



# **ENTREPRENEURSHIP ORIENTATION, INNOVATION AND FIRM PERFORMANCE IN NORTH-EAST NIGERIA**

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## **ABSTRACT**

Industries with high innovative behavior have a greater chance to stand competitive and gain superior performance. Therefore, this study aims to examine the effect of entrepreneurship orientation on performance firm and innovation as a mediator between entrepreneurial orientation and firm performance in the manufacturing industry in North-East Nigeria. A Survey of 194 employees of the manufacturing industry in the Northeast was used for the study. A questionnaire instrument was used for data collection. A quantitative method of data analysis was applied using Partial Least Square Structural Equation Modelling (PLS-SEM) Techniques. The findings of this study reveal that entrepreneurship orientation positively and significantly affects performance firm, entrepreneurship orientation positively and significantly affects innovation, innovation negatively and insignificantly affects performance firm. Moreover, negative and insignificant effect mediating effects of innovation on the relationship between entrepreneurial orientation and firm performance were recorded. The study recommended the manufacturing industry in North-eastern Nigeria should effectively address the issue of innovativeness of products and services for better organizational performance.

**Keywords:** Entrepreneurial Orientation, Innovation, Firm Performance, Manufacturing Industry

## **1. INTRODUCTION**

In the developed and developing nations, industries with high innovative behavior have a greater chance to stand competitive and gain superior performance. Soares



and Perin (2020) reveal that entrepreneurial orientation has a significant and positive impact on firm performance. In a study by Eugenie, John and Milena, 2017; Wahyu, Hana, Troena, Nimran, and Rahayu, (2013) firms performed effectively and successfully, with complete performance measurement metrics and innovation processes in a recent competitive environment. Similarly, studies such as Obeidat, (2016), Zehir, Can and Karaboga, (2015) affirmed that sales growth, profitability, client satisfaction, market effectiveness, and market demands usually create a new design, novel processes, and new inventions to overcome circumstances surrounding the manufacturing industry. Therefore, the organization concentrates on incisive innovation strategies to gain a sustainable competitive advantage for better performance (Madhoushi, Sadati, & Delavari, 2011; Zehir, Can, & Karaboga, 2015).

The aggressive business environment has made firms improve on their performance such as financial or non-financial and innovation strategies to achieve sustainable competitive advantage (Kosa, Mohammad & Ajibie, 2018). For organizations, there is a need to improve on these strategies to have a competitive edge over competitors. In the business environment of a developing nation like Nigeria, the role of the innovation concept would play greater importance to industries because business performance is very crucial to the development, growth, and survival of an organization (Eugenie, et al., 2017). According to Noe, John, Barry, and Patrick (2006); Ainuddi, Paul, John, and Michael (2007); Nasution, Felix, Margaret and Nelson (2011) business success is based on firm entrepreneurial ability in operations. Zulfadil, (2010) stressed that business performance requires entrepreneur ability in operations.

Prior studies were conducted in developed and underdeveloped countries on the effect of entrepreneurial orientation on a firm's performance but recorded mixed findings. Some affirmed that entrepreneurship orientation is positively affected firm performance (Haider, Asad & Fatima, 2020; Kosa, et al., 2018; Soares & Perin, 2020; Wiklund & Shepherd, 2003). Others argue that the effects of entrepreneurship orientation are either negative or not significant of firm performance (Branch & Mc Givern, 2014; Renko, Carsrud, & Brännback, 2009; Rochdi, Khatijah & Muhammad, 2017; Slater & Narver, 2000). As such, there is no conclusive agreement conclusion on the findings of the past study. Thus, the inconsistencies in the findings stand as a strong motivation in studying innovation as a mediator on the link between entrepreneurship orientation and firm performance (Schepers, Voordeckers, Steijvers & Laveren, 2014; Soares & Perin, 2020). In addition, most of the past



empirical studies focus on service industries (Abdalla & Mohamed, 2020; Eugenie, et al., 2017; Wahyu, et al, 2013) with less emphasis on the manufacturing industry. Therefore, this study fills this gap by assessing the effect of entrepreneurship orientation and firm performance: mediating effect of innovation in some selected manufacturing industries in the northeast region. The Specific objectives are:

- i. To assess whether entrepreneurial orientation affects firm performance.
- ii. To examine whether entrepreneurship orientation affects innovation.
- iii. To ascertain whether innovation affects a firm's performance.
- iv. To determine whether innovation mediates between entrepreneurial orientation and firm performance.

## **2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT**

### **Entrepreneurship Orientation**

Entrepreneurship according to Frank, Kessle and Fink (2010) is a concept that can be seen from different dimensions and perspectives. It is also understood that an individual that organizes resources being its human or financial resources to make a profit, is an entrepreneur (Rochdi, Khatijah, Muhammad, 2017). Some people believe generally that there are no entrepreneurs in Nigeria rather imitators (Frank, et al., 2010; Carland, Hoy, Boulton, & Carland, 1984).

Miller's (1983)' ground-breaking work reveals that an entrepreneurial firm is one that continually creates innovations over other competitors. Accordingly, he highlights main three dimensions that institute entrepreneurship orientation, thus: innovativeness, pro-activeness, and risk-taking are proportions of entrepreneurship orientation that were empirically assessed in the past (Al-Ansari, 2014; Beliaeva, 2014; Ejdy, 2016; Haider, et al., 2020; Karyotakis & Moustakis, 2016; Omisakin et al., 2016; Rauch et al., 2009; Soares & Perin, 2020). A depiction on the definition of Miller (1983); Burgelman, (1984); Hart, (1992); MacMillan and Day, (1987); Venkatraman, (1989); Lumpkin and Dess (1996) point out aggressiveness and autonomy as additional elements of entrepreneurship orientation. These elements are usually applied to appraise entrepreneurship orientation (Duru et al., 2018; Kaunda, 2012; Kosa, Mohammad & Ajibie, 2018; Sriprasert, 2013). Therefore, pro-activeness, autonomy, innovativeness, risk-taking, and competitive aggressiveness were applied as proxies to determine entrepreneurship orientation in this study.



Innovativeness is the most vital focus of entrepreneurship (Drucker, 1985), and comparably Lumpkin and Dess (1996) found it as the main element of entrepreneurial orientation. Risk-taking propensity is an indication of deeds of an entrepreneurial organization such as making bulky resource commitments, for the benefit of achieving high performance (Lumpkin & Dess, 1996; Zehir *et al.*, 2015). Risk-taking behavior is a vital issue that makes it different from others in that it bears the risk of losses and challenges in performance (Morris & Kuratko, 2011).

Pro-activeness is techniques to firm circumstances which consist of market expectation and changes in the competition ahead of their definite event and making a correct organizational shift in response (Kosa *et al.*, 2018). Hughes & Morgan, (2007) affirmed pro-activeness is aimed at the identification and exploitation of opportunities and in taking pre-emptive actions/measures against potentials problems and threats. Therefore, firms that are proactive in nature compute better than their rivals because they can react to market changes situations quickly (Zehir *et al.*, 2015).

Aggressiveness has to do with a high percentage of investment into a resource to yield high but risky equity securities and a low percentage in investments that are protected (Wahyu *et al.*, 2013). Competitive aggressiveness is the propensity of an organization to nonstop and extremely face its rivals to improve and achieve a high entry position in the market environment (Lumpkin & Dess, 2010). Other scholars viewed competitive aggressiveness as the reaction of the organization towards achieving a highly competitive advantage over rivals in the market environment (Duru *et al.*, 2018; Kaunda, 2012).

Lumpkin and Dess (2010) autonomy are individual or group self-determined action to purposeful generate organizational concept or a vision and accomplishing it through achievement. According to Hamdi, Silong, Rasdi, and Omar (2015) entrepreneurs are the great overseer of a business because their decision-making steps need crucial and uncertain deeds. Therefore, entrepreneurial autonomy is associated with the liberty of entrepreneurs, free deeds, and self-determining decision-making processes.

### **Innovation**

The concept of innovation is the opening of novel processes, methods, and inventions at all levels of advancement (Wahyu *et al.*, 2013). Similarly, innovation is the process of transforming thought or creations into products or services for value



creation and customers go for it (Wahyu *et al.*, 2013). Li, Huang and Tai (2009) describe innovation as; an idea that must be replicable at an economic cost and must be specific to satisfy a need. Lumpkin and Dess (2010) argued that innovation involves the deliberate application of information, imagination, and initiatives in deriving greater values from resources and includes all processes by which new ideas are generated and converted to useful products (Wahyu *et al.*, 2013).

Innovations often result when ideas are used by the firms to further satisfy the needs and expectations of the end-users (Eugenie, *et al.*, 2017; Madhoushi, *et.al* 2011). Lumpkin (2010) also stressed that for businesses to expand and gain profit, frequent innovation on products and services are being used by market leaders and besides, a manager in a particular field will also increase innovation. According to Lumpkin and Dess (1996), innovativeness indicates the ability to bear creativity and develop new products/services, and newness, technological leadership, and R&D in developing novel processes. Innovativeness is the ability to produce novel products and services and or improves on existing products and services in novel form (Schumpeter, 1947).

### **Firm's Performance**

Firm performance is the execution of a particular task assessed over predetermined identified standards of accuracy, completeness, charge, and fastness in accomplishing a task (Sebikari, 2014). In contrast, performance is considered as the accomplishment of a commitment and is the substratum of all firms mainly emphasizes in the present period. Venkatraman (1997) identified performance measurement into two namely, financial and operational (non-financial) indicators. Venkatraman (1997) affirmed that financial performance is linked with factors of economic (return on investment, return on sales and return on equity) at the same time as operational dimensions are linked to non-financial performance (quality, market share, satisfaction, new product development, and market effectiveness).

Gonzalez-Benito, & Gonzalez-Benito, (2005) acknowledged objective and subjective dimensions as measures of organizational performance. Wiklund and Shepherd (2003) stressed that organizational performance is related to organization success within a certain period. He also affirms that performance is organizations' sales, profitability, return on capital, turnover level, and market share. Hilmi, Ramayah, and Yanti Mu, (2011), also identified quite a lot of complaints, return on investment, financial performance, sales growth, productivity, customer satisfaction, and employee satisfaction as performance indicators.



### **Entrepreneurship Orientation and Firm Performance**

The link between entrepreneurship orientation (EO) and firms' performance has drawn the interest of the previous researcher. Studies on entrepreneurship orientation reveal that entrepreneurship orientation significantly affect firms' performance (Adebiyi, Amole, Arikewuyo & Oyenuga., 2019; Ambad & Wahab, 2016; Barrett & Weinstein, 2015; Gupta, Niranjana & Markin, 2019; Haider, et al., 2020; Hoque, 2018; Muhammad *et al.*, 2012; Soares & Perin, 2020; Umrani, et al., 2018; Wiklund & Shepherd, 2005). However, some of the studies reveal entrepreneurship orientation does not have a significant effect on firms' performance (Branch & McGivern, 2014; Matsuno et al., 2002; Morgan & Strong, 2003; Naldi, Nordqvist, Sjöberg, & Wiklund, 2007). Certainly, these considerations form the basis that entrepreneurship orientation significantly affects organizational performance (Miller, 1983).

The resource-Based theory is the theory on which this study and its hypotheses build (Galbreath, 2005; Wernerfelt, 1984). The well-known paradigm in the field of entrepreneurship and strategic management is Resource-Based Theory (Abdalla & Mohamed, 2020; Hitt, Xu. & Carnes, 2016). The Resource-Based Theory put forward that organizations that make an effort to ensure uniqueness from competitors, gain competitive advantage and high performance (Hitt et al., 2016; Galbreath, 2005). Consequently, Resource-Based Theory believed that businesses that put into practice a value-creating strategy, such as entrepreneurship orientation and corporate entrepreneurship gain ample competitive advantage and high performance over other competitors. Therefore, building on Resource-Based Theory, this study develops a hypothesis that points out the significant effect of entrepreneurship orientation on firm performance. Thus, the following hypothesis is formulated:

*H<sub>1</sub>: - Entrepreneurship orientation significantly affect firms' performance*

### **Entrepreneurship Orientation and Innovation**

Entrepreneurship orientation and innovation can be linked (Madhoushi, et al., 2011). Although, past studies have traditionally considered innovation as a measure of entrepreneurship and entrepreneurship orientation (Fornell & Larcker, 1981; Ireland & Webb, 2007). However; only a few studies have empirically analyzed this relationship Eugenie, et al., 2017; Ireland and Webb (2007); Madhoushi, et al, (2011) and affirmed that entrepreneurial activities have significant effects on innovation. Entrepreneurship orientation improves the firm's autonomy, competitive aggressiveness, pro-activeness, and abilities to take risks and innovate (Lumpkin &



Dess, 2010; Zahra, Nielsen & Bogner, 1999). Similarly, Covin and Miles (1999); Schumpeter (1934) claimed that entrepreneurial activities impact significantly the product, process, and administrative innovations. This study develops a hypothesis that points out the significant effect of entrepreneurship orientation on innovation. Thus, it is hypothesized that:

*H<sub>2</sub>: - Entrepreneurship orientation significantly affects innovation.*

### **Innovation and Firm Performance**

Innovation (INOV) is a vital feature in firm performance because of the advancement of the firm competitive marketplace (Bueno & Ordoñez, 2004; Eugenie, et al., 2017). Past studies Brockman and Morgan (2003); West and Iansiti (2003); Rochdi et al., (2017); Soares and Perin, (2020) affirmed that innovation significantly affects firm performance. Innovation significantly affects the performance of the firm, which leads to competitiveness in a changing marketplace (Newey & Zahra, 2009; Wheelwright & Clark, 1992). The implication of innovation for the organization's long-standing is comprehensively acknowledged in theory and practice (Eugenie, et al., 2017). As a result, it acknowledged that innovation significantly affects firm performance (Baker & Sinkula, 2009; Renko, Carsrud & Brannback, 2009). Therefore, we hypothesized that:

*H<sub>3</sub>: - innovation significantly affects firm performance.*

### **Mediating effect of innovation**

Prior past studies indicate that innovation acts as a partial mediator on the relationship between entrepreneurial orientation and firm performance (Hult, Hurley & Knight, 2004; Soares & Perin, 2020). Other studies reveal that full mediation (Eugenie, et al., 2017; Rochdi, et al., 2017; Sri *et al.*, 2013). When entrepreneurship orientation integrates pro-activeness and inventiveness, it may lead to the establishment of innovation projects to enhance performance (Hult et al., 2004). Therefore, it is likely that innovation is a mediating variable on the relationship between entrepreneurship orientation firm and performance. Therefore, it is hypothesized that:

*H<sub>4</sub>: - innovation significantly mediates the relationship between entrepreneurial orientation and firm performance.*

### **Conceptual framework**

Figure 1 below indicates the framework of this study, which a modified framework from Zahir *et. al* (2015). Part of the framework is drawn from the review of literature



related to the study. It gives a clearer picture of the variable that influences or mediates between the dependent and independent variables. It illustrates the fundamental process, which was used to guide this study. The study modified the Innovation with three dimensions, Firm's performance (non-financial indicators measurement) with five dimensions which are used to focus on the link among independent and independent variables, (new ideas, methods & inventions; quality, market share, customer satisfaction, new product development, and market effectiveness.

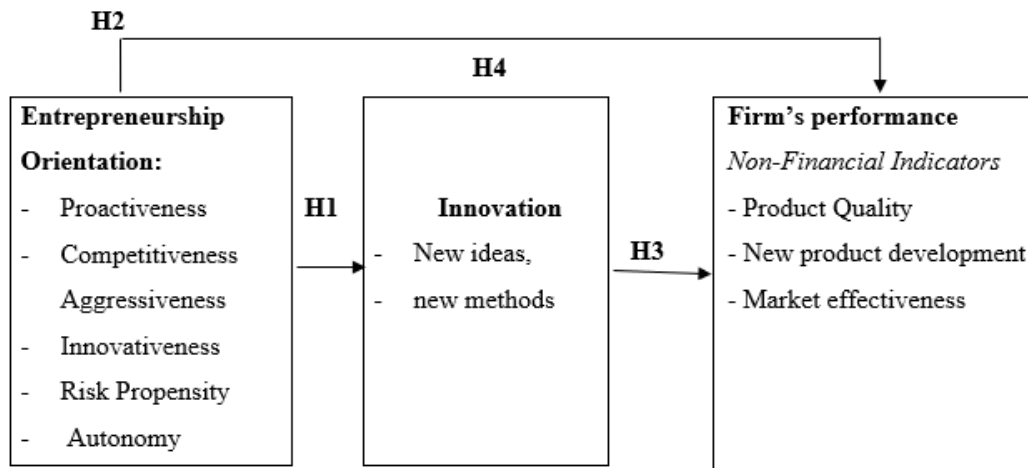


Figure 1: A modified conceptual framework of Zahiet *al.* (2015)

### 3. METHODOLOGY

This study used a survey research design. For this study, the population consists of senior and management employees of selected manufacturing industries in the Northeast region, Nigeria. The manufacturing industries are, Adama Beverages Ltd., Bajabure Ltd., Ashaka Cement Plc, and Taraba Quarry Company Ltd. The industries were chosen because they have a staff strength of 45 and above. The sample size of this study is 205 determined using Yamane (1967) model and considered to be adequate for conducting the Statistical analysis.

The formula is as thus;  $n = \frac{N}{1+N(e)^2}$





Where:

n= Sample size

N= Total population

e= Margin of error disturbance

1= constant

Given that N = 422 (as stated above), and e is assumed to be 5% Then sample size,

$$n = \frac{422}{1+422(0.05)^2} = \mathbf{205} \text{ respondents}$$

Self-administered questionnaires were used for data collection for hypotheses testing from employees working in manufacturing companies, which include Adama Beverages, Bajabure Ltd., Ashaka Cement Plc, and Taraba Quarry Co. Part of the questionnaire was adapted from the submissions of Tushman (2002), Zahra et al. (2000), and Mehrdad et al. (2011). While the other part of the questionnaire was developed from intensive literature reviewed (Mohammad 2020). The entire questionnaires were distributed to fill and return. In the design of the questionnaire, a five (5) point Likert scale method was adopted; Strongly Agree (SA), Agree (A), Undecided (U), Strongly Disagree (SD), and Disagree (D). A proportionate stratified sampling method was adopted to give a proper representative to the designated Industries.

#### **4. DATA ANALYSIS AND DISCUSSION**

##### **Convergent Validity and Reliability**

Convergent Validity: Measures the extent to which items in construct clusters together to reflect the construct they are supposed to be measuring. (Carlson & Herdman, 2012). Convergent validity in PLS includes average variance extracted (AVE) and composite reliability. AVE values are expected to be 0.5 and above, while composite reliability should be 0.7 and above. Figures in Table 1, show that the AVEs and composite reliabilities for all the first-order constructs satisfy the requirements.

**Table 1**  
**Convergent Validity and reliability**

	AVE	Composite Reliability	Cronbach's Alpha
EOA	0.8092	0.8945	0.7642
EOCA	0.5769	0.8435	0.7489
EOI	0.7288	0.8895	0.8136



EOP	0.6684	0.8577	0.7504
EORP	0.6439	0.8437	0.7199
FMPME	0.6864	0.8677	0.7706
FMPNPD	0.7876	0.8812	0.7303
FMPQ	0.6761	0.8608	0.7524
INOVNI	0.6265	0.7675	0.4226
INOVNM	0.7155	0.8342	0.6024

### Discriminant Validity

Mohammad (2019) described discriminant validity as a means of showing the extent to which any single construct is varied from the additional ones in the model. Discriminant Validity is checked through item cross-loadings and the squared root of AVE. The assessment of cross-loadings shows that the items are distinct from one another, as there are no obvious cross-loadings in Table 2.

**Table 2**  
**Cross loadings**

	EOA	EOCA	EOI	EOP	EORP	FMPME	FMPNPD	FMPQ	INOVNI	INOVNM
EOA1	0.9017									
EOA2	0.8975									
EOCA1	0.3002	0.6186								
EOCA2	0.6023	0.7667								
EOCA3	0.5943	0.8088								
EOCA4	0.4978	0.8263								
EOI2	0.2162	0.3159	0.8057							
EOI3	0.2026	0.3486	0.8926							
EOI4	0.2501	0.3807	0.8605							
EOP2	0.258	0.4664	0.4893	0.7754						
EOP3	0.4459	0.5614	0.3488	0.8791						
EOP4	0.3868	0.4612	0.3039	0.7945						
EORP2	0.362	0.492	0.4046	0.5887	0.7222					
EORP3	0.4726	0.5074	0.3302	0.4924	0.8612					
EORP4	0.3052	0.4204	0.3053	0.4802	0.8177					
FMPME1	0.6435	0.3563	0.2137	0.1383	0.293	0.8331				
FMPME2	0.5758	0.2588	0.0186	0.2082	0.292	0.8634				
FMPME3	0.2184	0.1589	0.2393	0.2267	0.2509	0.7872				



FMPNPD2	0.3078	0.2211	0.1206	-0.021	0.3137	0.4275	0.8879			
FMPNPD3	0.1235	0.122	0.2365	0.1239	0.3755	0.3182	0.8871			
FMPQ1	0.4029	0.5674	0.2649	0.6429	0.6405	0.3116	0.1466	0.6903		
FMPQ2	0.3277	0.4483	0.6382	0.517	0.61	0.1828	0.0953	0.8686		
FMPQ3	0.3235	0.4662	0.651	0.5417	0.6202	0.1718	0.0683	0.8928		
INOVNI1	0.3654	0.5658	0.4823	0.5473	0.4123	0.2518	0.1459	0.4154	0.886	
INOVNI2	0.0547	0.1616	0.3439	0.228	0.0548	-0.0977	-0.0392	0.0913	0.6842	
INOVNM1	0.5233	0.5038	0.5264	0.396	0.4044	0.4025	0.3236	0.3568	0.4049	0.8448
INOVNM2	0.2735	0.3578	0.6286	0.4602	0.4608	0.1086	0.2301	0.4402	0.4372	0.847

### **Discriminant Validity (Fornell-Lacker Criterion)**

Discriminant validity requires that the squared roots of AVE should be greater than all corresponding correlations along the rows and columns. Table 3 shows that all the lower-order constructs satisfy this condition, as the AVEs are above the correlations with other variables.

Table 3: Discriminant Validity

	EOA	EOCA	EOI		EOP	EORP	FMPME	FMPNPD	FMPQ	INOVNI	INOVNM
EOA	0.900										
EOCA	0.662	0.760									
EOI	0.262	0.410	0.854								
EOP	0.449	0.610	0.462	0.818							
EORP	0.479	0.594	0.435	0.651	0.802						
FMPME	0.575	0.311	0.192	0.231	0.315	0.828					
FMPNPD	0.243	0.193	0.201	0.058	0.388	0.420	0.887				
FMPQ	0.424	0.597	0.643	0.686	0.757	0.265	0.123	0.822			
INOVNI	0.303	0.506	0.531	0.524	0.339	0.144	0.092	0.358	0.792		
INOVNM	0.471	0.509	0.683	0.506	0.512	0.302	0.327	0.471	0.498	0.846	

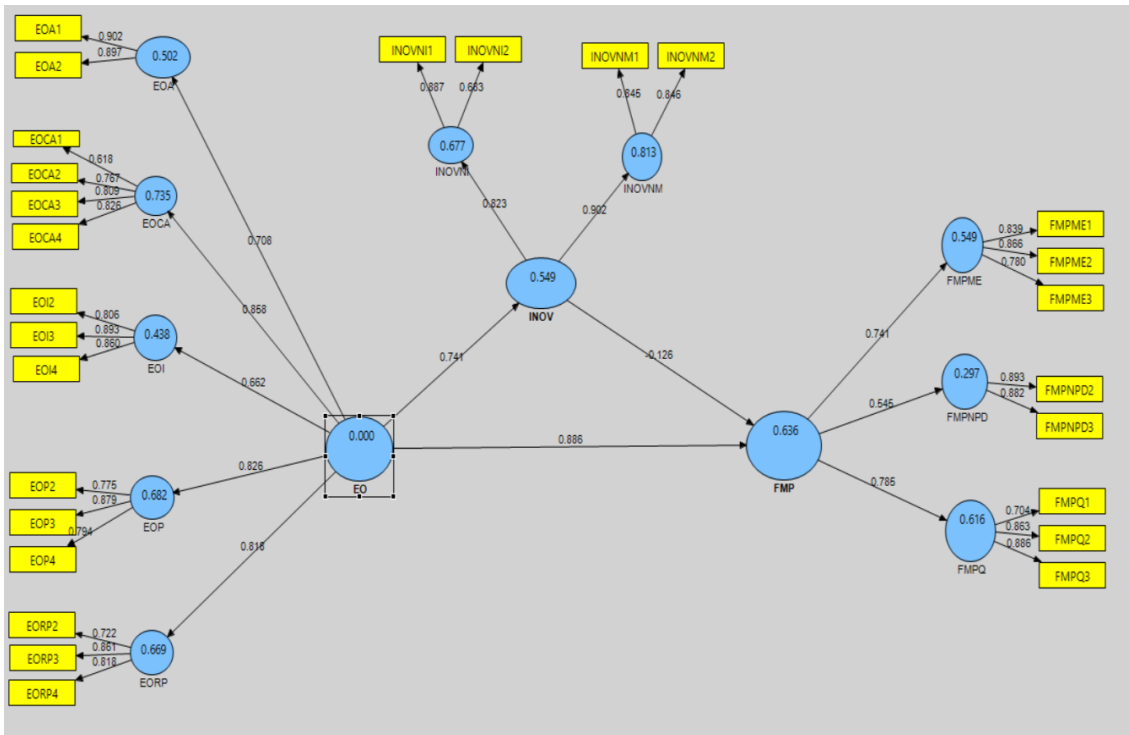


Figure 2: Smart PLS Analysis. The full measurement model.

#### 4.4 Structural model analysis

As part of the structural model analysis, it is important to check for collinearity among the major constructs in the research. It is required that the variance inflation factor (VIF) should be less than 5. Otherwise, a collinearity problem exists in the data. The collinearity diagnostics was done in SPSS, and Table 4 shows that the VIF values are less than 5.



**Table 4**  
**The collinearity diagnostics**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1 (Constant)	1.614E-06	0.040		0.000	1.000		
EO	0.932	0.060	0.932	15.486	0.000	0.451	2.219
INOV	-0.147	0.060	-0.147	-2.437	0.016	0.451	2.219

a. Dependent Variable: FMP

### Coefficient of determination

Results of the structural model analysis show that the overall coefficient of determination ( $R^2$ ) is 0.636. This suggests that the EO and INOV jointly explain 63.6% of the variance of the dependent variable, FMP. This shows a moderate coefficient of determination, based on Hair *et al.* (2013).

### Tests of hypotheses

Hypotheses were tested using the bootstrapping procedure. A 5000-bootstrap resampling with 194 cases was conducted. Decisions are taken based on the path coefficient and t-values as shown in Table 5.

Table 5: Hypotheses testing for direct relationships

Hypothesis	Path Coefficient	Std. error	t-value	Decision
H1 EO -> FMP	0.8859	0.0899	9.8505**	SIGNIFICANT
H2 EO -> INOV	0.741	0.0548	13.5254**	SIGNIFICANT
H3 INOV -> FMP	-0.1255	0.1006	1.2483 <sup>n.s</sup>	NOT SIGNIFICANT

**Note:** \*\*significant at  $p < 0.01$ ; **n.s**=not significant

Table 13 shows that only two of the three direct relationships are significant at 0.01. Relationship between EO and FMP is positive and significant ( $\beta = 0.8859$ , t-value = 9.8505). Relationship between EO and INOV is positive and significant ( $\beta = 0.741$ , t-value = 13.5254). Relationship between INOV and FMP is negative and is not significant ( $\beta = -0.1255$ , t-value = 1.2483).

#### 4.5.2 Test for mediating effect

The test for mediating effect on Table 6 entails checking for the significance of the indirect effect. From the PLS results, the indirect effect is negative and insignificant ( $\beta = -0.093$ ,  $t\text{-value} = -1.207$ ). This result revealed the negative and insignificant mediating effect of innovation on the relationship between entrepreneurial orientation and firm performance.

**Table 6**  
**Hypotheses testing for mediating effect.**

Relationship/effect	Total effect	t-value	Direct effect	t-value	Indirect effect	t-value
EO → INOV → FMP	0.7929	17.7408**	0.886	9.8505**	-0.093	-1.207n.s

Hypotheses were tested using the bootstrapping procedure. A 5000 bootstrap resampling with 194 cases was conducted. Decisions are taken based on the path coefficient and t-values as shown in the table above. The table shows that only two of the three direct relationships are significant at a 0.01, level of significance.

The relationship between EO and INOV is positive and significant ( $\beta = 0.741$ ,  $t\text{-value} = 13.5254$ ). This result is in line with the earlier study conducted by Sri *et al* (2013); Soares and Perin, (2020), which revealed that innovation plays an important role in entrepreneurship orientation, management capabilities, and knowledge sharing towards business performance.

Relationship between EO and FMP is positive and significant ( $\beta = 0.8859$ ,  $t\text{-value} = 9.8505$ ). This result revealed that there is a positive and significant relationship that existed between entrepreneurship orientation and firm's performance as it was earlier found in the study conducted by Muhammad *et al* (2012); Rochdi *et al.*, (2017); Soares and Perin, (2020) on the relationship between entrepreneurial orientations.

Relationship between INOV and FMP is negative and is not significant ( $\beta = -0.1255$ ,  $t\text{-value} = 1.2483$ ). The result revealed that there is no significant relationship between INOV and FMP. Although most studies that were conducted show the positive and significant relationship between innovation and firm's performances (Eugenie, *et al.*, 2017; West & Iansiti 2003; Rochdi *et al.*, 2017; Obeidat, 2016).

The test for mediating effect entails checking for the significance of the indirect effect. From the PLS results, the indirect effect is negative and insignificant ( $\beta = -0.093$ ,  $t\text{-value} = -1.207$ ), which shows no mediation. The finding of this study is not in line with the study by Obeidat (2016) that reveals a significant effect through



strategic orientation on organizational performance. Similarly, Hult, Hurley, and Knight, (2004); Soares and Perin, (2020) affirmed the partial mediation role of innovation on the relationship between entrepreneurial orientation and business performance.

### **The implication of the Study**

This study has the potentiality of contributing significantly to the growth of existing literature in management and social science particularly, in the field of strategic management by helping to enrich the series of knowledge through its reliable findings on the effect between entrepreneurial orientation and a firm's performance through innovation. The study will also contribute to the knowledge and provide useful information to entrepreneurs and managers/captains of industries to gain a competitive advantage in the areas of their quality of products, market share, customer satisfaction, market effectiveness, and new product developments in a turbulent business environment. Based on this it is hoped that this research will expose some of the salient problems facing the business performances of some selected manufacturing industries in three states of the Northeast region of Nigeria.

## **5. CONCLUSION AND RECOMMENDATIONS**

### **Conclusion**

The study assessed the mediating effect of Innovation on the Relationship between Entrepreneurship Orientation and Firm's Performance in some selected manufacturing industries in three states of Northeast region of Nigeria; Adamawa, Gombe, and the Taraba States such as Adama Beverages Ltd., Bajabure Ltd., Ashaka Cement Plc, and Taraba Quarry Company Ltd. The specific objectives are to determine whether there is a significant relationship between entrepreneurial orientation and firm performance. In addition, to find out whether there is a significant relationship between entrepreneurship orientation and innovation; to determine whether there is a significant relationship between innovation and firm's performance, and to ascertain whether there is a significant mediating effect of innovation on the relationship between entrepreneurial orientation and firm performance.

Related literature was reviewed on conceptual issues, theoretical framework as well as empirical review. Primary data formed the basis of the studies and were collected through a structured questionnaire to the selected manufacturing industries in Northeast Nigeria. The population of the study was workers in the study area who





were sampled through a stratified sampling technique to draw 205. However, 194 respondents adequately answered and returned their questionnaires, this gave a 94% returning rate. Both descriptive and inferential statistics were used in analyzing data. The descriptive statistics used included frequency count and percentage to analyzed gender, age, marital status, education level, years of service with the organization, department, and rank, while structural modeling equation and Smart PLS + SPSS were used.

The result of Smart PLS revealed Relationship between EO and INOV is positive and significant ( $\beta = 0.741$ , t-value = 13.5254) This result revealed the earlier study conducted by Sri et al (2013) on the innovation role in mediating the effect of entrepreneurship orientation, management capabilities and knowledge sharing towards business performance and the innovation role proved a positively and significantly toward business performance.

Relationship between EO and FMP is positive and significant ( $\beta = 0.8859$ , t-value = 9.8505). This result revealed that there a positive and significant relationship that existed between entrepreneurship orientation and a firm's performance as it was earlier fund the study conducted by Muhammad *et al* (2012) on the relationship between entrepreneurial orientation: Is innovation missing link?

Relationship between INOV and FMP is negative and is not significant ( $\beta = -0.1255$ , t-value = 1.2483). This result revealed that there is a negative and no significant relationship that existed between innovation and a firm's performance. Though, most researches that were conducted shows a positive and significant relationship between innovation and firm' performances. Similarly study by Eugenie, et al. (2017) on knowledge management and business performance: mediating effects on innovation, the study was conducted in small and medium enterprises in Rwanda using a cross-sectional research design, this revealed that there is a full mediation of innovation on business performance. Again, in a study conducted by Obeidat, (2016) on the effects of strategic orientation on organizational performance: mediating role of innovation, the result revealed that there is a significant effect of strategic orientation on innovation but not on organizational performance.

The test for mediating effect from the PLS results, the indirect effect is negative and insignificant ( $\beta = -0.093$ , t-value = -1.207), which shows that mediating effects of innovation on a firm's performance have a negative and insignificant effect. This finding study is not in line with the study of Eugenie, et al., (2017) that reveals the



full mediating effect of innovation on the relationship between knowledge management and firm performance. Similarly, Obeidat (2016) in his research conducted on organizational performance, revealed only a positive and significant effect through strategic orientation, not through innovation mediation, and firm's performance.

Based on the study, the following conclusions were made: Some Manufacturing industries in Adamawa, Gombe, and Taraba states have entrepreneurship orientation skills and lack innovativeness knowhow to innovate on their products and services that will give them more edge over rival firms. There is a need to improve innovation strategies in other to have organizational performance in the area of non-financial indicators.

North-eastern Nigeria will effectively address the issue of organizational performances in manufacturing industries when more attention is given to the innovativeness of products and services.

### **Recommendations**

Based on the study, the following recommendations were made:

- i. There is a need for manufacturing industries to introduce innovation strategies on a new idea, or methods on existing products and services, which organizations would adapt to capture the market and to gain a competitive advantage over their rivals for the overall survival of an organization.
- ii. Manufacturing industries in northeast Nigeria should improve on the invention of new products and services.
- iii. There is a need for manufacturing industries in northeast Nigeria to implore a new method of producing goods and services that will have the test of time.
- iv. Manufacturing industries should create more awareness of the innovativeness of their products and services
- v. There is a need for manufacturing industries to train the worker on innovation strategies technologies.



### **Suggestion for Future Research**

This study is limited to some manufacturing industries in Northeast Nigeria, there a need for further researches to expand the scope. It would be very interesting to study the mediating effects of innovation on the relationship between entrepreneurship orientations, and firm performance among manufacturing industries and to analyse their impact on firms' performance by financial indicators. Furthermore, longitudinal studies in this regard can make an invaluable contribution to the academic literature regarding innovation practices in manufacturing industries. Future researchers can also look for exploring the empirical relationship between entrepreneurship orientation and Innovation in manufacturing industries; therefore, the framework in this study tries to lead the researchers towards a new path for re-examining this important linkage and possibly building a new theory.

### **REFERENCES**

- Abdalla, A. M.A. & Mohamed, S. M. A. (2020). The effect of entrepreneurial orientation on firms' performance of the telecommunication sector in Sudan. *African Journal of Business Management*, 14(5), 151-158.
- Adebiyi, S.O., Amole, B.B., Arikewuyo, K.. A., &Oyenuga, O.G. (2019). Multi-Criteria Decision Analysis of Entrepreneurial Orientation and Business Performance in Nigeria. *Economics and Business* 33(1):140-151.
- Ainuddin, R. A, Paul W. B, John S H & Michael J. R, (2007) Resources Attributes and Firm Performance in International Joint Venture, *Journal of World Business*, 42, 47-60.
- Al-Ansari, Y.D.Y. (2014). Innovation practices as a path to business growth performance: a study of small and medium-sized firms in the emerging UAE market (Ph.D. dissertation). Southern Cross University, Lismore, NSW.
- Ambad, S.N.A., &Wahab, K.A. (2016). The relationship between corporate entrepreneurship and firm performance: evidence from Malaysian large companies. *International Journal of Business and Society* 17(2):259-280.



- Baker, W.E., & Sinkula, J.M. (2009). The complementary effects of market orientation and entrepreneurial orientation on profitability in small business. *Journal of Small Business Management*, 47(4), 23-37.
- Barrett, H., Weinstein, A. (2015). Corporate entrepreneurship, the marketing mix, and business performance. In Wilson EJ, Hair JF(eds.), *Proceedings of the 1997 Academy of Marketing Science (AMS) Annual Conference*, Springer International Publishing. 144-150.
- Beliaeva, T. (2014). Antecedents and performance outcomes of entrepreneurial orientation: a comparative cross-country study. Available at: <https://lutpub.lut.fi/handle/10024/97007>.
- Branch N, & McGivern M.H. (2014). Telecommunications Entrepreneurial Orientation (TELEO): An Empirical Study Measuring the Significance of Entrepreneurial Orientation on Business Performance of Small-to-Medium Enterprises (SME) in the Telecommunications Industry. *International Journal of Strategic Information Technology and Applications*, 5(2):13-26.
- Brockman, B.K., & Morgan. R..M.(2003). The role of existing knowledge in new product innovativeness and performance. *Decision Sciences*, 34. 45-62.
- Bueno, E., & Ordonez, P.(2004) Innovation and learning in the knowledge-based economy: Challenges for the firm. *International Journal of Technology Management*, 276(7), 78-89.
- Burgelman, R.A. (1984). Designs for corporate entrepreneurship in established firms. *California Management Review*, 26(3), 154-166.
- Carland, J. W., Hoy, F., Boulton, W. R. & Carland, A. C. (1984) 'Differentiating Entrepreneurs from Small Business Owners: A Conceptualization', *Academy of Management Review* 9(2): 354-9.



- Carlson & Herdman, (2012). Retrieved Feb. 3, 2019, [www.management.pamplin.vt.edu/directory/Articles/Carlson.pdf](http://www.management.pamplin.vt.edu/directory/Articles/Carlson.pdf).
- Covin J., & Miles, M., (1999). Corporate entrepreneurship and the pursuit of competitive advantage, "Entrepreneurship: *Theory and Practice*, 23(3). 12-34.
- Damanpour, F., (2010) Organizational Size and Innovation, *Organization Studies, Journal of Management*, 375-402.
- Duru, I.U, Ehidihamhen, P.O., & Chijioke A.N. (2018). Role of entrepreneurial orientation in the performance of small and medium enterprises: Evidence from Federal Capital Territory, Abuja, Nigeria. *Asian Journal of Economics, Business and Accounting* 6(1):1-21.
- Drucker, P.F. (1985). *Innovation and Entrepreneurship*. NY: Harper&Row Pub.
- Ejdys, J. (2016). Entrepreneurial orientation vs. innovativeness of small and medium-size enterprises. Available at: <https://depot.ceon.pl/handle/123456789/8587>.
- Eugenie, B, John, C.M & Milena, R. (2017). Knowledge management and business performance: Does innovation matter? *Cogent Business & Management*, 4, 1-18.
- Fornell, C. & Larcker, D.F. 1981. Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1): 39-50.
- Frank, H., Kessler, A. and Fink, M. (2010), Entrepreneurial Orientation and Business Performance - A Replication Study, *Schmalenbach Business Review*, 175-198.



- Galbreath, J. (2005). Which resources matter the most to firm success? An exploratory study of resource-based theory. *Technovation* 25(9), 979-987.
- Gonzalez-Benito, O. & Gonzalez-Benito, J. (2005), Cultural vs. operational market orientation and objective vs. subjective performance: *Perspective of production and operations, Industrial Marketing Management*, 34, 797-829.
- Gupta, V.K, Niranjana S., Markin, E. (2019). Entrepreneurial orientation and firm performance: the mediating role of generative and acquisitive learning through customer relationships. *Review of Managerial Science* 1(2), 1-25
- Haider, S.H, Asad, M, & Fatima, M. (2020). Entrepreneurial orientation and business performance of manufacturing sector small and medium scale enterprises of Punjab Pakistan. *European Business & Management*, 3(2): 21-28
- Hair, J.F., Ringle, C.M., & Sarstedt, M. (2013). Editorial Partial Least Squares Structural Equation Modeling: Rigorous Applications, *Better Results and Higher Acceptance. Long Range Planning*, 46, 1-12. <http://dx.doi.org/10.1016/j.lrp.2013.01.001>.
- Hamdi, S., Silong, A. D., Rasdi, R. M., & Omar, Z. B. (2015). Moderating effect of Technology Uncertainty on Relationship between Innovation Speed and Product Success: A Survey in Malaysian Biotechnology Industry, *6(8)*, 375–381.
- Hart, S.L. (1992). An integrative framework for strategy-making processes. *Academy of Management Review*, 17(2), 327-351.
- Hilmi, M. F, T. Ramayah and Yanti Mus., (2011) Product and Process Innovativeness: Evidence from Malaysian SMEs, *European Journal of Social Sciences*, 547-555.



- Hitt, M.A, Xu. K., & Carnes, C.M. (2016). Resource-based theory in operations management research. *Journal of Operations Management* 41, 77-94.
- Hoque, A.S.M.M. (2018). The effect of entrepreneurial orientation on Bangladeshi SME performance: Role of organizational culture. *International Journal of Data and Network Science* 2(1):1-14.
- Hughes, M. & Morgan, R. E. (2007), Deconstructing the Relationship Between Entrepreneurial Orientation and Business Performance at The Embryonic Stage of Firm Growth. *Industrial Marketing Management*, 36, 651-661.
- Hult, G. T. M., Hurley, R. F., & Knight, G. A. (2004). Innovativeness: Its antecedents and impact on business performance. *Industrial Marketing Management*, 33, 429-438.
- Ireland, R.D. & Webb, J.W. (2007). A cross-disciplinary exploration of entrepreneurship. *Research Journal of Management*, 33(6): 891-927.
- Karyotakis, K.M, Moustakis, V.S. (2016). Organizational factors, organizational culture, job satisfaction and entrepreneurial orientation in public administration. *The European Journal of Applied Economics* 13(1):47-59.
- Kaunda, C.M. (2012). *Entrepreneurial orientation, age of owner and small business performance in Johannesburg (Unpublished research report)*. Faculty of Commerce, Law and Management, University of the Witwatersrand.
- Kosa, A. Mohammad, I. Ajibie, D. (2018). Entrepreneurial orientation and venture performance in Ethiopia: The moderating role of business sector and enterprise location, *Journal of Global Entrepreneurship Research*, 8(25), 1-17.





- Li, Yong-Hui, Jing-Wen Huang & Mey-Tien Tsai, (2008). Entrepreneurial Orientation and Firm Performance: The Role of Knowledge Creation Process, *Industrial Marketing Management* (38), 2008, 440-449.
- Likert, R. (1931). A technique for the measurement of attitudes. Archives of Psychology. New York: Columbia University Press.
- Lumpkin, G.T. & G.G. Dess, (2010) Linking two dimensions of entrepreneurial orientation to firm performance: *The moderating role of environment and industry life cycle*. J. Bus. Venturing, 16(5), 429-451.
- Lumpkin, G.T., & Dess, G.G, (1996). Clarifying The Entrepreneurial Orientation Construct and Linking it to Firm Performance, *Academy of Management Review*, 21(1), 1996, 135-172.
- MacMillan, I.C, Day, D.L. (1987). Corporate ventures into industrial markets: Dynamics of aggressive entry. *Journal of Business Venturing*, 2(1), 29-39.
- Madhoushi, M., Sadati, A., Delavari, H., Mehdivand, M., & Mihandos, R. (2011). Entrepreneurial orientation and innovation performance: The mediating role of knowledge management. *Asian Journal of Business Management* 3(4): 310-316,
- Matsuno, K., Mentzer, J.T., & Ozsomer, A. (2002). The effects of entrepreneurial proclivity and market orientation on business performance. *Journal of Marketing* 66(3):18-32.
- Miller D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science* 29:770-791.
- Mohammad, H.I (2019) Mediating effect of organizational learning and the moderating role of environmental dynamism on the relationship between strategic change and firm performance. *Journal of Strategy and Management*, 12 (2):275-297



- Mohammad, H.I (2020) Outsourcing and public universities performance in Nigeria, the mediating effect of trust. *Journal of Global Operations and Strategic Sourcing* 13 (3):275-300.
- Morgan, R.E, &Strong C.A. (2003). Business Performance and Dimensions of Strategic Orientation. *Journal of Business Research*, 56(3):163-176
- Morris, M., Kuratko, D., & Covin, J. (2011). *Corporate entrepreneurship and innovation*. Cengage Learning.
- Muhammad H.H., Mohd, N.M., &Halim, B.M.L., (2012). Relationship between Entrepreneurial Orientation, Firm Resources, SME Branding, and Firm's Performance: Is Innovation the Missing Link? *American Journal of Industrial and Business Management*, 2, 153-159.
- Naldi, L., Nordqvist, M., Sjöberg, K., &Wiklund J. (2007). Entrepreneurial orientation, risktaking, and performance in familyfirms. *FamilyBusiness Review* 20(1):33-47.
- Nasution, H. N, Felix T. M, Margaret J. & Nelson O. N., (2011); Entrepreneurship: Its relationship with marketing orientation and learning orientation and as antecedent to innovation and customer Value, *Industrial Marketing Management*, 330-345.
- Newey, L.R., & Zahra, S.A., (2009). The evolving firm: How dynamic and operating capabilities interact to enable entrepreneurship. *British Journal of Management*, 20(1), 17-26.
- Noe, R. A., John R. H., Barry G., & Patrick M. W., (2006). Human resource management, *Gaining a Competitive Advantage, 5th Edition*, (Boston: McGraw-Hill).



- Obeidat, B.Y. (2016). The effect of strategic orientation on organizational performance: The mediating role of innovation. *International Journal Communications, Network and System Sciences*, 9, 478-505.
- Omisakin, O.M, Nakhid-Littrel, I. R, Verbitsky, J. (2016). Entrepreneurial orientation among migrants and small and medium enterprises. *Journal of Business Administration Research* 5(1), 7-19.
- Rauch, A., Wiklund, J., Lumpkin, G.T, &Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice*, 33(3):761-787.
- Renko, M., Carsrud, A., &Brännback, M. (2009). The effect of a market orientation, entrepreneurial orientation, and technological capability on innovativeness: a study of young biotechnology ventures in the United States and Scandinavia. *Journal of Small Business Management*, 47,331–369.
- Rochdi D., Khatijah O., & Muhammad A.S.A.H. (2017). Mediating role of the innovation effectiveness on the relationship between entrepreneurial orientation and the SMEs performance in Algeria. *Polish Journal of Management Studies*,15(1), 185-196.
- Schepers, J., Voordeckers, W., Steijvers, T., &Laveren, E. (2014). The entrepreneurial orientation-performance relationship in private family firms: The moderating role of socio-emotional wealth. *Small Business Economics*, 43,39–55.
- Schumpeter, J.A., (1934). *The Theory of Economic Development*, Cambridge MA: Harvard University Press.
- Sebikari, K.V., (2014). Entrepreneurial performance and small business enterprises in Uganda. *International Journal of Small Business and Entrepreneurship Research* 2(4) 1-12.



- Shane, S.A & Eckhardt, J.T. (2003), Opportunities and Entrepreneurship', *Journal of Management*, 29 (3), 333-349.
- Slater, S. F., & Narver, J. C. (2000). The positive effect of a market orientation on business profitability: A balanced replication. *Journal of Business Research*, 48, 69-73.
- Soares, M.D.C & Perin, M.G. (2020). Entrepreneurial orientation and firm performance: an updated meta-analysis. *RAUSP Management Journal*, 55(2), 143-159.
- Sri, W.L., Eka, A. T., Umar, N. & Mintarti R., (2013) Innovation Role in Mediating the Effect of Entrepreneurship Orientation, Management Capabilities and Knowledge Sharing Toward Business Performance: Study at Batik SMEs in East Java Indonesia, *Journal of Business Management* 8, 16-27.
- Sriprasert, P. (2013). The effect of entrepreneurial orientation on the success of community enterprise: a study of Nakhonsithammarat, Thailand. *International Proceedings of Economics* 59(33):158-162.
- Umrani, W. A, Kura, K.M., & Ahmed, U. (2018). Corporate entrepreneurship and business performance. *PSU Research Review*, 2(1):59-80.
- Venkatraman, N. (1989). Strategic orientation of business enterprises: The construct, dimensionality, and measurement. *Management Science*, 35(8), 942-962.
- Venkataraman, S. (1997). *The distinctive domain of entrepreneurship*. In Katz, J.A. (Eds), *Advances in Entrepreneurship: Firm Emergence and Growth*, 3 (1) 19-38.
- Wahyu, S., Hana, L., Troena, E. A., Nimran, U., & Rahayu, M. (2013). Innovation Role in Mediating the Effect of Entrepreneurship Orientation, Management Capabilities and Knowledge Sharing Toward Business Performance: Study



at Batik SMEs in East Java Indonesia, *Journal of Management Sciences*, 8(4), 16–27.

Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal* 5(2), 171-18.

Wheelwright, S.C., & Clark, K.B. (1992) *Revolutionizing product development – quantum leaps in speed, efficiency, and quality*, New York: The Free Press

Wiklund, J., & Shepherd, D. (2003). Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic Management Journal*, 24, 1307–1314.

Yamane, T. (1967). *Statistics, An Introductory Analysis*, 2nd Ed., New York: Harper and Row.

Zahra, S.A., Nielsen A.P. & Bogner, W.C. (1999). Corporate entrepreneurship, knowledge, and competence development. *Entrepreneurship: Theory Practice*, 23: 169-18.

Zehir, C., Can, E., & Karaboga, T. (2015). Linking entrepreneurial orientation to firm performance: the role of differentiation strategy and innovation performance. *Procedia - Social and Behavioral Sciences*, 210, 358–367. <https://doi.org/10.1016/j.sbspro.2015.11.381>.

Zulfadil, M (2010); *Strategik, Intrapreneurship dan Kinerja: Survaipada Koperasi Sekunder* KP-RI, Usahawan No.09 Tahun XXXV.