

## Influence of Entrepreneurship Orientation on Financial Performance of Construction SMEs in Nigeria

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### Abstract

Entrepreneurship orientation (EO) recently came to light as a major business strategy for improving firm performance in different contexts. The goal of this paper is to investigate the impact of EO dimensional components as independent constructs on the financial performance of Nigerian construction SMEs. A field survey method was used to collect information from 139 owners and top managers of construction SME in Abuja and Lagos, Nigeria. Partial Least Square-Structural Equation Modeling (PLS-SEM) technique with the aid of Smart PLS 3.0 software was used to analyse and tests the hypothesized relationships between EO dimensional components and financial performance of construction SME's. Finding shows that EO strongly explains 78.1% of the variance in construction SME's financial performance. Innovativeness, proactiveness and autonomy orientations were found to correlate positively with financial performance while competitive aggressiveness and risk taking reported no significant relationship with financial performance. The study concludes that EO has a very strong potential for boosting the financial outcomes of construction SMEs in Nigeria. The study recommends construction SMEs to leverage on EO strategies to engender improvement in their general corporate performance.

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**Keywords:** Aggressive competition; Autonomy; Entrepreneurship orientation; Proactiveness; Financial performance; Innovativeness; Risk taking

## 1. Introduction

The construction sector contributes significantly to the economies of nations all over the world. Its contribution to GDP as well as provision of employment to a significant number of people through its diverse operations is well recognized [1, 2, 3]. According to reports, small and medium-sized firms (SMEs) account for the vast majority of construction businesses in both developed and developing countries [4, 5, 6]. According to [7], SMEs comprises over 80% of the companies in the construction business. Researchers have also thoroughly documented this group of companies' overall impact as catalysts for socioeconomic development and expansion [8, 9, 10, 11, 12, 13]. Despite having immense potential to contribute to economic development, many construction SMEs, particularly those in developing nations like Nigeria, are reportedly struggling with poor performance [14, 11, 13]. Increasing competition has reportedly put the majority of construction SMEs in challenging circumstances, making their contribution to promoting national economic growth and employment creation insignificant. In light of these circumstances, researchers have emphasized the importance of adopting innovative techniques for improving the operational efficiency of construction enterprises [7, 15, 6, 16]. Entrepreneurship has recently attracted attention around the world as a critical approach for enhancing the efficiency and competitiveness of firms in different sectors, as well as those within the construction industry [10, 17, 6, 18]. Thus, in today's business world, having an entrepreneurial orientation (EO) is now regarded as a vital posture for a company's success.

EO is described as the processes, tactics, and styles that firms employ to act in an entrepreneurial manner to be able to gain competitive edge in their respective marketplaces [19, 20]. The five key EO dimensional elements are: autonomy, proactiveness, innovativeness, competitive aggressiveness and risk-taking [21, 22, 23, 16]. These EO aspects jointly represent an organization's decision-making styles and the extent of entrepreneurship in a business. Previous research has found that businesses with higher levels of EO have greater chances of having better financial outcomes [22, 6, 12]. As a result, the notion of EO has increased in relevance as a vital global construct for assessing firm success, particularly in today's competitive and fast changing corporate environment [24]. Despite its competitive environment, EO researchers have not given the construction industry in developing nations like Nigeria the attention it deserves [17, 6]. As a result, there are few studies and empirical data on the EO and its connection to performance among

Nigerian construction enterprises. The main goal of this research is to investigate the effect of EO on construction SMEs' financial performance in Nigeria with the intention of fostering a better knowledge of the correlation between EO components and performance in this vital segment of the nation's economy.

## 2. Literature review

### 2.1. The issue and objective

The theoretical underpinnings of this study were derived from the early theories of firm level entrepreneurship expounded by Khandawalla [25], Miller [26], Covin and Slevin [27], and Lumpkin and Dess [28]. [25] originally suggested that organizations do benefit from adopting an entrepreneurial management style defined by a penchant for decision-making that is daring, risky, and aggressive as opposed to an approach that is cautious and stability- oriented. [26] later made the first attempt to describe entrepreneurial processes at the firm level by identifying three fundamental processes: the willingness to engage in product innovation, taking on relatively risky projects, and being more proactive than rivals in seizing new market opportunities. The works of [27] extended on this idea by highlighting the critical importance of having an entrepreneurial posture by being innovative, proactive and risk-oriented. This forms the basis for the EO concepts, which is extensively discussed in both management and entrepreneurship literature. The concepts of [26] and [27] were elaborated upon by [28] to include autonomy and competitive aggressiveness orientations. According to [28] idea, the key characteristics of EO comprises the drive to operate autonomously, an inclination to take risks and innovate, the propensity to engage in competitive behavior, and a proactive mindset toward market opportunities. The current study employed the five-dimensional paradigm described by [28].

Many EO researchers have placed a strong emphasis on the link between EO and firm performance [22, 29, 12, 18, 30]. Performance has been assessed from both financial and non-financial standpoints. While financial measurements show aspects of company successes including revenues, sales growth, return on investment and growth in profit, non-financial indicators on the other hand, represents crucial value-creating activities that show a firm's long-term survival and health [31, 22, 32, 33]. One of the most crucial indicators that offers an effective means of defining

and appraising business success is financial performance based on accounting measures of profitability [34, 35, 23, 33]. Hence, the most common method of evaluating business performance in EO research has been to employ financial indicators of growth and profitability [22, 23, 36, 37]. Growth demonstrates a company's historical ability to grow in size, whereas profitability demonstrates its historical capability to earn profits [35]. Some of the most common indicators of profitability and growth identified from previous literature include: return on investment, return on asset, growth in profit, growth in revenue, market share growth and growth in number of employees [22, 31, 33, 34, 37].

The five EO dimensions in this study were treated as multi-dimensional constructs, and the correlation between each component and financial performance was therefore, separately evaluated. This was based on [28]'s viewpoints, who believes that EO dimensions differ independently, with firms scoring highly on some and poorly on others [28, 38, 22, 23]. This perspective promotes the idea that distinct EO dimensions and their impact on performance should be studied independently.

### **2.1.1. *Innovativeness and firm performance***

The term "innovativeness" describes a company's propensity for creativeness and experimentation by way of introducing new goods and services in addition to advancement in technology via research and development (R&D) [28, 22]. Numerous researches have shown a strong correlation between company performance and innovativeness [39, 22, 40, 41, 23, 37, 6, 16, 30]. According to a study by [16], the financial success of real estate companies in Nigeria's South West is positively correlated to their level of innovation. The study's findings reveal that creative thinking and market innovation are positively linked to the success of real estate businesses. Results of a prior study by [39] among US-based software companies show that greater innovation results in improved performance of the firms. Innovativeness, according to [42], can aid businesses in achieving improvements in their market positions, stronger growth, and product and service quality. [22] has noted that businesses with strong innovation drives typically outperform companies with weaker innovation efforts. By seizing possibilities in emerging markets, an innovative strategic stance should lead to improvement in company performance [43]. This study proposed the following hypothesis in light of the findings regarding the link between innovation and firm performance:

***H<sub>1</sub>:*** *Innovativeness dimensional component of EO is related positively to financial performance of construction SMEs in Nigeria.*

### ***2.1.2. Risk taking and firm performance***

The inclination to engage in bold rather than cautious actions, for example, venturing into unknown territories, borrowing significantly, and/or allocating substantial resources to operations in risky circumstances, is referred to as risk taking. [28, 22, 44]. Firms that are prepared to accept bigger risks by taking on more debt or putting more assets at risk can profit from these actions through abnormal financial gain [45, 41, 46, 47]. [19] stated, however, that taking risks in the context of EO does not imply engaging in severe and uncontrolled risky efforts, but rather taking moderated and measured risks. Numerous research [48, 23, 46, 37] have found a link between risk taking and business performance. Wang and Yen [48] discovered a positive connection between risk taking and company performance among Taiwanese SMEs in China. Another study [46] conducted in Kenya among micro and small firms discovered a substantial positive link between risk taking orientation and business growth. [37] also documented a positive association between risk taking orientation and financial performance for SMEs in Nigeria. Contrarily, some studies, including those by Hughes and Morgan [38], [40], and [49] have not been able to establish positive correlation between taking risks and various aspects of firm performance in their research. There may be a limit on how much taking risks can improve a firm's performance, according to other researchers, such as [50], who documented a curvilinear relationship between performance and risk-taking orientation. This study proposed the following hypothesis in line with the preceding literature:

***H<sub>2</sub>:*** *Risk taking dimensional component of EO is related positively to financial performance of construction SMEs in Nigeria.*

### ***2.1.3. Proactiveness and firm performance***

Proactiveness is described as a forward-looking, opportunity-seeking attitude defined by the launch of new products and services far ahead of competitors and taking anticipatory actions with respect to future demands [22]. It is the inclination to anticipate and respond to future needs rather than reacting to situations as they occur. Proactive firms anticipate changing market demands and

is frequently the first to penetrate new markets or "fast followers" who build upon the efforts of first movers. [22, 48, 47]. By entering new markets first, building a brand identity, executing administrative strategies, or deploying new operating technology, proactive businesses usually gain the first mover advantage [22, 6]. In a study of SMEs in Spain, [40] found that proactive enterprises who move proactively to seize new business opportunities have higher growth rates. Similar findings were reported by [48] among Taiwanese SMEs in China, [23] among Malaysian SMEs, [37] among Nigerian SMEs, and [6] among Tanzanian indigenous construction enterprises. This study therefore, hypothesized that:

***H<sub>3</sub>: Proactiveness dimensional component of EO is related positively to financial performance of construction SMEs in Nigeria.***

#### ***2.1.4. Competitive aggression and firm performance***

Competitive aggressiveness is a strong desire to outperform competitors in business. It is distinguished by a confrontational stance or an aggressive response designed to strengthen market position, defeat a threat, or surpass competitors in a competitive marketplace [51, 12]. Increased marketing investment, price cuts, enhanced product/service quality, and increased production capacity are examples of aggressive measures that can be taken by firms. A competitively aggressive approach allows a company to be a leading participant in a highly competitive environment and to move decisively to secure or enhance its position [21]. Due to the intensive competition in construction business, scholars have advocated for adoption of competitive aggressive attitudes to ensure survival in the sector [17, 42, 16]. However, researchers have reported contradictory results with respect to the relationship between competitive aggression and firm performance. Notwithstanding some research, such as [38], [40], and [16], that found no association between competitive aggressiveness and firm performance, others such as [52], [23], [53] and [36] were able to establish a positive link between the two constructs. Consequently, the current study proposed that:

***H<sub>4</sub>: Competitive aggressiveness dimensional component of EO is related positively to financial performance of construction SMEs in Nigeria.***

### **2.1.5. Autonomy and firm performance**

Autonomy refers to an individual's or a team's capacity to take decisions and carry out independent activities in order to accomplish an initiative, a business concept, or idea and see through to its completion, with no any constraints from the organization [19, 22]. It is the flexibility that a single individual or a team within a company has to come up with, and implement an entrepreneurial action. The basis of autonomy, according to Venter [54], is an individual's capacity to take independent, unconstrained actions that reflect their own independent reasoning. Autonomy is regarded as a vital strategy in the process of capitalizing on an enterprise's current capabilities, discovering prospects that are beyond its present capacities, and promoting the launch of new initiatives and enhanced business practices [55]. According to Lumpkin, Cogliser [56], autonomy can enhance firm performance by encouraging individuals to take initiative. Several empirical studies have established a positive correlation between autonomy and firm success [50, 53, 36]. Despite the fact that autonomy is acknowledged to have a good impact on company performance, several studies, including those by [38] and [16], have failed to demonstrate this. Previous researches have produced mixed results, thus, highlighting the need to explore the relationship between autonomy and performance of firms in the construction setting. As a result, the following hypothesis was advanced:

***H<sub>5</sub>: Autonomy dimensional component of EO is related positively to financial performance of construction SMEs in Nigeria.***

## **3. Methodology**

Data for this research was gathered via a cross-sectional field survey using a standardized structured questionnaire. Construction SMEs owners/CEOs and senior managers in Abuja and Lagos, Nigeria, were the targeted population of the study. The selection of Abuja and Lagos was based on their significance as the administrative and commercial nerves of the country respectively, as well as their hosting a significant number of construction enterprises as asserted by prior studies such as [57] and [58]. The sampling frame comprises construction enterprises listed within the Federal Inland Revenue Service (FIRS) database. This source was deemed reliable because it contains enterprises who pay their taxes on regular basis, reflecting their level of

industrial activity in the country. Based on Krejcie and Morgan's [59] sample size selection table, about 370 respondents were chosen at random from a sample frame of 9,128 businesses. Despite the fact that the survey questionnaires were distributed randomly to all selected firms in the sample frame, only the data collected for enterprises classified as SMEs were analysed. The number of permanent employees criterion from [60] definition of SMEs in Nigeria were employed in the study. As a result, only enterprises employing less than 200 workers were included for analysis. A total of 139 valid and useful responses representing a response rate of 37.6% were received at the end of data collection.

### **3.1. Study Variables and Measures**

Previously validated scales for measuring EO developed by [28], [57] and later employed by studies such as [29] and [61] was used with minimal changes to fit the circumstances of construction businesses. The scale for EO measurement has 27 items on a Likert scale of five-points, with six (6) questions assessing innovativeness, five (5) items each measuring proactiveness, risk taking and competitive aggressiveness, and six (6) items for autonomy. Indicators employed to measure financial performance as the dependent construct in the study were derived from prior works such as [35], [36], and [62]. Subjective indicators of growth and profitability were used to compare responding organizations' financial performance to that of their competitors. The preference for subjective measurements stemmed from the acknowledged challenges in obtaining reliable financial data from enterprises [63]. Furthermore, the Nigerian construction industry, like many others, is dominated by privately owned enterprises whose financial data is difficult to obtain. Thus, survey respondents were asked to rank the performance of their firms over the past three years in relation to their competitors on the Likert scale. Seven different items: return on investment, profit growth, return on asset, growth in asset, growth in revenue, employee growth, and market share growth—were used to represent profitability and growth indicators.

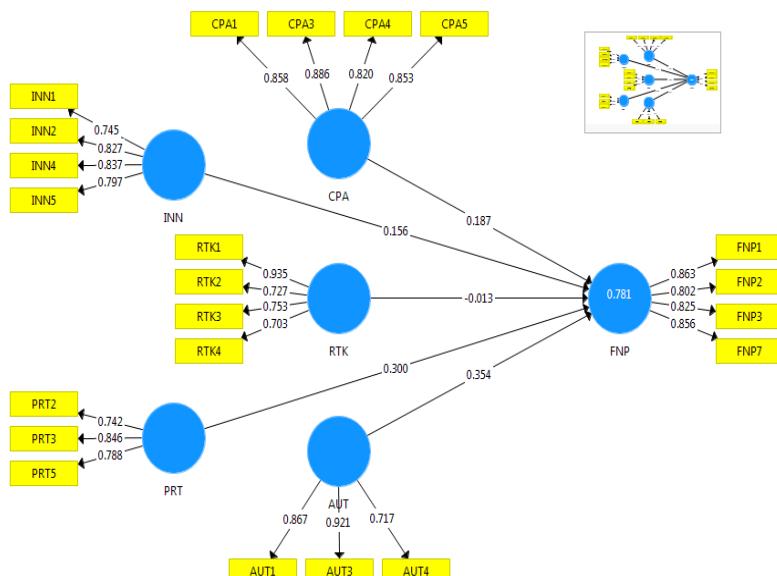
### **3.2. Analysis of Data**

The data collected for this study was analysed using PLS-SEM (Partial Least Square - Structural Equation Modeling) technique with the aid of SmartPLS software programme version 3.0. The PLS-SEM model is a multivariate data analysis method which analyses and interprets data in two

steps. Step one involves assessing and refining the adequacy of the measurement model to ensure the reliability and validity of the measures used. The second stage consists of assessing and evaluating the structural model in order to examine the hypothesized relationships among the research variables [64]. The PLS-SEM method is primarily concerned with predicting certain sets of hypothesized correlations to optimize the explained variance in the dependent constructs [65].

#### 4. Results

The hypothesized model for the research is shown in figure 1. The model demonstrates that all indicators are reflective, implying that their composite reliability, factor loadings, Average Variance Extracted (AVE), and square roots must be reported [66]. For the factor loadings, the model reveals that nine (9) items out of the initial twenty-seven (27) items measuring EO were dropped for having less than 0.7 outer loadings [67]. Items with outer loadings less than 0.70 are discarded as a rule of thumb to improve reliability and validity of measures [68]. Two (2) items were dropped from innovativeness, one (1) from risk taking construct and two (2) from proactiveness. On the competitive aggressiveness construct, one (1) item was dropped while three (3) items were dropped from autonomy. A total of Eighteen (18) EO items were therefore, retained on the EO measurement scale. The model also shows that three (3) items were also dropped from the dependent variable financial performance.



**Figure 1. PLS-SEM Measurement Model**

**Legends:** INN: Innovativeness, RTK: Risk taking, PRT: Proactiveness, CPA: Competitive aggressiveness, AUT: Autonomy, FNP: Financial Performance

#### 4.1. Construct Reliability, Convergent and Discriminant Validity

To ascertain the reliability of measurement scales employed in the research, Cronbach's alpha and composite reliability tests were used. The result in table 1 shows the Composite reliability and Cronbach's alpha values for the study's model. The results reveal that values for Cronbach's alpha and Composite reliability are all above 0.7, signifying that the measures utilized are reliable.

**Table 1.** Outer Model's Reliability and Convergent Validity Results

Latent Variables and Indicators	Item Loadings	Composite Reliability	Cronbach Alpha	Average Value Extracted
<b>Autonomy</b>		0.876	0.789	0.705
<b>AUT1</b>	0.867			
<b>AUT3</b>	0.921			
<b>AUT4</b>	0.717			
<b>Competitive Aggressiveness</b>		0.915	0.879	0.730
<b>CPA1</b>	0.858			
<b>CPA3</b>	0.886			
<b>CPA4</b>	0.820			
<b>CPA5</b>	0.853			
<b>Financial Performance</b>		0.903	0.857	0.701
<b>FNP1</b>	0.863			
<b>FNP2</b>	0.802			
<b>FNP3</b>	0.825			
<b>FNP7</b>	0.856			
<b>Innovativeness</b>		0.878	0.815	0.643
<b>INN1</b>	0.745			
<b>INN2</b>	0.827			
<b>INN4</b>	0.837			
<b>INN5</b>	0.797			
<b>Proactiveness</b>		0.835	0.706	0.629
<b>PRT2</b>	0.742			
<b>PRT3</b>	0.846			
<b>PRT5</b>	0.788			
<b>Risk Taking</b>		0.863	0.821	0.616
<b>RTK1</b>	0.935			
<b>RTK2</b>	0.727			
<b>RTK3</b>	0.753			
<b>RTK4</b>	0.703			

The Convergent validity was evaluated based on the item loadings and the AVE, as also indicated in the table 1. All item loadings were greater than 0.7, and the AVE values exceeded the 0.5 minimum required for convergent validity [68]. This supports the research constructs' convergent validity.

The result of discriminant validity shown in table 2, demonstrates that the AVE square roots (in bold) is greater than any other construct correlations in the table. According to the criteria by Fornell and Larcker [69] AVE square roots for all constructs must be bigger compared to all other correlations in the table. The finding reveals the distinctness of each construct, thus verifying the existence of discriminant validity of measurement scales in the study. The presence of discriminant and convergent validity demonstrates that each EO component contributes uniquely to the process of entrepreneurship and can vary independently, as claimed by the multi-dimensional theorist [70].

**Table 2.** Discriminant Validity

Variables	AUT	CPA	FNP	INN	PRT	RTK
<b>AUT</b>	<b>0.840</b>					
<b>CPA</b>	0.591	<b>0.855</b>				
<b>FNP</b>	0.807	0.727	<b>0.837</b>			
<b>INN</b>	0.795	0.584	0.742	<b>0.802</b>		
<b>PRT</b>	0.722	0.795	0.807	0.649	<b>0.793</b>	
<b>RTK</b>	-0.150	-0.062	-0.123	-0.040	-0.130	<b>0.785</b>

## 4.2. Structural Model Assessment

Following the successful assessment of the measurement model, the study moved on to test the hypothesized relationships (H1, H2, H3, H4, and H5) by assessing the structural model. The study used 1000 bootstrapped sub samples to examine the relevance of the hypothesized constructs' correlations [66]. Table 3 displays the bootstrap result, which includes the path coefficient, t-values, and significance level. A t-statistic more than 1.96 is regarded to be significant (using a 2-tailed test at 5% significance level). The findings demonstrated that financial performance is significantly correlated to autonomy ( $\beta=0.354$ , t-value  $3.813>1.96$ ), proactiveness ( $\beta=0.300$ , t-value  $2.434>1.96$ ) and innovativeness ( $\beta=0.156$ , t-value  $2.348>1.96$ ). However, the result suggests that competitive aggressiveness ( $\beta=0.187$ , t-value  $1.415<1.96$ ) and risk taking ( $\beta=-0.013$ , t-value

0.298<1.96) are not statistically significant predictors of financial performance. Thus, the findings support hypotheses H1, H3, and H5, while H2 and H4 are rejected.

**Table 3.** Structural Model (Inner Path Coefficients)

Hypothesis	Original Sample (O)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values	Decision
<b>H1: AUT -&gt; FNP</b>	0.354	0.093	3.813	0.000	Accepted
<b>H2: CPA -&gt; FNP</b>	0.187	0.132	1.415	0.157	Rejected
<b>H3: INN -&gt; FNP</b>	0.156	0.066	2.348	0.019	Accepted
<b>H4: PRT -&gt; FNP</b>	0.300	0.123	2.434	0.015	Accepted
<b>H5: RTK -&gt; FNP</b>	-0.013	0.042	0.298	0.766	Rejected

According to the value of coefficient of determination ( $R^2$ ), which is used to assess a model's predictive capacity, the five EO latent variables explained 78.1% of the variance in financial performance of firms in the research. Hair, Ringle [65] categorized  $R^2$  values: 0.75, 0.50, and 0.25 as strong, moderate, and weak respectively. The effect size  $f^2$  in table 4 illustrates how much an independent latent variable adds to the  $R^2$  of a dependent latent variable [66]. It depicts the evaluation of  $R^2$  after removing a certain independent construct from the model.  $f^2$  effect values: 0.02, 0.15, or 0.35 is adjudged to be small, medium and large effects respectively [71]. The  $f^2$  values of the EO constructs on financial performance indicate that the effect of size was minimal (less than 0.15) for all EO constructs on financial performance, with the exception of Autonomy (0.164), which demonstrates a moderate effect size.

**Table 4.** Effect Size ( $f^2$ ) Values

Independent Construct	F-Square ( $f^2$ )	Effect Size
AUT	0.164	Medium
CPA	0.057	Small
INN	0.038	Small
PRT	0.110	Small
RTK	0.001	Small

## 5. Discussion of Result

The results of the hypothesized model suggest that EO directly explains 78.1% of the variance in financial performance of construction SMEs in the research. This was observed to be in accordance with the preponderance of research, which reported EO as a significant contributor to business financial performance [22, 72, 23, 37, 73, 12]. According to the findings, the impact of EO on construction SME's financial performance in the study was significant [74]. Radipere [75] has

suggested that EO is possibly among the best indicators of corporate performance. The result shows a moderately strong and positive path coefficient for the dimensions of autonomy ( $\beta= 0.354$ ) and proactiveness ( $\beta=0.300$ ) while competitive aggressiveness ( $\beta=0.187$ ) and innovativeness ( $\beta= 0.156$ ) reported a relatively weak but positive path coefficient. A very weak and negative path coefficient was however, recorded for risk taking orientation ( $\beta=-0.013$ ) suggesting that risk taking may not predict financial performance [66]. The results of significant test for individual EO components demonstrate that autonomy, innovativeness and proactiveness have a statistically significant influence on financial performance of construction SMEs. The remaining two dimensions, competitive aggressiveness and risk taking, were however, found to be insignificantly associated with the financial successes of construction SME's. This was discovered to be consistent with previous empirical investigations that reported that it's not all the EO dimensional components that are responsible for boosting firm performance [22, 23, 36, 12, and 16]. While some EO aspects may increase performance in certain settings, others may have little or no impact. The current result was found to be compatible with the findings of [23, 37], which employed SMEs as samples. Both studies, like this one, found a favorable link between proactiveness and innovativeness with financial performance. [23] explored the EO-financial performance link among Malaysian technologically-driven SMEs whereas [37] reported the findings of EO-financial performance relationships among SMEs from various industries in Kano, Nigeria. Unlike the current study, the two previous investigations found a link between risk taking and competitiveness with financial performance. In addition, [23] discovered no relationship between autonomy and financial performance, whereas [37] did not consider autonomy in their study. The findings of this investigation show that while autonomy may not benefit technology-based SMEs in Malaysia, it considerably helps in boosting the financial performance of Nigerian construction SMEs.

The lack of substantial link between risk taking and financial performance was discovered to be consistent with [49], who established no correlation between taking risks and financial performance of companies from four distinct sectors listed on the Nigerian Stock Exchange. However, the results were at odds with [22]'s claims that taking risks should be associated with better financial performance, even if just marginally. Risk-taking, according to Lumpkin and Dess [19], entails possible hazard and pitfalls by nature, hence it must be carefully handled in order to

improve company performance. Previous research has shown that the attitude of taking risks has context-dependent, mixed effect on performance [41, 16]. However, this does not automatically imply that it is not a vital orientation for construction SMEs. Some studies have demonstrated that certain orientations only improve performance when moderating or mediating variables are present.

Implementing competitive aggressive actions like lowering of prices or sacrificing cash flow to gain market share is likely to affect negatively the profitability of construction companies. This was highly suspected to be the reason for the lack of positive association between competitive aggressiveness and construction SME's financial performance. A study by [63] has also found no link between Tanzanian construction firms' financial performance and their aggressiveness in the marketplace. In contrast, [49] have found a positive relationship between competitive aggressiveness and financial performance of listed firms on the Nigerian Stock Exchange. The finding, thus, emphasizes the significance for firms in various environments to determine the proper EO components for their specific circumstances. The findings of this study imply that granting autonomy, being innovative, and proactive are the most relevant orientations for enhancing financial accomplishments of construction SMEs in Nigeria.

## 6. Conclusion

The influence of EO as a multidimensional construct on the financial performance of Nigerian construction SMEs was investigated in this paper. Findings indicated substantial correlation between EO dimensions and financial performance of construction enterprises. EO was found to significantly predict 78.1% of the variance in financial performance, highlighting its substantial impact on construction SMEs financial achievements. Analysis of the individual components of EO, reveals that autonomy, proactiveness, and innovativeness significantly relates with financial performance. However, the study found insignificant relationships between both risk taking and competitive aggressiveness with the performance of construction SMEs, thus, confirming the argument that not every EO components is necessary for improving firm performance. The study concludes that EO dimensions of autonomy, proactiveness, and innovativeness are critical for achieving financial goals such as return on investment, profit growth, revenue growth, and return on assets among Nigerian construction SMEs. Based on the research findings, the following recommendations were made:

- i. Construction SMEs should endeavor to increase and improve their EO strategies by re-examining their current EO capabilities and focusing on those dimensions that are vital for boosting their corporate performance.
- ii. Construction owners and senior managers should encourage and support entrepreneurship training and education in order to realize the benefits of EO in their companies.

Finally, the study has contributed to the existing literature on EO and its impact on business performance, especially in the context of SMEs in the construction industry, which has received less attention from EO researchers. From a practical standpoint, the research will aid construction SMEs' owners and top executives in streamlining their entrepreneurial activities by focusing on EO components that contribute the most to their predefined performance targets.

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## References

- [1] E. A. Achuenu, & G.S. Oluoye, "Management of Information in the Nigeria Construction Industry," *The Professional Builder; Journal of the Nigerian Institute of Building*, pp. 22-28, 2007.
- [2] S. M. Pamulu "Strategic Management Practice in the Construction Industry: A Study of Indonesian Enterprises," Unpublished PhD Thesis, Queensland University of Technology, 2010.
- [3] P. U. Okoye, "Driving Public Investments in Construction Sector for Economic Growth in Nigeria: A Synthesis of Wagnerian and Keynesian Hypotheses". *Universal Journal of Management*, 9(1), pp. 1 – 12, 2021. DOI: 10.13189/ujm.2021.090101.
- [4] G. Ofori, "Developing the construction industry in Ghana: The case for central agency" A Concept paper prepared for improving the construction industry in Ghana. National University of Singapore, 2012.

[5] D. W Thwala, A. M. Ajagbe, W. I. Enegbuma, A. A. Bilau, & C. L. Long, "Sudanese Small and Medium Sized Construction Firms: An Empirical Survey of Job Turnover". *Journal of Basic, Applied Scientific Research*, 2(8), pp. 7414-7420, 2012.

[6] F. P. Okangi, "The impacts of entrepreneurial orientation on the profitability growth of construction firms in Tanzania," *Journal of Global Entrepreneurship Research*, 9(1), pp. 1-23, 2019.

[7] G. Ofori, "Small and medium sized construction enterprise development," *Construction for Development* (ISIZA), 1<sup>st</sup> Quarter, 2009.

[8] B.A.N. Onugu, "Small and Medium Enterprises (SMES) in Nigeria: Problems and Prospects" M.Sc. Dissertation, ST. Clements University, 2005.

[9] M.J. Phaladi, & W. D. Thwala, "Critical Success Factors for Small and Medium Sized Contractor in North West province South Africa". Proceedings of the 5th Post graduate Conference on Construction Industry Development, Bloemfontein, South Africa 16<sup>th</sup> – 18<sup>th</sup> March, 2008.

[10] A. Oteh, "The Role of Entrepreneurship in Transforming the Nigerian Economy" A paper delivered at the Seventh Convocation Lecture, Igbinedion University, Okada, Edo State. 4th December, 2009.

[11] S.J. Odediran, B.F. Adeyinka, O.A. Opatunji, K.O. Morakinyo, "Business Structure of Indigenous Firms in the Nigerian Construction Industry," *International Journal of Business Research & Management (IJBRM)*, 3(5), pp. 255-264, 2012.

[12] A.U. Ibrahim, M. M. Abu, Influence of Entrepreneurial Orientation on Firms Performance: Evidence from SMEs in Nigeria. *International Journal of Economics and Financial Issues*, Vol. 10. Issue 2, 10(2), pp. 99-106, 2020.

[13] I. F. Ali, Contribution of Construction SMEs to Sustainable Development in Nigeria. *International Journal of Small Business and Entrepreneurship Research* Vol.9, No.3, pp. 22-38, 2021.

[14] S. Dantata, "General Overview of the Nigerian Construction Industry," Unpublished Thesis (M. Eng.) Massachusetts Institute of Technology, 2008.

[15] K. Bala, A. Bello, B. A. Kolo, S. A. Bustani, Factors Inhibiting the Growth of Local Construction firms in Nigeria. In: Dainty, A. (Ed) Procs 25th Annual ARCOM Conference, Nottingham, UK, Association of Researchers in Construction Management, 7-9 September pp. 351-359, 2009.

[16] E. Olowofeso, O.J. Ojo, & M.O. Ajaji, Influence of Entrepreneurial Orientation on the Profitability of Real Estate Firms in South West, Nigeria. *Journal of Management and Economic Studies*, 3(1), pp. 16-27, 2021. DOI: 10.26677/TR1010.2021.722

[17] Z. Abd-Hamid, N. A. Azizan, & S. Soroosian, "Predictors for the Success and Survival of Entrepreneurs in the Construction Industry," *International Journal of Engineering Business Management*, 7(12), pp. 1-11, 2015.

[18] A. O. Okusanya, V. O Akpa, B. H. Akinlabi, "Entrepreneurial Orientation and Market Share of Selected Quoted Consumer Goods Manufacturing Companies in Nigeria," *International Journal of Engineering and Management Research*. 11(2), Pp. 64-74, 2021.

[19] G.T. Lumpkin, G.G. Dess, "The Role of Entrepreneurial Orientation in Stimulating Effective Corporate Entrepreneurship," The Academy of Management Executive, 2005.

[20] J.G. Covin, W.J. Wales, "The Measurement of Entrepreneurship Orientation," *Entrepreneurship Theory and Practice*. 36(4), pp. 667-702, 2012.

[21] G.T. Lumpkin, G.G. Dess, "Linking Two Dimensions of Entrepreneurial Orientation o Firm performance," *Journal of Business Venturing*, 16(5), pp. 429-451, 2001.

[22] A. Rauch, J. Wiklund, G.T. Lumpkin, M. Frese, "Entrepreneurial Orientation and Business Performance: An Assessment of Past Research and Suggestions for the Future," *Entrepreneurship Theory and Practice*. 33: pp. 761-787, 2009.

[23] A.S. Arshad, A. Rasli, A.A. Arshad, Z. A. Zain, The Impact of Entrepreneurial Orientation on Business Performance: A Study of Technology-based SMEs in Malaysia. *Procedia – Social and Behavioral Sciences*, 130: pp. 46-53, 2013.

- [24] S. Shane, R. McGrath, I. Macmillan, "Is Entrepreneurial Orientation a Global Construct? A Multi country Study of Entrepreneurial Orientation, Growth Strategy, and Performance," *The Journal of Business Inquiry*, 8: (2009), 12–25.
- [25] P.N. Khandwalla, "The Techno-economic ecology of corporate strategy," *Journal of Management Studies*, 13(1), pp. 62-75, 1977.
- [26] D. Miller, "The correlates of entrepreneurship in three types of firms," *Management Science*, 29 (7), pp. 770-792, 1983.
- [27] J.G. Covin, D.P. Slevin, "The influence of organization structure on the utility of an entrepreneurial top Management style," *Journal of Management Studies*, 25(3), pp. 217-234, 1998.
- [28] G.T. Lumpkin, G.G. Dess, "Clarifying the entrepreneurial construct and linking it to performance" *Academy of Management Review*, 21(1), pp. 135-172, 1996.
- [29] S. Schillo, "Entrepreneurial Orientation and Company Performance: Can the Academic Literature Guide Managers?" *Technology Innovation Management Review*, pp. 20-25, 2011.
- [30] A. Funmilayo, M. Clement, E. Solomon, E. Ofori, N. Onyedikachi, "The Impact of Entrepreneurial Orientation on Innovation Performance in Nigerian Firms: The Mediating Effect of Knowledge Management," *Open Journal of Business and Management*, vol. 10, pp. 3409-3435, 2022. DOI: [10.4236/ojbm.2022.106168](https://doi.org/10.4236/ojbm.2022.106168)
- [31] J. Johansson, D. Luotonen, M. Hasselström, "Performance Measurement -A study of Financial and Non-Financial Measures in Two Logistics Oriented Companies," Unpublished Bachelor thesis, Jönköping University, 2008.
- [32] D.E. Emeakponuzo, "Non-financial Performance Measures and Firm Value in Nigeria: What is the Link?" *British Journal of Economics, Management & Trade* 4(6), pp. 947-966, 2014.
- [33] U. Abdullahi, Y. Ardo, A. Hassan, G. Ibrahim, "Assessment of Financial and Non-Financial Performance Indicators Used by Small and Medium Construction Firms In Nigeria," *FUTY Journal of the Environment*, 15(2), pp. 71-80, 2021.
- [34] W.G. Rowe, J. L. Morrow, "A Note on the Dimensionality of the Firm Financial Performance Construct Using Accounting, Market, and Subjective Measures," *Canadian Journal of Administrative Sciences*. 16(1), pp. 58-71, 2009.
- [35] J. B. Santos, L. A. L. Brito, "Toward a Subjective Measurement Model for Firm Performance," *Brazilian Administration Review (BAR)*, 9(6), pp. 95-117, 2012.
- [36] W. Koe, "Entrepreneurial Orientation and Performance of Government-Linked Companies (GLCs)," *Journal of Entrepreneurship, Management and Innovation (JEMI)*. 9(3), pp. 21-42, 2013.
- [37] M. S. Magaji, R. Baba, H. Entebang, "An Empirical Analysis of the Effect of Entrepreneurial Orientation on Financial Performance of SMEs in Nigeria," Proceedings of International Conference on Entrepreneurship and SMEs Research, 2015.
- [38] M. Hughes, R.E. Morgan, "Deconstructing the Relationship between Entrepreneurial Orientation and Business Performance at the Embryonic Stage of Firm Growth," *Industrial marketing management*, 36(5), pp. 651-661, 2007.
- [39] F.A. Zainol, S. Ayadurai, "Entrepreneurial Orientation and Firm Performance: The Role of Personality Traits in Malay Family Firms in Malaysia," *International Journal of Business and Social Science*, 2(1), pp. 59-71, 2011.
- [40] J. C. Casillas, A. M. Moreno, "The Relationship between Entrepreneurial Orientations and Growth: The Moderating Role of Family Involvement," *Entrepreneurship and Regional Development*, 22(3–4), pp. 265–291, 2010.
- [41] S. N. A. Ambad, K.A. Wahab, "Entrepreneurial Orientation among Large Firms in Malaysia: Contingent Effects of Hostile," Environments. *International Journal of Business and Social Science*, 4(16), pp. 96-107, 2013.

[42] H. Setiawan, B. Erdogan, S. O. Ogunlana, "Corporate Entrepreneurship for Contracting Companies: The Current Issues," In: Smith, S.D (Ed) *Procs 28th Annual ARCOM Conference*, 3-5 September 2012, Edinburgh, UK, Association of Researchers in Construction Management, Pp. 817-827, 2012.

[43] J. Wiklund, D. Shepherd, "Entrepreneurial Orientation and Small Business Performance: A Configurational Approach," *Journal of Business Venturing*, 20(1), pp. 71-91, 2005.

[44] X. Peng, "Risk Taking and Firm Growth," RIETI Discussion Paper Series 15-E-061, 2015.

[45] J. Gibb, J.M. Haar, J. M, "Risk-taking, innovativeness, and competitive rivalry: a three-way interaction towards firm performance," *International Journal of Innovation Management*, 14(5), pp. 871- 891, 2010.

[46] M. M. A. Mwangi, K. Ngugi, "Affect of Entrepreneurial Orientation on Growth of Micro and Small Enterprises in Kerugoya, Kenya," *European Journal of Business Management*, 1 (11), pp. 417-438, 2014.

[47] T.O. Olubiyi, A.J. Egwakhe, B. Amos, A.A. Ajayi, "Entrepreneurial orientation and firm profitability: Evidence from Lagos State Nigeria," *Journal of Business and Management*, 2(6), pp. 42-54, 2019.

[48] H. K. Wang, Y. F. Yen, "An empirical exploration of corporate entrepreneurial Orientation and performance in Taiwanese SMEs: a perspective of multidimensional construct," *Total Quality Management & Business Excellence*, 23(9), pp. 1035-1044, 2012.

[49] O. Olaniran, "Role of Entrepreneurial Orientation on Performance of Firms in the Nigerian Stock Exchange," Unpublished PhD Thesis, Jomo Kenyatta University of Agriculture and Technology, Kenya, 2016.

[50] A. Awang, Z. A. Ahmad, "Firm's Entrepreneurial Orientation and Bumiputera SMEs Performance: The Impact of Munificent Environment," 7<sup>th</sup> International Research Conference on Quality, Innovation and Knowledge Management, Monash University, 2005.

[51] S. Vij, H. S. Bedi, "Relationship between Entrepreneurial Orientation and Business Performance. A Review of Literature," *IUP Journal of Business Strategy*. 9(3), pp. 17-31, 2012.

[52] M. Madhoushi, A. Sadati, H. Delavari, M. Mehdivand R. Mihandost, "Entrepreneurial Orientation and Innovation Performance: The Mediating Role of Knowledge Management," *Asian Journal of Business Management*, 3(4), (2011), 310-316.

[53] P. F. Dafel, "An Assessment of Entrepreneurial Orientation in an Agri-business," Unpublished Master's Thesis, Potchefstroom Campus, North-West University, 2012.

[54] D. Venter, "Entrepreneurial Orientation as a Performance Variable for Performing and Non-Performing Companies," Unpublished Master's Thesis, Gordon Institute of Business Science University of Pretoria, South Africa., 2014.

[55] K.G. DeepaBabu, J. Manalel, "Entrepreneurial Orientation and Firm Performance: A Critical Examination," *IOSR Journal of Business and Management*, 18(4), pp. 21-28, 2016.

[56] G. T. Lumpkin, C. C. Cogliser, R. D. Schneider, "Understanding and Measuring Autonomy: An Entrepreneurial Orientation Perspective," *Entrepreneurship Theory and Practice*, pp. 47-69, 2009.

[57] O. Adam, "Contractor Development in Nigeria: Perceptions of Contractors and Professionals," *Construction Management and Economics*. 151: pp. 95-108, 1997.

[58] A. Q. Adeleke, A. Y. Bahaudin, A. M. Kamaruddeen, J. A. Bamgbade, M. G. Salimon, M. W. Ali Khan, S. Sarooshian, "The Influence of Organizational External Factors on Construction Risk Management among Nigerian Construction Companies," *Safety and Health at Work*, 2017. <http://dx.doi.org/10.1016/j.shaw.2017.05.004>

[59] R. V. Krejcie, D. W. Morgan, "Determining Sample Size for Research Activities," *Educational and Psychological Measurement*, 30: pp. 607-610, 1970.

[60] Small and Medium Enterprise Development Agency of Nigeria & National Bureau of Statistics (SMEDAN/NBS) Collaborative Survey: Selected Findings, 2013.

[61] F. P. Okangi, P. Letmathe, "Measuring Entrepreneurial Orientation of the Local Tanzanian Construction Firms," Proceedings of Annual Paris Business Research Conference, Crowne Plaza Hotel Republique, Paris, France, 2015.

[62] M. Selvam, J. Gayathri, V. Vasanth, K. Lingaraja, S. Marxiaoli, "Determinants of Firm Performance: A Subjective Model," *International Journal of Social Science Studies*, 4(7), pp. 90-100, 2016.

[63] S. Zulkiffl, N. Perera, "A literature Analysis on Business Performance for SMES- Subjective or Objective measures?" 2011 Society of Interdisciplinary Business Research (SIBR) Conference on Interdisciplinary Business and Economics Research, Bangkok, Thailand, pp. 1-9, 2011.

[64] Statsoft, Structural Equation Modeling, Statsoft Electronic Statistics Textbook, 2013, <http://www.statsoft.com/textbook/structural-equation-modeling/> (Accessed 12<sup>th</sup> March, 2019).

[65] J. F. Hair, C. M. Ringle, M. Sarstedt, "PLS-SEM: Indeed a silver bullet," *The Journal of Marketing Theory and Practice*, 19(2), pp. 139-152, 2011.

[66] K. K. Wong, "Partial Least Squares Structural Equation Modeling (PLS-SEM) Techniques Using SmartPLS," *Marketing Bulletin, Technical Note*, 24(1), pp. 1-32, 2013. <http://marketingbulletin.massey.ac.nz>, 2013.

[67] J. Hensler, C. M. Ringle, M. Sarstedt, "Using Partial Least Square Path Modeling International Advertising Research: Basic Concepts and Recent Issues," In: Okazaki Shintaro (Ed) *Handbook of Research in International Advertising*, Edward Elgar, London, pp. 252-276, 2012.

[68] J. F. Hair Jr, G. T. M. Hult, C. Ringle, M. Sarstedt, "A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)," SAGE Publications, Incorporated, 2014.

[69] C. Fornell, D. F. Larcker, "Evaluating structural equation models with unobservable variables and measurement error," *Journal of Marketing Research*, 18(1), pp. 39-50, 1981.

[70] A. Kusumawardhani, "The Role of Entrepreneurial Orientation in firm performance: A Study of Indonesian SMEs in the Furniture Industry in Central Java," Unpublished PhD Thesis, Sydney Business School, University of Wollongong, 2013.

[71] J. F. Hair, M. Sarstedt, C. M. Ringle, J. A. Mena, "An assessment of the use of partial Least squares structural equation modeling in marketing research," *Journal of the Academy of Marketing Science*, 40(3), pp. 414-433, 2012.

[72] F. A. Zainol, S. Ayadurai, "Entrepreneurial Orientation and Firm Performance: The Role of Personality Traits in Malay Family Firms in Malaysia," *International Journal of Business and Social Science*, 2(1), pp. 59-71, 2011.

[73] J. F. Hair, S. C. Manley, R. I. Williams, R. C. Forrester, "Entrepreneurial Orientation and Firm Financial Performance: The Importance of Considering Intra-Organization Social Capital," *American Journal of Entrepreneurship*, pp. 35-58, 2019.

[74] J. F. Hair Jr, C. M. Ringle, M. Sarstedt, "Partial Least Squares Structural Equation Modeling: Rigorous Applications, Better Results and Higher Acceptance," *Long Range Planning*, 2013. doi:<http://dx.doi.org/10.1016/j.lrp.2013.01.001>

[75] A. Radipere, "Entrepreneurial Orientation: A Case of Gauteng Province, South Africa," *Foundations of Management*, 7: pp. 169-184, 2015.