Impact of Causation and Effectuation on Competitiveness among Nano Businesses in Nigeria

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ABSTRACT

Globally, nano, micro, small, and medium businesses are known to stimulate industrialisation of national economies through their impactful and strategic contribution. However, less than 14% of nano businesses in Nigeria experienced growth and development, which has implications on the national economy and calls for concern. Therefore, this study examined whether causation and effectuation will have a positive significant influence on the competitiveness of nano businesses while integrating the theory of effectuation in these relationships. Cross-sectional data were collected from 255 owner-mangers of nano businesses through questionnaire survey instruments and analysed them through the technique of hierarchical regression of SPSS AMOS version 23 software. The analyses revealed that both causation and effectuation have positive significant influence on the competitiveness of nano businesses. The study concludes by acknowledging the role of causation approach in helping nano businesses set clear goals and efficiently allocate resources to achieve the goals and effectuation as an approach for pursuing opportunities during uncertainty to remain competitive.

KEYWORDS: *causation, competitiveness, effectuation, nano businesses, uncertainty.*

JEL CLASSIFICATION: *D80, L26.*

1. INTRODUCTION

Globally, nano, micro, small, and medium businesses are known to stimulate industrialisation of national economies through their impactful and strategic contribution. Nano businesses accounted for 85.55% of enterprises in the informal sector and 13.9% of enterprises in the formal sector of the Nigerian economy. Nano businesses are enterprises with not more than 2 employees and a turnover of less than three million naira (or less than $3,500). The informal sector is comprised of businesses that are carried out at household level and not formally registered, while the formal sector is comprised of establishments that are formally registered and offered paid employment (NBS/SMEDAN, 2021). The statistics showed that less than 14% of nano businesses experienced growth and development, which has implications on the national economy and call for concern. Like in other emerging economies, nano businesses in Nigeria are predominantly small, operate in high uncertain business context, face resource scarcity, and experience a high rate of failure (Wang et al., 2019).

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Government efforts through programmes, policies, and interventions to address the inability of many nano businesses to transit to the formal sector may not yield significant outcome unless there is appropriate improvement at the microeconomic level as suggested by Porter (2004). In other words, the prosperity of the national economy is determined by firm competitiveness, which is the capability of a firm to realise its potentials in everyday operations, increase market share, and achieve sustainable growth and profitability (Cetindamar & Kilitcioglu, 2013). It is also seen as growth in productivity that translate to lower costs or premium priced differentiated products (Porter, 1990). Entrepreneurial activities are important drivers of competitiveness in both advanced and less developed economies (Crecente-Romero et al., 2019).

In a less developed economy like Nigeria, the face of entrepreneurial activities is changing overtime and needs timely interventions to become relevant in the ever competitive and dynamic global markets (NBS/SMEDAN, 2021). Values created by resources and capabilities may become outdated due to environmental dynamism (Shafia et al., 2016). Organisations that can adopt entrepreneurial strategies may be able to identify potential opportunities, relocate resources, shift managerial commitment quickly, and develop products and services to meet identified needs (Dhliwayo, 2014). Furthermore, they should be able to ensure a continuous presence on the market, make profit, and develop ability to adapt production to demand, which relate to firm competitiveness (Díaz-Chao et al., 2016). In the case of start-ups (which are mostly nano businesses), Sarasvathy (2001) developed effectuation and causation as the two entrepreneurial orientations that guide decision making. Both logics can enable this category of businesses to manage uncertainty and resource constraint which appear to be among the main challenges of nano businesses in Nigeria.

Several studies have explored the relevance of causation and effectuation with different outcome variables, for example, effectuation, causation and business growth (Matalamäki et al., 2017), synergistic effect of causation and effectuation and venture performance (Smolka et al., 2018), effectuation and internationalisation (Karami et al., 2020), effectuation, causation, resources, and new venture performance (Ruiz-Jiménez et al., 2020), effectuation and causation, firm performance, and country-level institutions (Shirokova et al., 2021). Also, several studies on causation and effectuation have been conducted under contexts of different emerging economies, for example, China (Guo et al., 2016; Peng et al., 2020; Xia et al., 2019; Yu et al., 2018), small businesses in Burundi (Eijdenberg et al., 2017), new small tourism firms in Ethiopia (Eyana et al., 2018), retail entrepreneurs in Nigeria (Ebegbetale, 2021). However, effectuation research in the field of nano businesses in Nigerian context has not received such attention.

This study extends previous research on causation and effectuation by exploring the relevance of causation and effectuation on competitiveness among nano businesses in Nigeria. As it appears no study has been carried out in this area to the best of the researchers' knowledge, the current study intends to make several contributions to entrepreneurship and effectuation literature. First, how causation and effectuation logics can be relevant within the context of competitiveness of nano businesses in Nigeria is illustrated, which is a response to test the relevance of both logics in emerging contexts (Karami et al., 2020). The outcome will give meaningful insight into how both logics will contribute to entrepreneurial outcomes which in this case is competitiveness. Second, there are many studies on how a firm can achieve competitiveness (Wibowo & Nurcahyo, 2020), but there is a scarcity of studies on this area in effectuation research. To the best of the researchers' knowledge, adopting competitiveness as

a dependent construct has only been tested within the context of retail business entrepreneurs in Nigeria. By empirically examining competitiveness as an outcome variable within the context of nano businesses, the study extends previous knowledge and demonstrates the relevance of causation and effectuation with different outcome variables (Frese et al., 2019) in advancing effectuation research (Smolka et al., 2018).

Therefore, the two main objectives of the study are: i) to examine whether causation will have any significant influence on the competitiveness of nano businesses in Nigeria, and ii) to investigate whether effectuation will have any significant influence on the competitiveness of nano businesses in Nigeria. In order to achieve these objectives, the remainder of this paper is divided as follows: Section 2 is dedicated to the theories and hypotheses development, Section 3 deals with the methodology, Section 4 presents the statistical analysis/results, Section 5 is dedicated to discussions, and Section 6 concludes the research with contributions to knowledge, limitations and future direction.

2. THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

2.1 Theoretical Framework

Effectuation theory developed by Sarasvathy (2001), is gaining increased significance in entrepreneurship (Matalamäki et al., 2017). It is a framework of two logics of decision-making, causation and effectuation, which enable firms to face the challenges of uncertainty and limited resources (Alzamora-Ruiz et al., 2021b). Causation is planning based process that enables an entrepreneur to face uncertainty using accumulated resources to optimally exploit opportunities (Alzamora-Ruiz et al., 2021a). Effectuation on the other hand, is a decision-making process that enables an entrepreneur to pursue opportunities in uncertain environment (Schmidt et al., 2018). Effectuation theory is underpinning this study because nano businesses in Nigeria operate under uncertainty and will want to achieve clearly stated objectives.

2.2 HYPOTHESES DEVELOPMENT

2.2.1 Causation and Competitiveness of Nano Businesses

Firm competitiveness is about combining assets (resources and infrastructure) and processes (transforming assets) to achieve economic gains (Deniz et al., 2013). Entrepreneur's orientation guides entrepreneurial activity which relates to how business firms combine resources and infrastructure and transform them to achieve prosperity (Cruz & Nordqvist, 2012). Causation is an effect-mean orientation, which implies that in low uncertain business environment where predictions can be made about the future, an entrepreneur can begin with environmental analysis, then formulation of objectives, followed by selection of strategies, and finally acquisition of necessary resources to achieve the set objectives (Matalamäki et al., 2017). Furthermore, causation as an entrepreneurial logic uses predictive instruments such as competitive analysis, strict goal orientation, focus on profit-maximisation, and avoiding the unexpected, all aimed at predicting an uncertain future (Smolka et al., 2016).

Although the initial conceptualisation of causation was for a low uncertain context (Sarasvathy, 2001), empirical evidences from studies on emerging economies show that causation has a significant link with performance even in high uncertain context (Eijdenberg et al., 2017; Eyana et al., 2018; Yu et al., 2018). Smolka et al. (2016) listed some of the benefits of planning-based approach to include, setting objectives to guide business actions, guide entrepreneurs in taking steps and decisions towards achieving set goals, may enhance the legitimacy of nano businesses in conveying the feasibility and viability of their business

concept to investors who can provide the needed resources and, it can enable timely access to information about the market, competitors and industry dynamics. Based on argument, this study proposes that planning-based approach may play a significant role in the competitiveness of nano businesses in Nigeria:

Hypothesis 1: There will be a positive significant relationship between causation and competitiveness of nano businesses in Nigeria.

2.2.2 Effectuation and Competitiveness of Nano Businesses

Effectuation is a mean-effect orientation that suggests that in a highly uncertain business environment where it is difficult to make predictions and set goals for effective and efficient allocation of resources, an entrepreneur can engage in trial and error with available resources and as the process progresses, clearer goals start emerging (Matalamäki et al., 2017). An effectual entrepreneur uses control strategies such as flexibility, experimentation, pre-commitment, and affordable loss to manage uncertainty (Sarasvathy, 2001) and embrace the unexpected (An et al., 2020). The adoption of the four effectual principles by nano businesses in Nigeria may positively affect their competitiveness. For example, the presumed benefits of adopting flexibility component of effectuation are to enable smaller firms (like nano) operating in unpredictable business environment to creatively combine resources at hand to take advantage of emerging opportunities (Laskovaia et al., 2019).

Also, for example, applying the principle of experimentation may help nano businesses to formulate goals in a step by step manner and explore opportunities; the principle of affordable loss may enable them to control risks and effectively use their limited resources to capture the upsides of uncertainty in an affordable manner; and lastly, the principle of pre-commitment may enable them control the future with stakeholders and deal with uncertainties (Yu et al., 2018). This study aligns with extant literature and conceptualises causation and effectuation as strategic decision-making logics that enable firms to carry out strategies (Nummela et al., 2014). Based on argument, the study proposes that:

Hypothesis 2: There will be a positive significant relationship between effectuation and competitiveness of nano businesses in Nigeria.

3. METHODOLOGY

3.1 Sampling and procedure

To test the study's hypotheses, cross-sectional data were collected from owner-managers of nano businesses through the administration of structured questionnaires. Owner-managers of nano businesses were the specific target because about 96.2% of the nano businesses are owned by sole proprietorship (NBS/SMEDAN, 2021). They are engaged in the day-to-day running of the business and will be in better position give information about the operations of their business.

A sample of 399 determined through Yamane (1967), was drawn from a population of 172,232 nano businesses in the formal sector of the Nigerian economy (NBS/SMEDAN, 2021). For ease of data collection, 3 sectors (wholesale/retail trade, manufacturing, and professional/scientific/technical works) that accounted for 64.44% of the total number of these nano businesses were purposively selected for questionnaire administration. Based on the stratified sampling distribution, 224 questionnaires were administered on owner-managers

of wholesale/retail trade, 102 owner-managers of manufacturing, and 73 owner-managers of professional/scientific/technical works. Of the 399 questionnaires administered, only 261 were returned, out of which 255 were deemed suitable for the study. Hair et al. (2010) suggested that for a robust factor analysis, 20:1 sample-to-variable ratio is adequate. There are 255 usable responses and 9 variables measured in this study. The sample-to-variable ratio analysis showed that 28:1 obtained exceeded the threshold.

The study controlled for the common method of bias following the procedural and statistical approach recommended by Podsakoff et al. (2012). Following the procedural approach, first, the questionnaire was re-validated, second, the questionnaire was separated into different sections due to proximity among the study variables, and third, the study participants were assured of anonymity and confidentiality. Then, the Harman's single-factor test was employed for the statistical procedure. The result of the analysis revealed that the 43.727% variance was explained by a single factor. The study confirmed that the common method of bias was not a treat since 43.727% is less than the threshold of 50% suggested by Allen and Bennett (2010).

3.2 Measurement

Causation: Causation was measured using 7-item causation scale adapted from Chandler et al. (2011) five-point Likert measuring scales that ranged from strongly disagree (1) to strongly agree (5). Sample of the items are, "My firm identifies long run opportunities and select what we think will provide the best returns," and "My firm develops a strategy to best take advantage of resources and capabilities." Causation was treated as a unidimensional construct in line extant literature (Yu et al., 2018) and the average of the corresponding seven-items will be used as indicator of causation.

Effectuation: Effectuation was measured using 13-item effectuation scale adapted from Chandler et al. (2011) five-point Likert measuring scales that ranged from strongly disagree (1) to strongly agree (5). In line with extant literature (Shirokova et al., 2021), effectuation was treated as a higher-order formative construct with the following sub-dimensions: Experimentation with four measuring items and a sample item is, "My firm experiments with different products and/or business models." Affordable loss with three measuring items and a sample item is, "My firm is careful not to commit more resources than we can afford to lose." Flexibility with four measuring items and a sample item is," My firm allows the business to grow as opportunities emerge." Pre-commitment with two measuring items and a sample item is, "My firm uses a substantial number of agreements with stakeholders to reduce the amount of uncertainty."

Competitiveness: Competitiveness was measured using 4-item firm competitiveness scale adapted from Sigalas et al. (2013) five-point Likert measuring scales that ranged from strongly disagree (1) to strongly agree (5). Sample of the items are, "My firm exploit all market opportunities that have been presented in the industry," and "My firm neutralise all competitive threats from rival firms in the industry." Competitiveness is treated as a unidimensional construct and the average of the corresponding four-items will be used as indicator of nano businesses competitiveness.

Control variables: The study controlled for age, education, and firm's age measured by the number of years the business has been in existence because of its potential to influence the relationship between the independent and the dependent variables (Yu et al., 2018).

4. RESULTS

Table 1. Socio-demographic profile of respondents

Profile	Frequency	Percentage (%)
Gender		
Male	155	60.8
Female	100	39.2
Total	255	100
Marital Status		
Married	122	47.8
Single	114	44.7
Divorced	13	5.1
Widowed	6	2.4
Total	255	100
Age Range		
29 years or younger	79	31.0
30 – 40 years	80	31.4
41 – 50 years	63	24.7
51 years or older	33	12.9
Total	255	100
Educational Qualification		
Less than Bachelor's Degree	122	47.8
Bachelor's Degree	124	48.6
Master's Degree	8	3.1
Ph.D.	1	0.4
Total	255	100
Number of Years in Business		
Less than 10 years	156	61.2
10 – 20 years	74	29.0
21years or above	25	9.8
Total	255	100

Source: authors' compilation

4.1 Sample profile

The socio-demographic data were analysed using IBM SPSS Statistics version 23 software and the results presented in Table 1.

Table 1 presented the results of the socio-demographic profile of the respondents. The results showed that there were 60.8% male respondents and 39.2% female respondents, implying that the majority of the study participants were male. Furthermore, 47.8% of the respondents were married, 44.7% were single, 5.1% were divorced, while 2.4% were widowed, indicating that most of the study participants were married. In addition, the results of the respondents' age revealed that 31% were either 29 years or younger; 31.4% were between age of 30-40 years; 24.7% were between age 41-50 years; and 12.9% were either 51 years or above. This indicated that most of the respondents were either 40 years or younger. Regarding the educational qualification of the respondents, the analysis revealed that 47.8% had less than a bachelor's degree, 48.6% had a bachelor's degree, 3.1% had a master's degree, and 0.4% had a Ph.D. degree. This implied that most of the respondents had at least a bachelor's degree. Finally, about the number of years in business, 61.2% of the firm had been in the business for

less than 10 years, 29% for between 10-20 years, and 9.8% for more than 20 years. This indicated that most of the firms that participated in the study are relatively young.

4.2 Preliminary Analysis

The preliminary data analysis focused on descriptive statistics, composite reliability (CR), discriminant validity, convergent validity, and bivariate correlations using SPSS AMOS version 23. First, a measurement model (depicted in Figure 1) for the study's constructs was drawn and a confirmatory factor analysis (CFA) was conducted to check if the constructs were distinct. The model was deemed fit having satisfied the following criteria listed by Hu and Bentler (1999): the ratio of X^2 to degree of freedom (X^2/df) < 3; the comparative fit index (CFI) > 0.95; the standard root mean-squared residual (SRMR) < 0.08; and the root mean square error of approximation (RMSEA) < 0.06. However, the pre-commitment construct was excluded due to validity concern. The results of the three-factor measurement model showed that X^2/df= 1.404, RMSEA = 0.040, CFI = 0.980, SRMR = 0.041, indicating a good fit. Finally, these indices were compared to two-factor and one-factor alternative models, and poor fits were obtained for both alternative models. This indicated that the common method of bias was not an issue with the data.

### Table 2. Composite Reliability, Validity, and Correlation

	CR	AVE	MSV	MaxR(H)	CSN	Comptv	EFFt
CSN	0.933	0.665	0.5497	0.940	**0.816**		
Comptv	0.884	0.658	0.469	0.897	0.503***	**0.811**	
EFFt	0.825	0.611	0.497	0.825	0.705***	0.685***	**0.782**

Key: CR: Composite Reliability; AVE; Average Variance Extracted; MSV: Maximum Shared Variance; EFFt: Effectuation; CSN: Causation; Comptv: Competitiveness.
*Sig. *** p < 0.001. All reported significance levels are three-tailed.*

Source: authors' compilation

Furthermore, the results of the composite reliability (CR), discriminant validity, convergent validity, and bivariate correlations were obtained from the analysis of the measurement model are displayed in Table 2. From Table 2, all CR values were above the 0.70 threshold advocated by Fornell and Larker (1981), indicating that there is internal consistency among the data set. Furthermore, the values of average variance extracted (AVE) were greater than 0.5, which confirms there was convergent validity and that the indicators of a particular construct measured the construct. Also, the square roots of the AVEs were obtained as represented by the diagonal of each construct and were found to be greater than the correlation values corresponding to each AVE square root. This confirmed discriminant validity and that the indicators of a particular construct did not measure another construct. Finally, the analysis of the bivariate correlation revealed that causation has a positive significant relationship with the competitiveness of nano business in Nigeria ($r = 0.503$; $p < 0.001$), and that effectuation has a positive significant relationship with competitiveness of nano business in Nigeria ($r = 0.685$; $p < 0.001$).
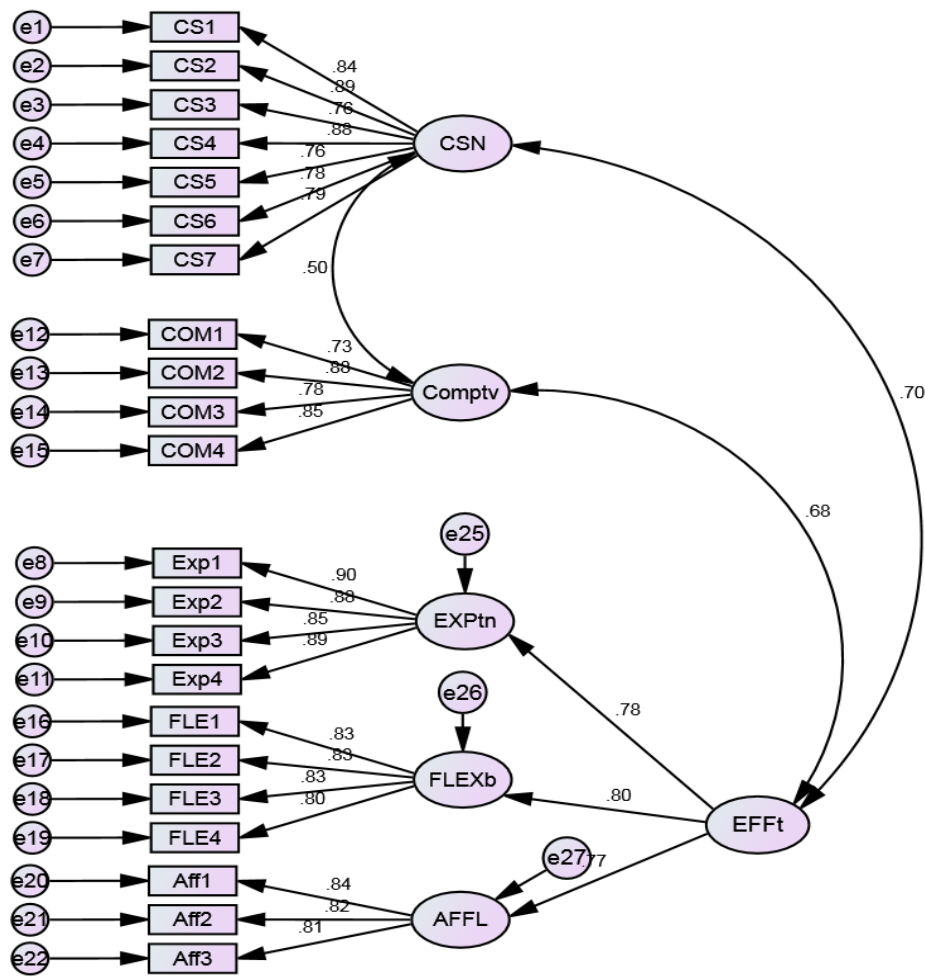
Key: *EFFt: Effectuation;* **EXPtn:** *Experimentation;* **AFFL:** *Affordable loss;* **FLEXb:** *Flexibility;* **CSN:** *Causation;* **Comptv:** *Competitiveness.*

Figure 1. Measurement Model

Source: authors' compilation

4.3 Hypotheses Test

Two structural models were developed and SPSS AMOS version 23 software employed in an attempt to test the study's hypotheses.

Hypothesis 1: There will be a positive significant relationship between causation and competitiveness of nano businesses in Nigeria.

In order to test whether a positive significant relationship exist between causation and competitiveness of nano businesses in Nigeria, model 1 depicted in Figure 2 was developed. In Model 1, competitiveness was regressed against causation while controlling for age, education, and firm age. The hierarchical regression analysis revealed that none of the control

variables significantly predict competitiveness of nano business. Furthermore, the results displayed in Table 3 showed that causation has a positive significant influence on the competitiveness of nano businesses in Nigeria ($\beta = .544$; $t = 10.318$; $p<0.001$).

Table 3. Results of Hierarchical Regression analysis for Hypothesis One

$R^2 = 0.297$

Relationships	Standardised regression Coefficients	S.E.	C.R.	p-value	Conclusion
Comptv <--- CSN	.544	.047	10.318	***	Supported

*Key: S.E: Standard Error; C.R.: Critical Ratio (t-value); Comptv: Competitiveness; CSN: Causation. Sig. *** p < 0.001. Three-tailed significance level is reported.*
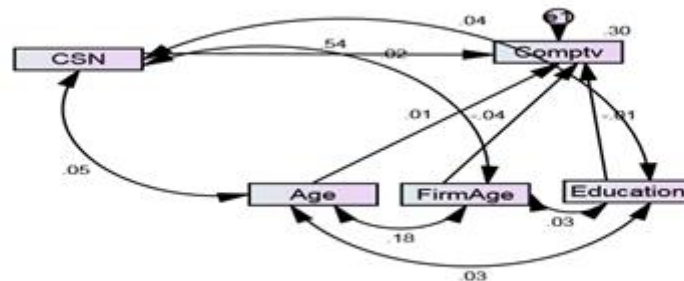
Source: authors' compilation

Figure 2. Structural model1 for hypothesis 1
Source: authors' compilation

Hypothesis 2: There will be a positive significant relationship between effectuation and competitiveness of nano businesses in Nigeria.

In order to test if a positive significant relationship exists between the effectuation and competitiveness of nano in Nigeria, Model 2 depicted in Figure 3 was developed. In Model 2, competitiveness was regressed against effectuation while controlling for age, education and firm age. The hierarchical regression analysis revealed that none of the control variables significantly predict competitiveness of nano business. Furthermore, the results displayed in Table 4 showed that effectuation has a positive significant influence on the competitiveness of nano businesses in Nigeria ($\beta = .767$; $t = 18.953$; $p<0.001$).

Table 4. Results of Hierarchical Regression analysis for Hypothesis Two

$R^2 = 0.587$

Relationships	Standardised regression Coefficients	S.E.	C.R.	p-value	Conclusion
Comptv <--- EFFt	.767	.040	18.953	***	Supported

*Key: S.E: Standard Error; C.R.: Critical Ratio (t-value); Comptv: Competitiveness; EFFt: Effectuation. Sig. *** p < 0.001. Three-tailed significance level is reported.*
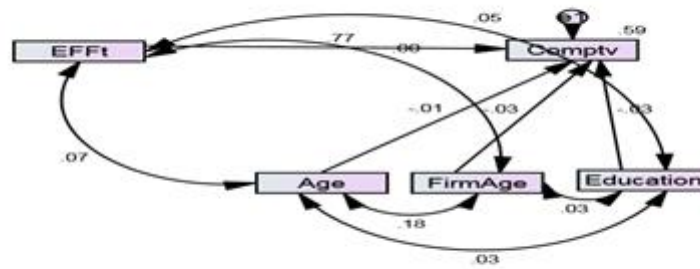
Source: authors' compilation

Figure 3. Structural model 2 for hypothesis 2
Source: authors' compilation

5. DISCUSSION

The study examined whether causation and effectuation will have any significant link with competitiveness among nano businesses in Nigeria. The study integrated the theory of effectuation developed by Sarasvathy (2001) to explain these relationships. Causation was examined as a planning-based and predictive model that can enable nano businesses set clearer objectives and efficiently allocate resources to achieve them. The finding from the analysis of hypothesis one revealed that causation has positive significant influence on competitiveness of nano businesses in Nigeria, which is consistent with previous studies (Ebegebetale, 2021; Shirokova et al., 2021; Yu et al., 2018). This study emphasises the relevance of causation or planning as a valuable task for nano businesses operating in a highly uncertain emerging context as the Nigerian economy. Exploring causal logic will enable nano businesses to set specific objectives that guides their actions and efficient allocation of scare resources, which enhances their competitiveness.

Effectuation was examined as a control-based model that can enable nano businesses in Nigeria pursue opportunities and control uncertain without making attempt to predict it. The finding from the analysis of hypothesis two revealed that effectuation has positive significant influence on competitiveness of nano businesses in Nigeria. This finding is in line with previous studies that find a positive significant link between effectuation and their outcome variables in emerging economies (Eijdenberg et al., 2017; Eyana et al., 2018; Laskovaia et al., 2019; Xia et al., 2019). This study establishes that effectuation plays a significant role in helping nano businesses manage the uncertain emerging context as the Nigerian economy.

Exploring the benefits of effectuation depends on how nano businesses are able to apply its principles. For instance, experimentation principle suggests that owner-managers of Nigerian nano businesses should use the resources at their disposal in the best possible way during high uncertainty (Alzamora-Ruiz et al., 2021b), as this approach of learning-by-doing will enable them to detect and understand the needs of customers that can be comfortably serve and exploited as market opportunities (Schmidt et al., 2018). Furthermore, the harsh environmental conditions suggest the possibility of losing one's investment, however, the application of the principle of affordable loss enables nano businesses to test and modify their business ideas by committing their resources in an incremental manner to exploit market opportunities (Smolka et al., 2016). Finally, nano businesses tend to enjoy greater flexibility because they are small (An et al., 2020), as the principle of flexibility allows them to be open

to the unexpected, which enhances their ability to experiment with available means to develop new initiatives at affordable loss (Alzamora-Ruiz et al., 2021b).

While both causation and effectuation both made unique statistical contributions to competitiveness of nano businesses, the correlation values showed that effectuation had a stronger positive significant relationship on competitiveness than causation. A plausible explanation is that many nano businesses are small, young and lack resources and capabilities, which make them to be more effectual oriented (An et al., 2020). This contradict previous study that showed that causation had a stronger positive significant relationship on competitiveness among retail business entrepreneurs than effectuation (Ebegbetale, 2021). This indicates that the degree of relevance of the two logics is context-based, such as business area, country, and level of uncertainty.

6. CONCLUSIONS, CONTRIBUTIONS TO KNOWLEDGE, LIMITATIONS AND FUTURE DIRECTION

The study found a significant positive relationship between causation and competitiveness among Nigerian nano businesses. The study also found a significant positive relationship between effectuation and competiveness among Nigerian nano businesses. Therefore, the study concludes that causation approach can help nano businesses set clear goals and efficiently allocate resources to achieve the goals and enhance their competitiveness. Furthermore, the study also concludes that effectuation approach can help nano businesses pursue opportunities which enhance their competitiveness in a highly uncertain environment like Nigeria.

The study contributes to effectuation theory by conducting the study within the context of nano businesses in an emerging economy, which is a response to call for testing the relevance of both logics in emerging contexts (Karami et al., 2020). Then, the study empirically demonstrated that both logics are relevant to nano businesses operating in Nigeria, thereby extending previous knowledge on the positive significance of both logics in high uncertain contexts. This revelation has implications for practice.

The study was conducted among nano businesses in Nigeria, which limits generalisation. Future studies may consider broadening the scope to include micro, small and medium enterprises. Furthermore, cross-sectional data were considered in this study. Future research may consider a longitudinal study. Finally, future research may consider replicating the study in another emerging context.

REFERENCES

Allen, P. & Bennett, K. (2010). *PASW statistics by SSPS: A practical guide, version 18.0* (1st ed). Sydney: Cengage Learning Australia Pty Limited.

Alzamora-Ruiz, J., Fuentes-Fuentes, M. D. M., & Martinez-Fiestas, M. (2021a). Together or separately? Direct and synergistic effects of Effectuation and Causation on innovation in technology-based SMEs. *International Entrepreneurship and Management Journal*, 1-27.

Alzamora-Ruiz, J., Fuentes-Fuentes, M. D. M., & Martinez-Fiestas, M. (2021b). Effectuation or causation to promote innovation in technology-based SMEs? The effects of strategic decision-making logics. *Technology Analysis & Strategic Management*, *33*(7), 797-812.

An, W., Rüling, C. C., Zheng, X., & Zhang, J. (2020). Configurations of effectuation, causation, and bricolage: implications for firm growth paths. *Small Business Economics*, *54*, 843-864.

Cetindamar, D., & Kilitcioglu, H. (2013). Measuring the competitiveness of a firm for an award system. *Competitiveness Review: An International Business Journal*, *23*(1), 7-22.

Crecente-Romero, F., Giménez-Baldazo, M., & del Val-Núñez, M. T. (2019). Competitiveness and entrepreneurship rate in Europe during the economic recovery phase, 2012-2016. *International Entrepreneurship and Management Journal, 15*(2), 455-470.

Cruz, C., & Nordqvist, M. (2012). Entrepreneurial orientation in family firms: A generational perspective. *Small Business Economics*, *38*(1), 33-49.

Deniz, M., Seçkin, Ş. N., & Cüreoğlu, M. (2013). Micro-economic competitiveness: a research on manufacturing firms operating in TRB1region. *Procedia-Social and Behavioral Sciences*, *75*, 465-472.

Dhliwayo, S. (2014). Entrepreneurship and competitive strategy: An integrative approach. *The Journal of Entrepreneurship*, *23*(1), 115-135.

Díaz-Chao, Á., Sainz-González, J., & Torrent-Sellens, J. (2016). The competitiveness of small network-firm: A practical tool. *Journal of Business Research*, *69*(5), 1769-1774.

Ebegbetale, C. I. (2021). Effectuation and causation decision making logics of managing uncertainty and competitiveness by Nigerian Retail business entrepreneurs. *Facta Universitatis-Econonmics and organization, 18*(2), 157-168.

Eijdenberg, E. L., Paas, L. J., & Masurel, E. (2017). Decision-making and small business growth in Burundi. *Journal of Entrepreneurship in Emerging Economies, 9*(1), 35-64.

Eyana, S. M., Masurel, E., & Paas, L. J. (2018). Causation and effectuation behaviour of Ethiopian entrepreneurs. *Journal of Small Business and Enterprise Development, 25*(5), 791-817.

Fornell, C., & Larker, D. (1981). Structural equation modeling and regression: guidelines for research practice. *Journal of Marketing Research*, *18*(1), 39-50.

Frese, T., Geiger, I., & Dost, F. (2019). An empirical investigation of determinants of effectual and causal decision logics in online and high-tech start-up firms. *Small Business Economics*, *Springer,* 1-24.

Guo, R., Cai, L., & Zhang, W. (2016). Effectuation and causation in new internet venture growth: the mediating effect of resource bundling strategy. *Internet Research, 26*(2), 460-483.

Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2010). *Multi-variate Data Analysis* (7th ed). Englewood Cliffs: Prentice Hall.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1-55.

Karami, M., Wooliscroft, B., & McNeill, L. (2020). Effectuation and internationalisation: A review and agenda for future research. *Small Business Economics*, *55*(3), 777-811.

Matalamäki, M., Vuorinen, T., Varamäki, E., & Sorama, K. (2017). Business growth in established companies: Roles of effectuation and causation. *Journal of Enterprising Culture, 25*(02), 123-148.

McGowan, P. (2020). Use of effectuation by established micro businesses: short-term gain, long-term pain? *Journal of Business & Industrial Marketing*, *36*(1), 60-71.

Laskovaia, A., Marino, L., Shirokova, G., & Wales, W. (2019). Expect the unexpected: examining the shaping role of entrepreneurial orientation on causal and effectual decision-making logic during economic crisis. *Entrepreneurship & Regional Development*, *31*(5-6), 456-475.

NBS/SMEDAN (2021). *Report on national survey of micro, small and medium enterprises (MSMEs)*. National Bureau of Statistics (NBS)/Small & Medium Enterprises Agency of Nigeria (SMEDAN), Abuja, 1-186.

Nummela, N., Saarenketo, S., Jokela, P., Loane, S. (2014). Strategic decision-making of a born global: a comparative study from three small open economies. *Manag. Int. Rev. 54*(4), 527-550.

Peng, X. B., Liu, Y. L., Jiao, Q. Q., Feng, X. B., & Zheng, B. (2020). The nonlinear effect of effectuation and causation on new venture performance: The moderating effect of environmental uncertainty. *Journal of Business Research*, *117*, 112-123.

Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology, 63*, 539-569.

Porter, M. E. (1990). *The Competitive Advantage of Nations*. New York: Free Press.

Porter, M. E. (2004). *Building the microeconomic foundations of prosperity: findings from the microeconomic competitiveness index*. London: Palgrave Macmillan.

Schmidt, S., Bendig, D., & Brettel, M. (2018). Building an equity story: the impact of effectuation on business angel investments. *Journal of Business Economics*, *88*(3), 471-501.

Ruiz-Jiménez, J. M., Ruiz-Arroyo, M., & del Mar Fuentes-Fuentes, M. (2020). The impact of effectuation, causation, and resources on new venture performance: novice versus expert entrepreneurs. *Small Business Economics*, 1-21.

Sarasvathy, S. (2001). Causation and effectuation: Towards a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review, 26* (243-263).

Shafia, M. A., Shavvalpour, S., Hosseini, M., & Hosseini, R. (2016). Mediating effect of technological innovation capabilities between dynamic capabilities and competitiveness of research and technology organisations. *Technology Analysis & Strategic Management, 28*(7), 811-826.

Shirokova, G., Morris, M. H., Laskovaia, A., & Micelotta, E. (2021). Effectuation and causation, firm performance, and the impact of institutions: A multi-country moderation analysis. *Journal of Business Research*, *129*, 169-182.

Sigalas, C., Economou, V. P., & Georgopoulos, N. B. (2013). Developing a measure of competitive advantage. *Journal of Strategy and Management, 6*(4), 320-342.

Smolka, K. M., Verheul, I., Burmeister–Lamp, K., & Heugens, P. P. (2018). Get it together! Synergistic effects of causal and effectual decision–making logics on venture performance. *Entrepreneurship Theory and Practice*, *42*(4), 571-604.

Wang, G., Li, L., & Jiang, X. (2019). Entrepreneurial business ties and new venture growth: The mediating role of resource acquiring, bundling and leveraging. *Sustainability*, *11*(1), 244.

Wibowo, N., & Nurcahyo, R. (2020, March). Competitiveness in global transformation: A systematic review. In *Proceedings of the International Conference on Industrial Engineering and Operations Management* (Vol. 12, No. 10, pp. 718-727).

Xia, L., Luo, B., & Sun, Y. (2019). How can entrepreneurs achieve success in chaos? *Kybernetes, 49*(5), 1407-1428.

Yamane, T. (1967). *Statistics, an introductory analysis (2nd Ed.)*. New York: Harper and Row.

Yu, X., Tao, Y., Tao, X., Xia, F., & Li, Y. (2018). Managing uncertainty in emerging economies: The interaction effects between causation and effectuation on firm performance. *Technological Forecasting and Social Change*, *135*, 121-131.