such as motives, traits, and special skills, general or particular knowledge that leads to the birth of an enterprise, its survival and growth (Dermol, 2010). In the light of this, entrepreneurial competencies reflect in the extent to which entrepreneurs are willing to take risks so as to enable the enterprise succeed (Oyeku, Oduyoye, Asikhia, Kabuoh & Elmo, 2014). Even though, (Nurach, Thawesaengskulthai and Chandrachai, 2012; Man, Lau, and Snape, 2002) argue that the firm level competencies are named entrepreneurial competencies to emphasize the nature of structure. Thus, there is widespread acknowledgement that competencies influence the business performance of SMEs (Mitchelmore & Rowley, 2013) and inadequate entrepreneurial competencies in SMEs could constitute a major problem and barrier toward achieving a better performance in SMEs (Pulka, Ramli & Mohamad, 2018). As a result, entrepreneurs must pay a special attention to their competency improvement in order to enhance performance.

In spite of the fact that, Entrepreneurial Competence is being regarded as a vital aspect of business performance, the study focusing on Entrepreneurial competencies are limited (Yusuff, Bakar, & Ahmad, 2016; Abaho, Sylvia, Ntayi, & Kisubi, 2016; Taipale-Eravala, Heilmann & Lampela, 2014). In spite of this, Research shows that the competencies



of entrepreneurs contribute to business performance such as profitability and growth (Bird, 1995).

However, little research attention has been given to the theoretical blend between EC and EO in a single research work in existing scientific investigation (Ibidunni et al., 2018). Furthermore, Hashim, Raza and Minai (2018) state that the relationship between EC and SMEs performance is questionable due to incompatible results of studies connected to this relationship. Even though, Mithelmore and Rowley (2013) state that there is a basis for further investigation in to EC that affects performance of SMEs. In addition, study on the empirical relationship between EC, EO and performance of SMEs can be seen as a stepping stone towards a new path in determining this vital link for future researcher (Hashim, Raza, & Minai, 2018). However, very little studies have considered the EC as a mediator to assist the relationships between EO and firm performance (Herath & Mahmood, 2013). Furthermore, there is a knowledge-based gap related to EC of entrepreneurs (Yusuff et al., 2016). Hence, there is a necessity for research to explore more on the relationship between EC and firm performance (Hashim, Raza, & Minai, 2018). It is on this basis that the present study tries to link EC as a mediating variable between EO and small business performance. This combination is coming as most business failures are caused by business managers of SMEs who are incompetent and lack experience in managing their businesses.

Literature Review

Entrepreneurial Orientation and SMEs Performance

A number of studies show that EO and organizational performance have positive relationship (Rauch et al., 2009) even as many other studies indicate negative relationship between them (Matsuno, Mentzer, & Ozsomer, 2002; Morgan & Strong, 2003). Even though,



Wales et al. (2011) further argue that organizations that adopt EO perform better than conservative organizations.

Similarly, Entrepreneurial orientation may be viewed as a special resource in terms of organizational ability, which allows companies to develop competitive advantages and improve performance (Aloulou, Fayolle, 2005; Grande et al., 2011; Madsen, 2007; Wiklund & Shepherd, 2011). In this light, developing entrepreneurial orientation involves adapting a firm's alternative strategic orientations and skill sets, which can in turn have a positive impact on business performance. Besides, entrepreneurial orientation is considered a fundamental organizational process (Hult et al., 2003) that contributes to reassure firm performance (Barringer & Bluedorn, 1999; Dimitratos & Plakoyiannaki, 2003; Hitt et al., 2001; McDougall & Oviatt, 2000; & Miller, 1983). Therefore, this study views EO as a strategic force behind performance which is related to first mover advantages as well as to the tendency to utilize emerging opportunities.

Entrepreneurial Competency

Entrepreneurial competencies are specific competencies relevant for the implementation of successful ventures (Mitchelmore & Rowley, 2010). Hence, Entrepreneurial competencies are important when it comes to business performance and an understanding of the nature and role that such competencies can have important implications for practice (Mohamad, Ramayah, Puspowarsito, Natalisa, & Saerang, 2011). Several empirical studies attest to the fact that entrepreneurial competencies influence the performance of SMEs. For example, Sanchez (2011) who studied small firms which had just started in Spain, and Muhamad (et al., 2011) who studied home-stay entrepreneurs in Malaysia, both established that entrepreneurial competencies have a positive impact on a firm's performance.



According to Mohamad et al., (2011) an entrepreneur with the ability to create new combinations of production, organize and reorganize some economic mechanisms, willingness to take risks and ready to exploit market opportunities operates a business more successfully than one who lacks these characteristics. Therefore, entrepreneurial competencies are associated with the firm's performance and competitiveness (Man, Lau, & Snape, 2002), business growth and success (Colombo & Grilli, 2005). Acquiring and leveraging entrepreneurial competencies is crucial for achievement-oriented entrepreneurs. In SMEs, the critical resources are likely to be held by individual entrepreneurs as reflected in their skills, knowledge, abilities, experience and education (Vijay & Ajay, 2011).

In this light, four competency dimensions are identified by (Rahman, Noor, Seyedeh and Taghizadeh, 2015) namely: Opportunity, Strategic, Conceptual and Technical Competencies. Due to its comprehensiveness, Rahman, et al. (2015) categorization of entrepreneurial competencies was adopted in the present study

Empirical Review of Some Related Studies

Shafique and Saeed (2020) Conducted a study in Pakistan to examines the moderation of environmental dynamism on the relationship between elements of entrepreneurial orientation and firm performance. Data was gathered from 143 textile and leather manufacturing small and medium-sized enterprises (SMEs) in Pakistan. Partial least square (PLS) was employed to analyse the hypotheses. The findings reveal that EO elements positively affect firm performance directly, except in the case of proactiveness. However, the study is concern with the moderating role of environmental dynamism on the relationship between EO and firm performance in Pakistan region thereby neglecting EC as an intangible resource of the



firm in the model. More so, the sample size is relatively small to generalize the findings and therefore there is need to increase the robustness of their findings by increasing the sample size which this study intended to do. Finally, there the need also to include other variables such as EC to act as a mediating variable to get an improved comprehension about the central juxtaposition between EO elements and firm performance.

Ibrahim and Abu (2020). Conducted a study in Abuja, Nigeria to investigate the Influence of Entrepreneurial Orientation on Firms Performance. A total of one hundred ten (110) questionnaires had been distributed to SMEs based on a simple random sampling method. However, only ninety-seven (97) firms responded to the survey questionnaires and these are considered to be appropriate representing 88% response rate. The descriptive statistics as well as inferential statistical tool were used to analyse the data. It was revealed that proactiveness, risk-taking and autonomy are positive and significantly related to business performance. However, the study concern only with direct effect of EO and firm performance neglecting other important variable such as EC that can help to increase the firm performance in the model. None the less, the sample size is relatively small considering the concentration of SMEs in Abuja and that if more sample were collected the relationship between the variables as well as the result of the findings will have been different which this study intends to do.

Putnins and Sauka, (2019) conducted a study in Australia to examine Why does entrepreneurial orientation affect company performance? Data were collected from 1,020 companies from three European union member states (Estonia, Latvia and Lithuania) by administering a questionnaire through telephone interviews and collect responses with complete information on the items required to compute



entrepreneurial orientation. The telephone interviews were conducted with company owner/managers. The result suggests that risk-taking that is associated with a high level of innovativeness is related to better performance than risk-taking that is associated with a low level of innovativeness. There is no evidence of a moderating relationship for proactiveness, nor is the joint effect of innovativeness and proactiveness on the relationship between risk-taking and performance significant. However, the study concern only with direct and indirect effect of EO dimensions on companies' performance in European union member states thereby neglecting EC as an intangible resource of the firm in the model. Hence, this study intended to fill this gap by including EC as a mediating variable in the relationship between EO and SMEs performance.

Ibidunni, et al. (2018) also examine the moderating effect of entrepreneurial orientation on the relationship between entrepreneurial competencies and performance of agro based SMEs in Nigeria. The study used questionnaires gathered from 230 managers of agro based firms in Lagos state Nigeria. Findings suggest that entrepreneurial competencies have a direct influence on performance of Agro-based SMEs. More so, the statistical result indicates that innovativeness, proactiveness and autonomy are the three entrepreneurial orientations that moderate the relationship between entrepreneurial competencies and performance of the firms. However, this study is concerns with only Agro based SMEs thereby neglecting other SMEs firms in the sector. Therefore, the study does not include mediating effect of Entrepreneurial Competency instead include EO as a moderator in the study. Moreover, if Secondary data were employed in the study the result of the findings might change thereby affecting the generality of the result which the present study intends to do.



Theoretical Framework

A potential framework for augmenting the conceptual analysis of the mediating effects of entrepreneurial competencies on the relationship between entrepreneurial orientation and firm performance is the resource-based view (RBV) of the firm which links the performance of organizations to resources and skills that are firm-specific, rare, and difficult to imitate or substitute (Barney 1986, 1991). The resource-based view is presently the dominant theoretical perspective in strategic management literature, and focuses on costly-to copy attributes of a firm which are seen as the fundamental drivers of performance (Conner 1991; Rumelt 1984, 1987; Schulze 1992). Consequently, the present study has adopted resource-based perspective of the firm to underpinned it model as shown below.

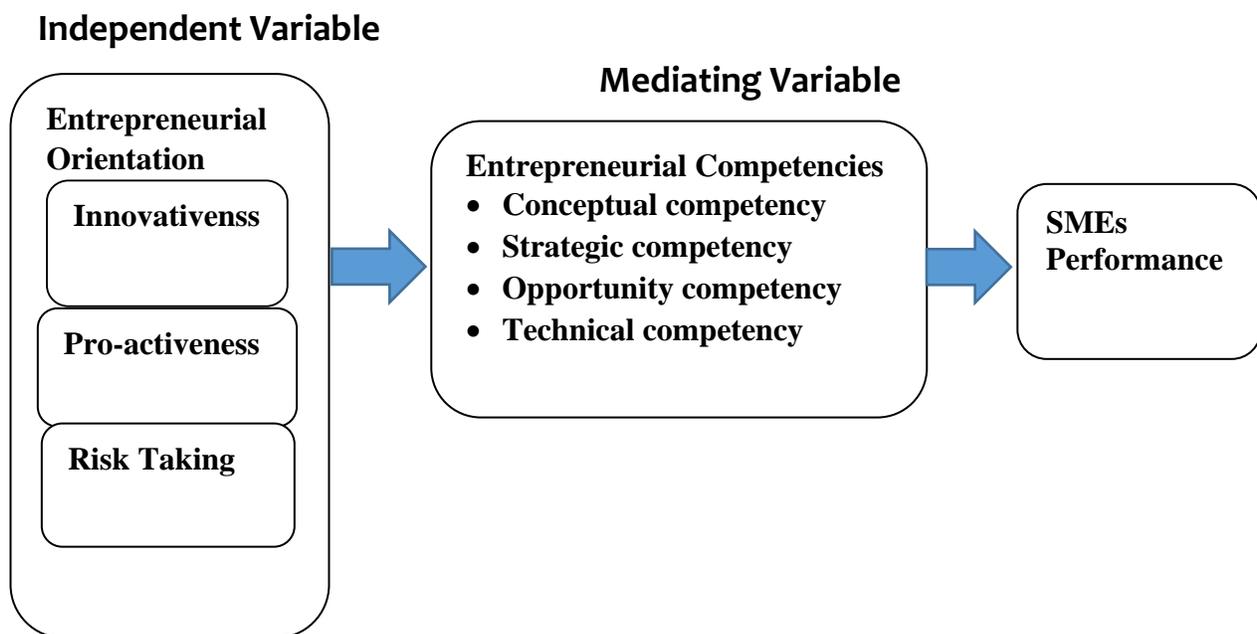


Figure 1. Model for the study

The model depicts a relationship amongst the key variables that affect SMEs performance. The framework is developed to test the mediating



role of entrepreneurial competency on the relationship between entrepreneurial orientation and SMEs performance in Nigeria.

Research Methodology

This study was conducted as a cross sectional survey research which is designed to obtain pertinent information concerning the current state of affairs. The population of the study consists of 2,650 SMEs (2,574 Small and 76 Medium scale enterprises) operating businesses within Kaduna State. The number of SMEs was obtained from SMEDAN and National Bureau of Statistics Collaborative Survey (2017). The sample size was determined using Krejcie and Morgan's (1970) table. 335 sample size against a population of 2650 registered SMEs. However, 30% of the minimum sample provided in the formula will be added as suggested by Israel (2013) to take care of non-response bias and improper filling of the questionnaire, bringing the total sample size to 436.

Primary source of data was used in the study to examine the mediating role of entrepreneurial competency on the relationship between entrepreneur orientation and SMEs performance in Kaduna State. This primary data was obtained through the use of self-administered questionnaires to business owners/managers using simple random sampling techniques. The measurement for each of the variables was adapted from different authors. Additionally, content validity was used to validate each statement of the instrument based on the evaluation of the two experts in the management field.

Data were analyzed using partial least square (SmartPLS 2) and followed the two-stage approach for assessing the measurement model and the structural model respectively. According to the suggestion of Urbach and Ahlemann (2010), this study tested the important criteria and process to estimate the outer and inner model.



Data Analysis

The total of 436 copies of questionnaires was distributed to respondents of the study, out of which 384 copies of questionnaires were retrieved by the researcher. This represents about 88% of the total distributed copies of questionnaires. However, 28 copies of the returned questionnaires were considered to be outliers and were deleted from the data set. Hence, only 356 copies of questionnaires were found usable for final analysis. This is considered very appropriate for this study.

Table 4.1 Summary of Responses

Questionnaires	Frequency	Rate (%)
Distributed Questionnaires	436	100
Unreturned Questionnaires	52	12
Returned Questionnaires	384	88
Unusable Questionnaires	28	7
Usable Questionnaires	356	82

From table 4.1, the no of useful questionnaire is 356 representing (82%) which is a response rate considered sufficient for statistical reliability and generalization (Tabachnick & Fidell, 2013) as Cited in (Aminu, 2015).

Table 4.2 Demographic Distribution of Respondents

Characteristics	Frequency	Percentage	Cumulative Percentage
Sex			
Male	251	70.5	70.5
Female	105	29.5	100
Age			
18-25	34	10.0	10.0
26-30	89	25.0	35.0
31-35	121	34.0	69.0



>35	112	31.0	100
Qualification			
Secondary	86	24.2	24.2
Tertiary	202	56.7	80.9
Others	68	19.1	100
Current Position			
Owner/Manager	125	35.1	35.1
Manager	231	64.9	100

Table 4.2 presents the result of the demographic characteristics of the respondents of this study. It is seen on Table 4.2, there are more males than female respondents in this study. 70.5 percent of the total respondents are males, while 29.5 percent are females. None of the respondents of this study is less than 18 years. This is expected as this study focused on individuals in managerial levels, and it will be difficult for 18-year old to be in managerial positions. However, 10 percent of the respondents of this study are between ages 18 to 25, while 25 percent are between ages 26 to 30 years of age. 34 percent are between ages 31 to 35, and finally, 31 percent of the respondents of this study are above 35 years of age.

24.2 percent of the respondents of the study are secondary school certificate holders, 56.7 percent have first degree holders, and finally, 19 percent have degrees that are not specified on the questionnaire. It is seen that most of the respondents of this study are first degree holders. This is expected as it is only reasonable that individuals in managerial positions have at least their first-degree certificates. 35.1 percent of the respondents of this study are owners and simultaneously are managers of their various businesses. While the other 64.9 percent of the respondents are just managers of the sampled SMEs.



Table 4.3 Construct Reliability and Convergent Validity

Construct	Item	Loadings	AVE	CR
Innovativeness	INN1	0.84	0.71	0.88
	INN2	0.88		
	INN3	0.81		
Proactiveness	PRO1	0.92	0.83	0.91
	PRO2	0.90		
Risk Taking	RT1	0.86	0.79	0.92
	RT2	0.91		
	RT3	0.89		
Performance	FP1	0.75	0.62	0.92
	FP2	0.78		
	FP3	0.81		
	FP4	0.87		
	FP5	0.86		
	FP6	0.84		
	FP7	0.67		
	FP8	0.68		

Note: AVE represents Average Variance Extracted; CR represents Composite Reliability. One item was deleted due to measurement issues.

It is important that item loadings be more than 0.7, except for FP7 and FP8 that loaded 0.67 and 0.68 respectively. Even though this item has a loading below 0.70, it was maintained because it is already above the critical level of 0.40, and its removal would not bring about any significant change to either AVE or CR. More so, 0.67 and 0.68 is very close to 0.70 or approximate equal to. Therefore, based on the criterion given by Hair et al. (2014), all the remaining items are reliable to measure their respective reflective latent constructs. On the other



hand, AVE be above 0.5 and while composite reliability should be above 0.7 (Hair *et al.*, 2014). On Table 4.4, it can be seen that all items loaded above 0.5, AVE is above 0.5 and composite reliability coefficients are all above 0.7. However, PRO₃ was deleted due to poor measurement. It can therefore be said that the items used in this study are reliable and valid.

Table 4.4 *Measurement Model: Discriminant Validity (Fornell-Lacker Criterion)*

	1	2	3	4
1. Firm Performance	0.79			
2. Innovativeness	0.63	0.84		
3. Proactiveness	0.50	0.69	0.91	
4. Risk Taking	0.63	0.58	0.48	0.89

Note: The bolded diagonal values correspond to the square root of the AVE of the constructs.

Fornell-Larcker (1981) criterion was used to assess discriminant validity. The bolded numbers represent the square root of AVE. for the constructs to meet discriminant validity using Fornell-Larcker criterion, correlations with the bolded square root of AVEs should be lower than the bolded number. On Table 4.4, it is seen that correlations with the bolded number are lesser than the bolded numbers. Thus, using Fornell-Larcker criterion, the constructs passed discriminant validity.

Bootstrapping Analysis (Structural Model)

Bootstrapping analysis is conducted to determine the direct effect. This was done by using 5000 subsamples with 356 cases as presented in figure 2.

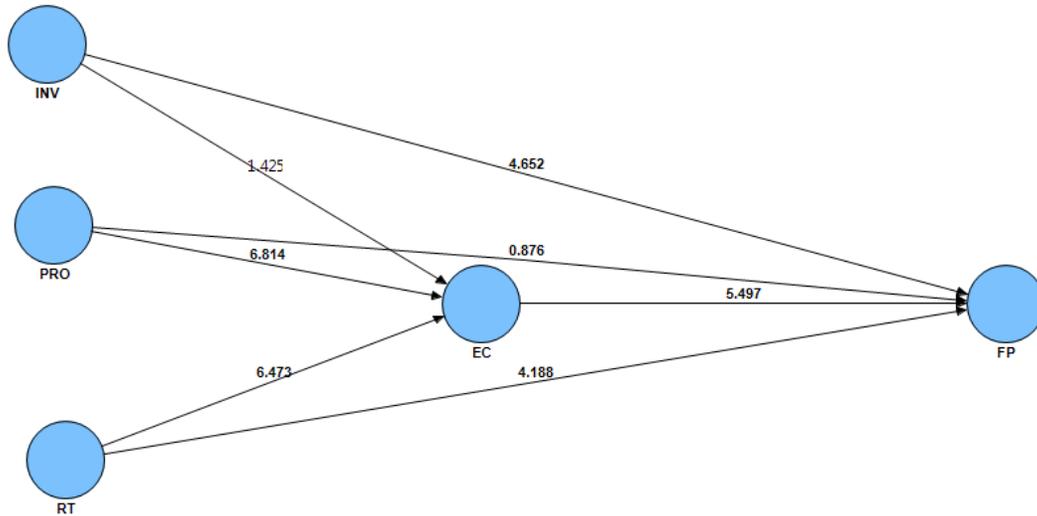


Figure 2. Structural model

Table 4.5 Structural Model: Test of Significance for Direct Relationships

Hypotheses	Relationships	Beta	SE	T Statistics	P Value	Decision
H ₀₁	INV-FP	0.29	0.06	4.59***	0.00	Rejected
H ₀₂	PRO-FP	0.049	0.06	0.85	0.40	Fail to Reject
H ₀₃	RT-FP	0.29	0.07	4.19***	0.00	Rejected
H ₀₄	EC-FP	0.34	0.061	5.66***	0.00	Rejected

***p < 0.01; **p < 0.05; *p < 0.10

Table 4.5 presents the result of the bootstrapping analysis of the direct relationships in the study. From Table 4.5, it can be seen that innovativeness (INV) significantly predicts performance of SMEs ($\beta=0.29$, $p<0.01$). As a result, H₀₁ that states that innovativeness has no significant effect on the performance of SMEs in Nigeria is rejected. On the other hand, proactiveness (PRO) does not significantly predicts performance of SMEs ($\beta=0.049$, $p>0.1$). Thus, this study fails to reject H₀₂ that states that proactiveness has no significant relationship on the



performance of SMEs in Nigeria. Similarly, risk taking is significantly related to the performance of SMEs ($\beta=0.29$, $p<0.01$). Thus, H_{03} that states that risk taking has no significant effect on the performance of SMEs in Nigeria is rejected. Finally, entrepreneurial competencies are significantly related to the performance of SMEs ($\beta=0.34$, $p<0.01$). Thus, H_{04} that states that entrepreneurial competencies have no significant effect on the performance of SMEs in Nigeria is rejected.

Table 4.6 Structural Model: Bootstrapping Results for Indirect Effect

Path a	Beta	Path b	Beta	Indirect Effect (a*b)
INV -> FP	0.29	EC -> FP	0.34	0.10
PRO -> FP	0.05	EC -> FP	0.34	0.02
RT -> FP	0.29	EC -> FP	0.34	0.10

Hair *et al.*, (2014) opined that mediation effects can be determined using indirect effects. On Table 4.6, indirect effects of the exogenous latent construct were calculated. Indirect effect is calculated by multiplying bootstrapped path *a* by *b*. to test for the significance of a mediating effect, *t* values can be used, using indirect path coefficient. *T* value is calculated by dividing indirect effects by standard error (i.e., $a*b/SE$).

Table 4.7 Structural Model: Test of Significance for Mediating Relationships

Hypotheses	Relationship	Beta	SE	T Statistics	P Value	Decision
H_{05}	INV-EC-FP	0.10	0.06	1.67	0.10	Fail to Reject
H_{06}	PRO-EC-FP	0.02	0.03	0.67	0.50	Fail to Reject
H_{07}	RT-EC-FP	0.10	0.05	2.00*	0.05	Rejected

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.10$.



Table 4.7 presents the results of the significance of mediating relationships using t value. It is seen that entrepreneurial competencies do not significantly mediate the relationship between innovativeness and SMEs performance ($\beta=0.10$, $p>0.1$). Therefore, this study fails to reject H_{05} that states entrepreneurial competencies does not mediate the relationship between innovativeness and SMEs performance. Similarly, entrepreneurial competencies do not significantly mediate the relationship between proactiveness and SMEs performance ($\beta=0.02$, $p>0.50$). Therefore, this study fails to reject H_{06} that states entrepreneurial competencies does not mediate the relationship between proactiveness and SMEs performance. On the contrary, entrepreneurial competencies significantly mediate the relationship between risk taking and SMEs performance ($\beta=0.10$, $p<0.1$). Therefore, this study rejects H_{07} that states entrepreneurial competencies does not mediate the relationship between risk taking and SMEs performance. It can be said that there is an indirect relationship between risk taking and SMEs performance. This means risk taking significantly predicts entrepreneurial competencies, while similarly, entrepreneurial competencies predict SMEs performance.

Table 4.8 *Coefficient of Determination for Mediating Relationships: R-Squared*

Construct	R Squared
SMEs Performance	0.54
Entrepreneurial Competencies	0.53

It can be seen on Table 4.8, that the exogenous variables in this study explains 54 percent variance in SMEs performance. The R square is considered to be adequate. On the other hand, 53 percent variance in entrepreneurial competencies is accounted for by the independent variables. This is also considered as appropriate for the study.



Table 4.9 *Assessment of the Effect Size of all Relationships on Performances: F-Square*

Construct	$f^2(\text{FP})$	Effect Size	$f^2(\text{EC})$	Effect Size
Innovativeness	0.07	Small	0.02	Small
Proactiveness	0.00	None	0.22	Medium
Risk Taking	0.09	Small	0.17	Medium
Entrepreneurial Competencies	0.11	Small	NA	NA

NA means not applicable

Table 4.9 show the effect size of innovativeness, proactiveness, risk taking and entrepreneurial competencies on SMEs performance. Innovativeness, risk taking and entrepreneurial competencies have small effect on SMEs performance. On the other hand, proactiveness and risk taking have medium effect on entrepreneurial competencies, while innovativeness has small effect on entrepreneurial competencies.

Table 4.10 *Predictive Relevance for Mediating Relationships on the Dependent Variable: Q-Square*

Construct	SSO	SSE	1-SSE/SSO
SMEs Performance	356.0000	173.6835	0.5121
Entrepreneurial Competencies	356.0000	171.4932	0.5183

The study utilised the Stone-Geisser's Q^2 value to assess the predictive relevance of the exogenous variables. The result is presented in Table 4.10. From Table 4.10, it is seen that the Q^2 value of performance is above 0. SMEs Performance has a Q^2 value of 0.51, which means the exogenous variables in this study have large degree of predictive



relevance with regard to the endogenous variable performance. Entrepreneurial competencies have a Q^2 value of 0.52, which also means the exogenous variables in this study have large degree of predictive relevance with regard to entrepreneurial competencies.

Conclusion and Recommendations

The study based on the findings, concludes that innovativeness has a positive effect on the performance of SMEs. These findings agreed with the earlier studies of Lumpkin & Dess, (2005) and Sanchez, (2012), who demonstrated that entrepreneurs have the ability to provide innovative solutions to solve business problems. However, proactiveness does not significantly predicts performance of SMEs. These findings agreed with the studies of (Shafique & Saeed, 2020). This is because SMEs performance can only be enhanced through additional resources and competence (Dimitratos, Liouka & Young, 2014). Risk taking and the performance of SMEs are significantly related. This aligns with the priori expectation of the researcher. Risk-taking entails the willingness to pursue opportunities that have a substantial likelihood of producing losses or significant performance discrepancies. Therefore, the more SMEs engage themselves in calculated risks, the more likely they are to perform better. This finding is supported by (Putnins et al., 2019; Wambugu, et al., 2015; Grande et al., 2011). The relationship between risk taking and SMEs performance is significantly mediated by entrepreneurial competencies. This means there is an indirect relationship between risk taking and SMEs performance.

Therefore, based on the findings of this study, the better entrepreneurs exhibit competence in their respective businesses, the better they are likely to perform. This is supported by the works of



(Gerli, Gubitta & Tognazzo ,2011; Sanchez,2012; Zizile & Chimucheka ,2018).

Finally, government should strive to reduce the cost of doing business in Nigeria, to the benefit of both entrepreneurial firms and other small businesses, by providing conducive environment. To achieve this objectives, infrastructural facilities, including good road network, stable power and water supply should be provided as a matter of priority. Security should be beefed up in both urban and rural communities and the problem of corruption should be realistically addressed.

The study focused on SMEs in Kaduna State, therefore findings may not be generalized on all SMEs in Nigeria. It is therefore important for future study to be conducted in different states of Nigeria to enable generalization of findings.

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