



Effect of Product Innovation on Growth of Medium Enterprises in North Central Nigeria

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Abstract: *The study investigated the effect of product innovation on growth of medium enterprises in North Central Nigeria. Survey research design was adopted for this study. The population of the study comprised of 243 medium enterprises in North Central Nigeria. The study adopted the census approach the entire population of 243 owner/managers of these medium enterprises in North-Central Nigeria served as the sample size of the study. Questionnaires were therefore, administered on this sample but only 223 were usable for analysis. Both descriptive statistics (percentages, frequency counts and mean values) and inferential statistics (correlation and regression analysis) were employed for data analysis. Regression analysis was used to test the null hypothesis. The regression result revealed that product innovation had significant positive effect on the growth of medium enterprises in North-Central Nigeria. The study concluded that product innovation practice had significant positive effect on growth of medium enterprises in North Central Nigeria. The study recommended among others, that medium enterprises in Nigeria should focus on developing unique products through extensive research and development via teamwork as this has the most potential to improving the medium enterprises growth in Nigeria.*

Key Words: *Growth, medium enterprises, product innovation, North Central Nigeria*

1.0 INTRODUCTION

Globally, innovation is broadly seen as an essential component of competitiveness embedded in the organizational structures, process, product and services within a firm. Innovation within a firm is considered as one of the essential components for survival and growth, as these innovation activities (product innovation, process innovation, technology innovation, marketing innovation, organizational innovation); create value and competitive advantage for successful organizations.

Innovation remains the major strategy and driving force for Medium Enterprises (MEs') growth and survival in any competitive business environment, as the introduction of novel products and services has remained the thrust behind the spring up enterprises and the expansion of the existing ones (Ukpabio *et al.*, 2018). In the past few decades, technological changes have proven to either be sustainable or disruptive to companies all over the world; innovation and

adaptability are key tools to surviving any form of hardship and staying relevant in the current competitive market (Zwingina *et al.*, 2017; Akimwale *et al.*, 2017; Ukpabio *et al.*, 2018).

Innovation has become a key tool for small and medium enterprises which strive to cope with today's highly competitive environment (Al-Battaineh, 2018). The importance of innovativeness of MEs to their growth is widely acknowledged and established in literature (Masood *et al.*, 2013; Njogu, 2014; Ibidunni *et al.*, 2014; Zwingina *et al.*, 2017; Akimwale *et al.*, 2017; Okumu *et al.*, 2019). 'Innovate or die' is a popular slogan used today by many successful companies such as Gillette, Procter and Gamble, and Microsoft, among others (Bamidele *et al.*, 2018; Choi, 2019; Nguyen *et al.*, 2019), but what does it really mean? One way of understanding this saying is by reflecting upon reports from industry and academia which argue that a lack of innovation will lead to products obsolescence and customer disintegration (Akimwale *et al.*, 2017; Suhaq *et al.*, 2017; Okumu *et al.*, 2019).

Medium Enterprises growth is the dependent variable of the study. Medium Enterprises growth in general refers to increase in size of MEs. Growth MEs' growth has been identified as a key driver for the creation of wealth and employment and economic development in every country. Business grows from micro to small to medium and to large. Medium Enterprises growth is can be defined as increase in size of MEs in terms of sales growth, employment growth, market share growth, and firm size growth (Peter, 2011).

1.1 Objective of the Study

To determine the effect of product innovation on growth of medium enterprises in North Central Nigeria

1.2 Research Question

To what extent does product innovation affect growth of medium enterprises in North Central Nigeria?

1.3 Statement of Hypothesis

H₀: Product innovation has no significant effect on growth of medium enterprises in North Central Nigeria.

2.0 LITERATURE REVIEW

2.1 Schumpeterian theory of innovation

The theory of innovation was propounded by Schumpeter in 1934. Schumpeter was an economist who coined the term "creative destruction" to describe the outcome of the process of innovation by competing firms interacting in a given market place. Creative destruction refers to the portable opportunities seized by innovators, which ultimately benefit not just them but the whole society. The theory holds the assumption that an entrepreneur is one

having three major characteristics: innovativeness, foresight and creativity. Creative destruction implies that the entrepreneurs destroy the prevailing equilibrium in the market thereby disrupting existing goals and changing the direction of the economy. They achieved this through creating new market, introducing a new way to make products, discovering new markets for a product, finding new sources of raw material and establishing new ways of making things or organization.

With the process of creative destruction, Schumpeter (1934) was one of the earliest scholars in highlighting the importance of innovation in entrepreneurial activity. He argued that the creative destruction was a process that disrupts current market structures by means of new goods or services, new markets, new production process, sources of supply and organization structures. Innovation mainly refers to an iterative process initiated by the perception of a new market and/or new service opportunity which leads to development, production, and marketing tasks striving for its commercial success. Accordingly, Schumpeter calls innovation the specific tool of entrepreneurs, the means by which entrepreneurs exploit change as an opportunity for a different business or a different service. Schumpeter (1934) stressed the role of entrepreneurs as primary agents effecting creative destruction and emphasized to the entrepreneurs the need to search purposefully for the sources of innovation, the changes and their symptoms that indicate opportunities for successful innovation as well as their need to know and to apply the principles of successful innovation.

The Schumpeterian articulation of innovation has been carried forward by successive scholars and researchers. On his part, Drucker (1985) held that entrepreneurs are always searching for change, responding to it, and exploiting it as an opportunity, and engaging in purposeful innovation. Furthermore, the link between innovation and business growth in SMEs is supported by the results of Covin and Wales (2012) who found that innovation is among the key factors that stimulate business growth in SMEs. Schumpeterian theory supposes that firms' progress comes from innovations they carry out motivated by the pursuit of profit. That is, each innovation is aimed at creating some new process or product/service and new market that give its creator a competitive advantage over its business rivals by rendering obsolete some previous innovation (Mwangi and Ngugi, 2014).

Therefore, in SMEs, innovation provides a holistic, vibrant and complementary base to SMEs growth resulting to SMEs' sustainability and superior performance (Afriyie and Musah, 2019). Thus, this theory is relevant to the present study because it provides a deeper understanding of innovation and its dimensions (product, process, technological, organizational and market innovations) in relation to MEs' growth.

Innovativeness is paramount to the survival and growth of small enterprises (Ibidumi *et al.*, 2014). A study by Rosenbusch *et al.* (2011) identified that innovativeness has strong positive effect on financial growth measures such as return on sales, returns on assets and profitability. Moreover, Rosli and Sidek (2013) recorded a strong positive relationship between innovativeness and non-financial performance measures. Ngugi *et al.* (2013) examined the

influence of innovativeness on the growth of small and medium-sized enterprises. They based their research on the RBV and operationalised innovativeness to include new goods and services, new processes and technological advancement, while enterprise growth was operationalised as sales growth, employment growth, profit, market share growth, customer satisfaction and owner's/manager's satisfaction. They found that both the individual and composite dimensions of innovativeness had significant positive relationships with growth of SMEs in Kenya. Similarly, Salavou and Avlonitis (2008) investigated the influence of product innovativeness on the performance of small and medium-sized manufacturing, food and beverages, and textile enterprises in Greece and concluded that product innovativeness influenced performance. In another related study, Alpayet *et al.* (2012) examined the innovativeness-SME growth relationship. The results indicated that there was a strong linear relationship between innovativeness and performance of SMEs in Turkey.

2.1.1 Relevance of the underpinning theory to the study

Schumpeterian theory of innovation underpins the study and is supported by the resource-based view theory, the diffusion theory of innovation. Schumpeterian theory of innovation is most relevant to the present study because it provides a deeper understanding of innovation practice and its dimensions (product, process, technological, organizational and market innovations) in relation to MEs' growth.

2.2 Conceptual Framework

The concepts relevant to this study are carefully clarified as presented below.

2.2.1 Concept of Innovation

The term innovation comes from the Latin – *innovare* – meaning to make something new; that is turning opportunity into new ideas and putting these new ideas into widely use practice. Firstly, it is important to understand what innovation entails from a conceptual perspective. Innovation relates to the doing of new or novel things or the doing of old things through new strategies so as to enhance sales, cost, and profit or market performance (Abdilahi *et al.*, 2017). Innovation has also been suggested to be the use of institutional, technological or human resources in ways that achieve new products, markets and practices (Abdilahi *et al.*, 2017). Innovations can manifest as a new service or product, a new technological process in production, a new organizational administration structure or system, a new program or plan. Product and process innovation types are the major focus of academic literature on innovation, although organizational innovation is also a newer type of innovation dimension being focused on by researchers (Braunerhjelm *et al.*, 2016). The innovative capability of the firm has been tied to the process of research and development (R&D) within the SME. R&D leads to the generation of newer knowledge which informs new innovations (Zimmerman, 2017). As such, SMEs which regularly do R&D activities are more likely to have newer knowledge and thus will be able to come up with new services or products or newer processes of production.

In the third edition of the Oslo Manual, innovation is defined as the implementation of a new or significantly improved product (goods or services), a process, a new marketing techniques or a new organizational method in business practices, workplace organizations or external relation (OECD and Eurostat, 2005). Here, innovation was classified into four different types which are product innovation, process innovation, marketing innovation and organizational innovation. Here, the product and process innovation were grouped into technological innovation while marketing and organizational innovation were grouped as non technological innovation.

Innovation is described as “the introduction of new or improved processes, products or services based on new scientific or technology knowledge and/or organizational know-how” (OECD, 2015). An invention is the first occurrence of an idea for a new product or process whereas innovation is the act of putting it into practice. There are different types of innovation in business (Trott, 2008); however it can be related to new products or services, new production processes, new marketing techniques, and new organisational or managerial structures (Rebound, 2008). Innovation may also involve technology, intellectual property, business, or physical activity (Sundbo, 2003).

Innovativeness is paramount to the survival and growth of small and medium scale enterprises. A study by Rosenbusch *et al.* (2011) identified that innovativeness has strong positive effect on financial growth measures such as return on sales, returns on assets and profitability. Moreover, Rosli and Sidek (2013) recorded a strong positive relationship between innovativeness and non-financial performance measures. Ngugi *et al.* (2013) examined the influence of innovativeness on the growth of small and medium-sized enterprises. They based their research on the RBV and operationalised innovativeness to include new goods and services, new processes and technological advancement, while enterprise growth was operationalised as sales growth, employment growth, profit, market share growth, customer satisfaction and owner’s/manager’s satisfaction. They found that both the individual and composite dimensions of innovativeness had significant positive relationships with growth of SMEs in Kenya. Similarly, Salavou and Avlonitis (2008) investigated the influence of product innovativeness on the performance of small and medium-sized manufacturing, food and beverages, and textile enterprises in Greece and concluded that product innovativeness influenced performance. In another related study, Alpay *et al.* (2012) examined the innovativeness-SME growth relationship. The results indicated that there was a strong linear relationship between innovativeness and performance of SMEs in Turkey.

Various types of innovative developments are associated with different aspects of growth and performance. Previous studies mention a positive relationship between the innovation and performance (Centobelli *et al.*, 2019; Chegeand Wang, 2020). The impacts of innovation on the performance of a firm can be demonstrated by both financial and non-financial indicators (Mashal, 2018). The positive impacts of innovation include the ability to compete with others (Anwar, 2018; Conto *et al.*, 2016), financial accessibility (Abdu and Jibir, 2018), connection and communication (Radzi *et al.*, 2017), marketing (Adam *et al.*, 2017), and export

performance.(Azar and Ciabuschi,2017; Love *et al.*, 2016; Prange and Pinho, 2017). However, some critics have a different perspective. For example, Karabulut (2015) found that innovation has negative impacts on firm growth. It has also been suggested that a failure to consider the potential negative effects of innovation could eventually impact on the environment and lead to uncontrollable business growth ((Laforet, 2011). In spite of reservations like these about potential negative impacts, there is strong support in the literature for the positive effects of innovation on firm growth (Kijkasiwat and Phuensane, 2020).

2.2.2 Concept of Product innovation

This can be considered as any good or service that is perceived by an individual or a firm as new (Abdilahi *et al*; 2017). Also, it refers to the introduction of new products or services in order to create new markets or customers, or satisfy existing market or customers (Wan *et al.*, 2005; Obunike and Udu, 2018). Product innovation entails diverse organizational strategies as well as unique inputs which results in novel outputs (Martinez-Ros and Labeaga, 2009). Production innovation has been investigated in accordance with a wide range of managerial phenomena, including entrepreneurial firms in the emerging countries, continuous innovation in mature firms, collaborative networks, R&D spillovers, human resource systems and organizational culture, and leadership (Doran and Ryan, 2014; Dimnwobi *et al.*, 2016). Product innovation is usually the result of producing and commercialization of new goods (products or services) or with improved performance characteristics. Product innovations assist firms to distinguish themselves from their competitors, through proffering solutions to individual or national challenges.

Product innovation is the improvement of original goods, modify in design of recognized goods, or exercise of fresh supplies in the construct of recognized goods (Alegre *et al.*, 2006). Product innovation which is latest and in the past it was unfamiliar to the marketplace the business operate in. Product innovation is defined as the new product which is totally diverse from the old product and there is an idea that phrase of product innovation goes hand in hand with phrase of newness (Dada, 2016). According to Suhaq *et al.* (2015) product innovation is a process which involves the practical design, research and development, administration and marketable actions which concerned in the promotion of the novel good. The product innovation is the main factor for the business development and performance of the business product innovation method is measured component of new product development mostly the companies earn profit in future with the help of product innovation (Wheelwright, 1992).

In business perspective product innovation include a new products invention, quality improvements and technical specification given to a product, or the addition of new materials, components or valuable functions into an existing product. It covers the enhancement of goods and services or the development of the new categories (Rennings *et al.*, 2006). According to Alegre *et al.* (2006) in recent times there is highly aggressive and forceful atmosphere, the product innovation is highly explored and its highly important to survive, product innovation is mostly the outcome of the three major inclinations; high worldwide competition split,

challenging marketplace and third one is the difference and quickly changing in the technologies. Product innovation can engage a new or significantly improved product, whose distinctiveness may be significantly different due to use of knowledge, new technologies or materials (Rogers, 1998).

According to Olayemi *et al.* (2020) the business capability to produce constant flow of the product innovations is the highly significant to run the business or to improve the performance of the business or for the growth of the business, and product innovation is crucial for the business to survive in the market and to capture the market share due to huge competition and day by day competition increases in the market. Due to the high competition the life of the product decreases because of the huge competition and product innovation. So, mostly the main focus of the businesses is on the innovation of the product either to improve the product or to develop the new product (Alegre *et al.*, 2006).

Product innovation remains one of the major roots of competitive advantage to firms (Mohd and Syamsuriana, 2013). This is because when firms engage in innovation, the quality of their goods and services is improved upon and this enhances the performance as well as the competitive advantage of the firm. (Forker *et al.*, 1996). As noted by Hult *et al.* (2004), product innovation shields a firm from threats and competitors creates opportunity for the innovating firm to enjoy the 'first mover' advantage. Bayus *et al.* (2003) proved that product innovation had positive and significant link with organizational performance. Alegre *et al.* (2006) opined that product innovation dimension was strongly and positively associated with firm performance. Also, Espallardo and Ballester (2009) in their study affirmed that product innovation positively impacts firm performance. Likewise, Varis and Littunen (2010) noted that introduction of product innovation is positively associated with firm performance.

Product-oriented innovativeness involves either a new or improved product, which is distinguished significantly from previous products. Product-oriented innovativeness targets quality improvement of products (Obunike and Udu, 2018). They further argue that it offers potential protection to firms from market threats and competitors. It is the creation of new products or modification of existing products, technological newness in product and product differentiation to meet customers and market equilibrium. It is the result of producing and commercialization of new products/services or imitating foreign or competitors' product. It involves radical product which can be new to the firm or new in the market.

2.2.3 Medium enterprises (MEs)

Medium enterprises (MEs) are the unit of analysis in this study. MEs are conceptualized in this study to mean those enterprises that operate in North Central Nigeria with total assets (excluding land and buildings) are above fifty (50) million naira, but not exceeding five (500) million naira with a total workforce of between 50 and 199 employees. This definition of MEs is adapted from the definition and classification of SMEs as provided by National Bureau of

Statistics /Small and Medium Enterprises Development Agency of Nigeria (NBS/SMEDAN) (2017).

2.2.4 Medium enterprises' growth

For past few decades, the firm's growth has become a major topic in the field of strategic management research. The three basic components such as the small firm's characteristics, the entrepreneur's characteristics, and the firm's development strategies combine together and results into the process of business growth in small firms (Ferreira *et al.*, 2011). Every business owner aims to achieve the growth and outstanding performance of his/her businesses (Rosli and Abdullah, 2015). The research on business growth has revealed little progress in recent years. Therefore, it is crucial to determine various factors that impact the SMEs business growth.

Many researchers have emphasized more on business growth as an important indicator of MEs performance (Chandler and Hanks, 1993; Brush and Vanderwerf, 1992; Fombrun and Wally, 1989). Wilklund (1999) has also argued that growth of SMEs businesses can determine the performance of SME more accurately relative to other measures of performances (financial and non-financial). The firm's business growth also reveals its failure or success. The researchers have highlighted various internal as well as external factors that might impact the ventures' early growth (Garnsey *et al.*, 2006).

The firm's growth also demonstrates the behaviors of business owners or entrepreneurs in small firms (Green and Brown, 1997). Lee and Tsang (2001) stated that as most of the entrepreneurial businesses are of small or medium sizes which are privately held, therefore, legally they are not required to reveal information regarding their financial performance. Moreover, it is a sensitive matter for MEs to depict their financial performance. On the other hand, disclosing data on business growth may be a less sensitive matter for MEs businesses (Lee and Tsang, 2001). Moreover, Chandler and Hanks (1993) also found higher internal consistency and better content validity in self-reported data on MEs business growth as compared to self-reported data about financial or non-financial performances of ventures.

Growth is the result of the combination of firm's specific resources, capabilities and routines. Firms' growth can be determined by the extent to which firms' specific resources like employees, capital and knowledge are acquired, organized and transformed into sellable products and services through organizational routine, practices and structure. It refers to an increase, expansion or change over time. Small and medium scale enterprises 'growth has been identified as a key driver for the creation of wealth and employment and economic development in every country. An impressive share of radical breakthrough innovations has been shown to originate from entrepreneurs and small firms' growth (Corradini *et al.*, 2016).

Growth can be attributed to an increase in factors of production, improvements in the efficient allocation across economic activities, knowledge and rate of innovation. Innovativeness is

considered as one of the critical issues in the firm growth (Obunike and Udu, 2018). The dimension of business growth used in this study includes: employment growth, sale growth, firm size growth and market share growth.

Employment growth: Employment generation is a very important aspect of the country economic growth. Small businesses are seen as a great force in generating employment in the country. Employees are the most crucial resource of an organization. Some expertise is embedded in them. Quality of employees affects the firms' ability to embark in innovativeness. While product innovation boosts employment, process innovation is associated with job losses (Preeti, 2015).

Sales growth: This is considered a very important and popular determinant of medium scale business growth because business growth is measured through sales. Increase in sales makes it possible for businesses to invest in additional factors of production, such as equipment and employees, which in turn results in raising the profits of the business, although sales can be affected by inflation (Akosile, 2017).

According to Tedla (2016) it is the quantity or number of products or services sold in the normal operations of a firm in a specified period. It can also be seen as the quantity or number of products sold or services offered to a large number of customers by a firm in a particular period of time (Tedla, 2013). Within a business, sales growth may be monitored at the level of the product, product line, customer, subsidiary or sales region. Investment targeted at any of these areas may be altered using the above stated information. Firms may also monitor its break –even sales volume.

Firm size: The size of a firm mediates between the internal and external firm's environment. The size of a firm measured by its employees is a consequence of the firm's hiring strategy. It is also decisively influenced by the market-oriented view of Schumpeter and the resource-based view. Large firms are less likely to embark on innovativeness. It is well-known that small firms are more affected by innovativeness obstacles and thus they are prevented from innovative activities (Akinwale *et al.*, 2017).

Market share: Market share is portion or percentage of sales of a particular product or service in a given region that are controlled by a firm. It is used by firms to determine their competitive strength in a sector as compared to other firms in the same sector. It takes account of the market conditions that may have improved or decreases sales which sale or revenue may not capture (Peter, 2011).

Market share as one of the growth measures has been defined differently by different authors in the field of business management. According to Robson (cited in Akande, 2012) market share is the percentage of a market (defined in terms of either units or revenue) accounted for by a specific entity. Armstrong and Greene (2007) posited that market share is

the specific percentage of total industry sales of a particular product achieved by a single firm in a given period of time.

3.0 METHODOLOGY

This section discusses the research design, the study area, population of the study, sample and sampling techniques, instruments of data collection, validation of the instrument, reliability of the instrument, method of data collection, variables specification, model specification, and data analysis techniques.

3.1 Research Design

This study utilized the survey research design. Quantitative data were gathered in order to establish the effect of the independent variable (innovation practice) on the dependent variable (growth of MEs). The reason for the choice of survey research design is grounded on the fact that it helps researchers to collect data from respondents regarding their views and knowledge concerning the study variables in order to achieve the study objectives. The justification for the choice of survey research design is because it would help to elicit opinions of respondents on the effect of innovation practices on growth of MEs in North Central Nigeria.

3.2 The Study Area

The study focuses on the effect of innovation practices on growth of MEs in North Central Nigeria. The geographical location covered by the study is the North Central Region of Nigeria. The study was limited to only the MEs that are located and operational in the six states in North Central – Nigeria (Benue State, Kogi State, Kwara State, Nasarawa State, Niger State, and Plateau State) including the Federal Capital Territory. There are 243 MEs in North Central Nigeria (NBS/SMEDAN, 2017). 28 of these MEs are in Benue State, 16 of them are in Kogi State, 18 of them are in Kwara State, another 18 of these MEs are in Nasarawa State, 47 of them are in Niger State, and 41 of the MEs are in Plateau State, while 75 of these MEs are in Federal Capital Territory (FCT). Appendix 4 captured this information.

The study area is the central part of Nigeria and is regarded as part of northern Nigeria. The region has arable land for agriculture; hence it is an agrarian region, and rich in farming with common crops such as: yam, rice, soya beans, guinea corn, maize, millet, amongst others; which serves as rich sources of raw materials for manufacturing firms. The region also houses the two major rivers in Nigeria, namely river Niger and river Benue, thus supporting even dry season farming and fish/aquaculture businesses. The region is rich in solid minerals such as having high deposits of limestone for cement production, thus making the region a viable zone for primary raw materials for industries to thrive.

The economy of North Central Nigeria comprised the private and public sectors. With respect to industrial development, the private initiative is mainly confined to micro, small and medium enterprises. Vast investment opportunities exist in large, medium and small enterprises in the

region. There are good prospects for innovation practice in terms of product innovation, process innovation, marketing innovation, technology innovation and organizational innovation in the medium enterprises sector in the region.

3.3 Population of the Study

The population of this study comprised 243 MEs in North Central Nigeria (NBS/SMEDAN, 2017). The study focused on only owners/managers of MEs in the study area. The decision to focus on only the owner/managers of these MEs was informed by the fact that they are presumed to be more knowledgeable and are also in a better position to provide relevant information on how innovation practice affects the growth of their enterprises in terms of sales growth, employment growth, market share growth, and firm size growth. The population of the study is shown on Table 1. From Table 1, it can be seen that 28 of these MEs are in Benue State, 16 of them are in Kogi State, 18 of them are in Kwara State, another 18 of these MEs are in Nasarawa State, 47 of them are in Niger State, and 41 of the MEs are in Plateau State, while 75 of these MEs are in Federal Capital Territory (FCT).

Table 1: Population of the Study

State	Number of MEs in North Central Nigeria	Percent
Benue	28	11.4
Kogi	16	6.5
Kwara	18	7.4
Nasarawa	18	7.4
Niger	47	20.0
Plateau	41	16.7
FCT	75	30.6
TOTAL	243	100

Source: NBS/SMEDAN (2017)

3.4 Sample and Sampling Techniques

The nature of the present study called for the adoption of a census approach. As a result of the small size of the population, the census approach was used in selecting the sample size; hence the sample size of the study was the same with the population. Consequently, the researcher adopted a census approach and the entire population of 243 owner/managers of MEs in North Central Nigeria was used as the sample to achieve a desired level of precision. The list of MEs sampled in North Central Nigeria by state can be found in Appendix 5.

The owners/managers of MEs from North Central Nigeria were considered for the study based on the criteria: Owners/Managers who are chief executive officers of MEs, and who operate these MEs based on NBS/SMEDAN (2017) definition of MEs; the Owners/Managers who operate MEs in North Central Nigeria for at least a period of 5 years (i.e. 2016 to 2020 and

beyond). The study focused on only owners/ managers of MEs in the study area because as CEOs of their respective enterprises, they are presumed to be more knowledgeable and are also in a better position to provide information on how innovation practices affect the growth of their enterprises in terms of sales growth, employment growth, market share growth, and firm size growth.

3.5 Instrument of Data Collection

Data for this study were collected through questionnaire administration. Structured questionnaire were designed to collect responses from the participants. The questionnaire was divided into three sections (Section A, Section B and Section C) for ease of administration and convenience (see Appendix 1 for details). Section A was based on personal data of the respondents while sections B and C contained questions on the study variables using five-point Likert-scale which anchored on a continuum of strongly agree (5), agree (4), undecided (3), disagree (2) to strongly disagree (1).

3.6 Validation of Instrument

Validity remains a relevant criterion for evaluating sufficiency and efficiency of criterion measures. The researchers subjected the questionnaire to both content and construct validity evaluation. Content validity was established by evaluation of the measurement scale by my supervisors and other experts in the area while factor analysis was used for construct validity test.

3.7 Reliability of the Instrument

In the current research, reliability of the instrument was established using Cronbach 's coefficient Alpha test and a coefficient of 0.7 and above was accepted. According to Hair *et al.* (2010) when Cronbach's Alpha coefficient is of 0.7 and above, the reliability of the variable is considered as acceptable.

4.0 RESULTS AND DISCUSSION

4.1 Product innovation

The respondents were asked to respond to a number of statements or items regarding *product innovation* in their enterprises and the responses are summarized and presented in Table 11. To analyze the responses, respondents that strongly agreed and those who agreed were combined in one category of those who *concurred or agreed with* the items. In addition, respondents who strongly disagreed and those who disagreed were combined in one category of those who opposed the items. Another category of respondents were those who neither agree nor disagree- undecided about the items. Thus, the three categories of responses were compared. Interpretation was then drawn from the comparison of the three categories accordingly. Comparison of responses to these items shows that the percentage of those who agreed

(concurred) ranged from 25.1 % to 56.5 %, while those who are undecided ranged from 8.6 % to 14.4 % and those who opposed ranged from 2.2 % to 12.1 %.

From those comparisons it can be seen that the range of percentages of those who agreed is higher than those that were opposed and those that were undecided. This implies that majority of the respondents agreed or strongly agreed that products are innovatively produced with diverse inputs through research and development in their enterprise; that there are collaborative innovative efforts by all employees in producing new products; that because of the enterprises' innovative practices, their company is often first to bring new products to the market; that new products of their company are often perceived as the best by customers simply because of the innovative practices; that in comparison with competitors, their company has introduced more innovative products during the past 5 years; and that new products in their company often take the company up against new competitors. The implication of the findings revealed that owners/ managers of MEs in North Central Nigeria agreed that there is product innovation existing in their enterprises.

Table 11: Respondents' Views on Product Innovation

Item	SA		A		UD		D		SD		Total	
	F	%	F	%	F	%	F	%	F	%	F	%
Our products are innovatively produced with diverse inputs through research and development.	58	26.1	101	45.5	32	14.4	18	8.1	13	5.9	222*	100.0
There are collaborative innovative efforts by all employees in producing new products.	56	25.1	126	56.5	19	8.5	14	6.3	8	3.6	223	100.0
Because of our innovative practices, our company is often first to bring new products to the market.	69	30.9	101	45.3	21	9.4	27	12.1	5	2.2	223	100.0
New products of my company are often perceived as the best by customers simply because of our innovative practices.	73	32.9	103	46.4	29	13.1	12	5.4	5	2.3	222*	100.0
In comparison with competitors, our company has introduced more innovative products during the past 5 years.	71	32.0	96	43.2	31	14.0	18	8.1	6	2.7	222*	100.0
New products in our company often take us up against new competitors.	61	27.5	115	51.8	19	8.6	18	8.1	9	4.1	222*	100.0

Source: Author's Computations, 2022

Note:

SD = strongly disagree; D = disagree; UD = Undecided; A = agree; SA = strongly agree; F = frequency; *1 missing value.

4.2 Growth of medium enterprises

Owners/managers of MEs in North Central Nigeria were asked to respond to a number of statements or items regarding the growth of their enterprises and the results are summarized and presented in Table 16. In order to analyze the respondents' opinions on MEs in North Central Nigeria, respondents that strongly agreed and those who agreed were combined in one category of those who concurred or agreed with the items. Besides, respondents who strongly disagreed and those who disagreed were combined in one category of those who opposed the items. Another category of respondents was those who neither agree nor disagree- undecided about the items. Thus, the three categories of responses were compared. Interpretation was then drawn from the comparison of the three categories accordingly.

Comparison of responses to these items indicates that the percentage of those who concurred ranged from 22.7 % to 52.9 %, while those who are undecided ranged from 9.4 % to 19.5 % and those who opposed ranged from 1.4 % to 17.9 %. From those comparisons it is evident that the range of percentages of those who concurred is higher than those that were opposed and those that were undecided. This implies that majority of the respondents agreed or strongly agreed that there is employment growth in their enterprise as a result of innovative practices; that innovation practices are major determinants of employment growth in their enterprise; that their enterprise has also witnessed a positive sales growth in the past few years as a result of innovative practices; that innovation practices adopted by their enterprise are the key to sales growth of their enterprise; that innovation practices are necessary for the growth of their firm's size; that increase in the size of their firm/enterprise is a direct consequence of innovative practices; that their enterprise enjoys greater percentage of market share in comparison to its competitors; and that their enterprise has maintained its market share by building a strong customer relationship via innovative products.

The implication of the findings revealed that owners/ managers of MEs in North Central Nigeria have adopted innovation practice in terms product innovation, process innovation, technology innovation, organizational innovation, and market innovation which have resulted in the growth of their enterprises.

Table 16: Respondents' Views on *Medium Enterprises Growth*

Item	SA		A		UD		D		SD		Total	
	F	%	F	%	F	%	F	%	F	%	F	%
There is employment growth in our enterprise as a result of innovative practices.	57	25.8	107	48.4	21	9.5	33	14.9	3	1.4	221**	100.0
Innovation practices are major determinants of employment growth in my enterprise.	66	30.3	86	39.4	29	13.3	30	13.8	7	3.2	218*****	100.0
My enterprise has also witnessed a positive sales growth in the past few years as a result of innovative practices.	59	26.6	103	46.4	22	9.9	26	11.7	12	5.4	222*	100.0
Innovation practices adopted by the enterprise are the key to sales growth of the enterprise.	71	31.8	112	50.2	21	9.4	14	6.3	5	2.2	223	100.0
Innovation practices are necessary for the growth of our firm's size.	49	22.7	94	43.5	36	16.7	31	14.4	6	2.8	216*****	100.0
Increase in the size of our firm/enterprise is a direct consequence of innovative practices.	62	27.8	91	40.8	38	17.0	28	12.6	4	1.8	223	100.0
Compared to competitors, my enterprise enjoys greater percentage of market share.	52	23.1	117	52.9	31	14.0	19	8.6	3	1.4	221**	100.0
The enterprise has maintained its market share by building a strong customer relationship via innovative products.	55	25.0	96	43.6	43	19.5	23	10.5	3	1.4	220***	100.0

Source: Author's Computations, 2022

Note: SD = strongly disagree; D = disagree; UD = Undecided; A = agree; SA = strongly agree; F = frequency; *1 missing value; **2 missing values; ***3 missing values; ****5 missing values; *****7 missing values.

4.3 Test of Hypothesis

Product innovation has no significant effect on growth of *medium enterprises* in North Central Nigeria

Based on the result of the regression analysis, hypothesis one was rejected in favour of the alternate hypothesis which states that product innovation has a significant positive effect on the growth of medium enterprises in North Central Nigeria as indicated by the following: $B = 0.265$, $t = 4.168$, $p = 0.000$. The regression equation is therefore, presented thus holding other variables constant: $MEG = 0.299 + 0.265PDI + 0.064$

Table 21: Regression Result and Findings

Hyp	Variable	B	SE	t-value	p-value	Decision
	Constant	0.299	0.270	1.107	0.270	
H_{01}	Product Innovation	0.265	0.064	4.168	0.000	Reject

Dependent Variable: Growth of medium enterprises (MEs)

Independent Variables: (Constant), Product Innovation

Source: Authors computation, 2022

4.4 Discussions of Findings

Based on the result of the regression analysis, hypothesis one was rejected in favour of the alternate hypothesis that product innovation has a significant positive effect on the growth of medium enterprises in North Central Nigeria. The contribution of product innovation to the growth of MEs is about 26.5 percent. The implication of this finding is that if MEs in North Central Nigeria focus on introducing new products and services or if they focus on bringing about significant improvement in their existing products and services, then they will be able to grow their MEs in terms of sales, employment, market share, and firm size. In other words if MEs are able to collaborate with their employees to develop new products and services by way of research and development and are perceived to be the best by their customers, then the medium enterprises will be able to improve positively their turnover, market share and their size. In Nigeria, scholars such as Raji (2014), Njogu (2014), Ibidunni *et al.* (2014), Olughor (2015), Dada (2016), Zwingina *et al.* (2017), Akimwale *et al.* (2017), Obunike and Udu (2018),

Ukpabio, *et al.* (2018), Bamidele *et al.* (2018), Akande *et al.* (2019), Nnodim *et al.* (2019), Egwakhe *et al.* (2021) have all found that product innovation contributes positively towards improving the growth of firms. Similar research conclusions have also been reported in countries other than Nigeria. Some of the scholars in other countries that have reported similar research findings include Masood *et al.* (2013), Abdilahi and Hassan (2017), Suhaq *et al.* (2017), Al-Battaineh (2018), Nguyen *et al.* (2019), Jin and Choi (2019), Laban and Deya (2019).

5.0 CONCLUSION

This study highlighted the constructs of the innovation practice and how it explains collectively and individually the variance in the growth of MEs in Nigeria using North-Central as a case analysis. The moderate explanation of growth of MEs may explain why innovation practice in form of its dimensions of product innovation, has a moderate effect on the growth of MEs. In terms of their individual contribution, product innovation contributed the most in accounting for the variation in growth of MEs. The concept therefore, holds great promise as a tool for entrepreneurs to be innovative and creative in the management of MEs in Nigeria.

6.0 RECOMMENDATIONS

The following are the recommendations of this study:

- a) Medium enterprises should focus on developing unique products through extensive research and development via teamwork as this has the most potential to improving the MEs growth in Nigeria. They should also be the first to market their unique products into the market and should also ensure that customers perceive their products as the best as all these strategies contribute positively to the growth of MEs in North-Central Nigeria.
- b) For MEs in Nigeria to improve their growth potentials, the owners/managers should focus on developing their market innovation capabilities. They can achieve this by way of new marketing tools and strategies, modifying their marketing strategies, responding to market opportunities and customer suggestions. When MEs implement these market innovation strategies, then this will contribute positively to their growth.
- c) Technological innovation as a tool of innovation practice should be encouraged, developed and implemented by MEs if they are desirous of achieving sustained growth. MEs can achieve this via development of their technological capabilities and the technical knowhow of their employees. MEs can also achieve this through the development and deployment of advanced production and manufacturing technologies and systems that are efficient and effective in offering products and services that outperform their competitors. By so doing, MEs in Nigeria in general and North-Central in particular will be able to achieve sustained growth levels.
- d) As the results indicated, organizational innovation as an aspect of innovation practice was also significantly related to growth of MEs in North-Central Nigeria. It ranks fourth in its impact on the growth of MEs in Nigeria; hence MEs should not neglect in

developing and implementing organizational innovation practice. Ways they can ensure organizational innovation is through constant introduction of new business practices, new ways of managing their external relations and mechanisms, routines, procedures and processes that are daily reviewed, updated and creatively deployed across the organizations. In that way, MEs in Nigeria will be able to achieve sustained growth.

- e) Process innovation has the least influence on growth of MEs in North-Central Nigeria. Be that as it may, owners/managers of MEs should consider implementing process innovation especially for those in the service sector. However, deployment of resources for this aspect of innovative practice should not be favored above product or market innovation practices which have the most impact on growth of MEs. Despite this claim, owners and managers of MEs should endeavor to continuously improve on their production techniques that are more efficient and effective which may also include on an expansive training program for its employees. In such a way, MEs may be able to contribute to their growth in North-Central Nigeria.
- f) Innovation practice should therefore, be designed, developed and implemented to support and complement the broader strategic management framework. Greater resources should be allocated to product innovation practice followed by process innovation, technology innovation, organizational innovation and market innovation. Deploying resources to those aspects of innovative practice that has the most impact on growth of MEs is most cost-effective and sustainable as the overall long-term growth of such MEs will be sustained.

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