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INCREMENTAL INNOVATION AND COMPETITIVE ADVANTAGE OF TEXTILE INDUSTRY IN NIGERIA

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Abstract

The study explored the relationship between incremental innovation and competitive advantage of textile industry in Nigeria. The specific objectives were to determine the extent of relationship that exists between design innovation and price leadership of textile industry in Nigeria; and to ascertain the nature of relationship that exists between timely delivery of products and channels of distribution of textile industry in Nigeria. Descriptive survey research design was employed and Pearson product moment correlation coefficient was utilized to test the formulated hypotheses at 5% (percent) level of significance. Finding revealed that there were statistically significant positive relationships that exist between the variables. It is recommended that the managers of the textile industry in Nigeria need to review their product designs occasionally in order to maintain their price leadership. In addition, the strategic managers need to ensure and sustain the timely delivery of textile materials so as to maintain their competitive advantage. We therefore advocate for regular incremental innovation that serves as positive business disruption which drive competitive advantage of textile industry in Nigeria.

KEYWORDS*: Incremental innovation, Competitive advantage, Textile industry, Design innovation, Price leadership.*

INTRODUCTION

In today's fiercely competitive market, embarking on incremental innovation is the key to future success of textile industry. The Nigerian Textile industry has been on decline over decades as a result of challenges, stiff competition from foreign importation, lack of government support and high cost of production. Textile industry in Nigeria has a long rich history. The first textile factory was established in the city of Kaduna in 1950s and the industry has grown steadily since then (Aboyade, 2001). However, the economic downturns in the country have forced many textile companies to close. But, there is hope that incremental innovation will help to revive the ailing industry (Abubakar, 2017). Incremental innovation plays an important role in economic growth and revival of textile firms and further innovations can be built on it. It is a gradual design of continuous improvement in firms' existing concepts, products or services (Karanen, Komulainen, Lehtimaki & Ulkaniemi, 2021). It is the most common innovation that does not use complex technology, rather it removes deficiency and boosts performance through characteristics, such as product line extension, cost reduction and gradual generation of products (Rampa, 2021)

Competitive advantage is the ability to gain edge over competitors and sustaining superior performance. It is the concept that refers to the ability of an organisation or entity to outperform its competitors. It could be achieved through a number of factors such as lower cost, better products or services, unique selling propositions or superior customers' service(Aveni 1994). Competitive advantage arises from strategic choices made by a company to utilize market opportunities .It is a dynamic process that is maintained in order for a company to be ahead of its competitors.

The Nigeria textile industry had grown to become the third largest in Africa between 1970s and 1980s. By 1985 and 1991, it registered an annual growth of 67% and employed 25% of employees in the manufacturing sector(Abimbola, 2010). Despite these giant strides, the companies began to close down to the extent that out of 180 viable textile firms, the number

drastically reduced to insignificant number(Owen, Ogunleye & Orekoya, 2016). This situation calls for study in the textile manufacturing subsector.

In the light of the above the study was guided by the main objective of exploring the relationship between incremental innovation and competitive advantage of textile industry in Nigeria. Specifically, to determine the extent of relationship that exists between design innovation and price leadership in textile industry and to ascertain the nature of the relationship that exists between timely delivery of products and channel of distribution.

REVIEW OF RELATED LITERATURE

CONCEPTUAL REVIEW

INCREMENTAL INNOVATION

It refers to sustainable innovation, systematic planning and constant improvement in firms existing, products, services and process (Karanen et al.,2021). Incremental innovation allows an organisation to create modern values continuously for products and services.

COMPETITIVE ADVANTAGE.

It is the factor that permits organisations to gain superior margins against their marketing competitors. (Owusu & Duah 2018). Competitive advantage occurs when an organisation performs better than rivals or above the industries average. (Aluko, Babalola & Rabiu 2022). The survival of every firm lies on its effort to remain competitive by continuously striving to produce product or service to meet the dynamic change in the tastes of consumer.

DESIGN INNOVATION

It is a process of identifying, pinpointing and understanding the needs of the user audience. Design innovation (prototypes) are effective means to facilitate communicating design concept (Wang, Ranscombe & Eisenbart 2023), Competitive advantages can be generated by applying design thinking (design innovation) (Appleyard, et al,. 2020).

PRICE LEADERSHIP

It is when a firm stands out as the cheapest supplier of a particular product in a competition. Price leadership occurs when a company sells lowest price for its products and services. (Depamphilis, 2019)This strategy is designed to make an industry a cost leader in its market using efficient production facilities , controlling overhead expenses tightly and eliminating marginally profitable customers' accounts.

TIMELY DELIVERY

It shows the capability of fulfilling the issues planned for a specific release, meeting internal and external delivery schedules (Manzano ,Gomez & Ayala 2018). It is the availability of products within a short period of time and it helps in customers satisfaction and retention.

CHANNELS OF DISTRIBUTION

They are different methods through which firms transport their products and services to their final consumers. These channels could be through intermediaries or direct distribution (Zhu, 2020)

THEORITICAL FRAMEWORK

This study is anchored on Joseph Schumpeter Innovation theory(1942). This theory postulates that innovation originate market power that could provide more effective result than pure price competition. This suggests that more profits could be earned by introducing and implementing new ideas that earn competitive advantage to firms. This theory is relevant because incremental innovation generally improves the design and prices of products and services.

EMPIRICAL REVIEW

Incremental Innovation has been studied by different authors in many aspects and directions. Moruff, Olasumkami and Ekong (2019) examined the impact of business innovation on competitive advantage in the Nigerian Manufacturing sector using

descriptive survey design and sample of 496 staff of Nestle Nigeria Plc, Ogun. The data were analysed using ordinal regression. The result showed that business innovation has significant effect on the cost of the product. The study recommended that multinational companies should pay more attention to customer's satisfaction by increasing product quality .Emphasis should be placed on innovation in order to cut a competitive edge.

Ayman and Eyad (2022) explored radical innovation,incremental innovation and competitive Advantage :The moderating role of technology intensity evidence from the manufacturing sector in Jordan. Thirty manufacturing firms were analyzed, using convergent validity and discriminant validity tests through structural equation modelling in the smart –pls programme, Finding revealed that relationship between radical innovation and competitive advantage is modified through high tech industries. The study recommends focusing on radical and incremental innovation to enhance competitive advantage.

Onileowo, Muharam , Ramily and Khatib(2021) reviewed the nexus between innovation and Business competitive Advantage: A conceptual study. The result suggests that adequate financing can be a mechanism by which innovation and competitive advantages positively relates to increased performance. They recommend that business firms conduct market surveys to determine the need for current and prospective customers. Management should prioritize, invest heavily in research and development.

Egwakhe, Tijani, Akinlabi and Egwonwu (2020) reviewed Driving Competitive advantage: The role of strategic entrepreneurship in textile manufacturing firm in Lagos state using cross-sectional research survey design. The adapted questionnaire validity was established through confirmatory factor analysis. The population of the study is 253 senior management staff. Descriptive statistic, exploratory analysis and structural equation model were utilized to analyses the data. The findings indicated that strategic entrepreneurship has a significant effect on competitive advantages and recommends that firms in Nigeria

textile industry should focus more on strategic reconfiguration of their capabilities as continuously drive competitive advantage.

Tarus ,Boit and Korir(2017) investigated the effect of innovation on firms competitive advantage using explanatory research design, they employed census survey technique to get the targeted population of a branch manager and four departmental heads. Descriptive and inferential statistics were used to test the hypothesis and analyse the data collected. The result shows that incremental innovation is important to firms competitive advantage .The study recommends that managers are encouraged to be the lead innovators and to employ the staff who have passion for their work that yield greater creativity.

Yusof , Kamal,Lou,and Ahmed (2023)studied the effects of innovation capability on radical and incremental innovations and business performance relationships using a mediation and moderation model. The findings showed that innovation capability fully mediates the relationship between radical innovation and business performance. Additionally, construction companies with a low innovation capability have a strong effect on incremental innovation and business performance relationships. The findings illustrate the heterogeneous effects of innovation capability on the link between radical and incremental innovations and business performance. Construction practitioners should understand the forms of innovation they pursue to leverage innovation capability for superior business performance.

METHODS

Research Design

This study employed descriptive survey research design in order to obtain information and data from selected respondents. Survey research design was necessitated by the large number of people sampled.

Area of Study

Nigeria is a country in West Africa that shares land borders with the Republic of Benin to the West, Chad and Cameroun to the east and Niger to the north. It has 356,669 square miles bordering many climate regions, coastal areas ,hills, rain forests, savanna and desert along the Sahel. Rivers Niger and Benue are the two vital geographical features(Onah, 2020). Presently, Nigeria has 36 states and Federal Capital Territory at Abuja. The six geographical zones in Nigeria are Southeast, Southwest, and South-south. Northeast, Northwest and North central. Many of the textile mills are established in the six geographical zones in Nigeria such state as Kano, Kaduna, Zamfara, Lagos, Abia and Delta.

Population of the Study

There are 25 textile firms in Nigeria, operating at sectoral average of 40% capacity and hiring 25,000 employees. However, many of them are not functional (Oxford Business Group, 2017). Given this scenario, seven thriving textile firms out of the population were selected. The criterion for selection was existence for more than 10 years. The details of the textile firms selected are shown in Table 1.

Sample size determination and sampling technique.

The sample size was determined using krejcie and Morgan (1970) formular table(krejcie & Morgan,1970)

$$N = \frac{X^2 \, NP \, (1-P)}{d2 \, (N-I) + X^2 \, P \, (1-P)}$$

Where: X^2=Table value of chi-square @ df =1 for desired confidence level. Therefore, 10= 2.71, .05= 3.84; .01 =6.64; .001 =10.83

N= Population size

P=Population proportion (assumed to be .50)

d=Degree of accuracy (expressed as a proportion)

Therefore, population (N) =1,500=>sample size (n) =306 krejcie and Morgan sampling technique was used because the population size was known.

Given the aforementioned formular, the study respondents were sampled below:

Table 1; categories of employees in selected textile firms

S/N	Names of selected Textile Firms	Year Established	Location	Number of employees
1	Sunflag Nigeria Limited	1960	Lagos	299
2	African Textile Manufacturers	1998	Kano	75
3	Limited Nigerian Textile Ltd	1964	Kaduna	171
4	Femro 3 Nigeria Ltd	1985	Lagos	248
5	Da Viva Fashion Ltd	2019	Owerri	226
6	Reddizwear Nigeria Ltd	2012	Kano	265
7	Haffar Industries Company Ltd	1969	Lagos	216
	Total			1500

Source : Field survey, 2024

Sources of data:

Primary and secondary sources of data were employed in the study. The primary source consisted of the structural questionnaire, while the secondary source hinged on journal articles, online materials ,company profile and text books.

Questionnaire Distribution and Retrieval

The copies of questionnaire distributed were three hundred and six (306). Two hundred and sixty nine copies (269) were collected (88%), while thirty-seven (12%) copies were not returned.

Validity of Research Instrument

The questionnaire instrument was subjected to content validity where all the relevant constructs to research problem were measured.

Reliability of Research Instrument

Cronbrach Alpha was employed to test the reliability of the instrument. The first specific objective variables and the questionnaire items gave result of 0.995. However, the second specific objective produced a co-efficient of 0.989.

Reliability statistics for specific objective 1

Reliability Statistics

Cronbach's Alpha	N of Items
.995	8

Reliability statistics for specific objective 2

Reliability Statistics

Cronbach's Alpha	N of Items
.989	8

Hypothesis Testing

H_1: There is a significant relationship that exists between design innovation and price leadership of textile industry in Nigeria.

Table 2: Correlation result for design innovation and price leadership.

Correlations			
		DESINNO	PRICLEAD
DESINNO	Pearson Correlation	1	.987**
	Sig. (2-tailed)		.000
	N	269	269
PRICLEAD	Pearson Correlation	.987**	1
	Sig. (2-tailed)	.000	
	N	269	269
**. Correlation is significant at the 0.01 level (2-tailed).			

SOURCE: Computed from field survey data, 2024.

Table 2 shows the result of the correlation analysis on design innovation and price leadership. The result indicates that there is a statistically significant positive relationship existing between the variables. This is sequel to the correlation coefficient of. 987 obtained, while the p-value was. 000 (p-value < 0.05).

HYPOTHESIS 2: H_1: There is a significant relationship that exists between timely delivery of products and channels of distribution of textile industry in Nigeria.

TABLE 3: Correlation result of timely delivery of products and channels of distribution.

Correlations			
		TIMDELIV	CHANDIST
TIMDELIV	Pearson Correlation	1	.973**
	Sig. (2-tailed)		.000
	N	269	269
CHANDIST	Pearson Correlation	.973**	1
	Sig. (2-tailed)	.000	
	N	269	269
**. Correlation is significant at the 0.01 level (2-tailed).			

SOURCE : computed from field survey data, 2023

Table 3 indicates the result of the correlation analysis on timely delivery of products and channels of distribution. The output reveals that there is a statistically significant positive relationship existing between the variables. This is evident in the coefficient of .973 generated, with the p-value of .000(p-value less than 0.05)

DISCUSSION OF RESULT AND IMPLICATIONS

The findings showed that there are statistically significant positive relationships that exist between design innovation and price leadership; timely delivery of products and channels of distribution in the textile industry in Nigeria. The implication is that as design innovation increases incrementally, price leadership increases. In addition, as timely delivery of products increases, the channel of distribution of the focused firm's increases. This finding corroborates the result of Egwavhe, Tjani, Akinlabi and Egwuonwu (2020) who studied

competitive advantage innovative (strategic) entrepreneurship in textile industry in Nigeria. They found that strategic reconfiguration of capabilities continuously drive competitive advantage.

Moreover, the finding agrees with the study of Ayman and Eyad (2022) who explored radical innovation, incremental innovation and competitive advantage. They concluded that radical and incremental innovation enhanced competitive advantage.

CONCLUSION

It is obvious from the hypotheses testing that there are statistically significant positive relationships existing between design innovation and price leadership; timely delivery of products and channels of distribution of textile firms in Nigeria. These variables are measures of incremental innovation and competitive advantage. We therefore, conclude that incremental innovations are aspects of positive disruptions that enhance competitive advantage of textile industry in Nigeria.

RECOMMENDATIONS

Following from the conclusion, we recommend the following:

- The managers of the textile firms in Nigeria need to review their product designs occasionally so as to maintain their price leadership.
- The strategic managers of the focused textile industry need to ensure and sustain the timely delivery of their textile materials in Nigeria in order to maintain competitive advantage level already acquired.

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