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Impact of Penetration Strategy on the Performance of Manufacturing Industry in North West Nigeria

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Abstract

Years of outdated infrastructure, inconsistent policy, political economy in business regulation, bad pricing, advertising, and product quality, as well as low or no access to finance by most entrepreneurs have plagued Nigeria's industrial sector, notably that of the country's North-West, for years. The manufacturing sector in North West Nigeria is not operating at its peak potential, despite the emphasis on penetration strategy (pricing, product, and promotion). The study's objective was to ascertain how penetration strategy affects the performance of the industrial sector in North-West Nigeria. Surveys were used as the primary method of the study's investigation. 81 people made up the study's population and sample size. The preferred statistical technique used in the study was multiple regression, and the respondents' responses to a questionnaire were used to gather the study's data. According to the findings, the penetration strategy's price (PRI and PROM = 0.02 + 0.14 and 0.02 + 1.71) and product (PROD = 0.2 - 1.30) components have a significant impact on the performance (effectiveness) of the manufacturing sector in North West Nigeria, both positively and negatively. The study advises the manufacturing sector in North-West Nigeria to continually altering price and promotion strategies to improve performance because doing so is an efficient way to draw in new clients. This is necessary for the market penetration plan to be implemented effectively. Spend more energy and time on a promotion to raise brand awareness. Due to this unfavourable impact, employ an efficient marketing plan that will raise product awareness in such places.

Keywords

Pricing Strategy, Product Strategy, Promotion Strategy, Distribution Strategy,

Efficiency and Manufacturing Industry

1. Introduction

Over the years, the manufacturing industry in Nigeria has undergone years of dilapidated infrastructure, policy inconsistence, political economy in business regulation, poor power supply characterized with constant power outage, poor or no access to credit by most of the entrepreneur particularly the small and medium scale enterprise (Noko, 2016). As such, the industry has witnessed slow performance and growth in terms of value addition, capacity utilization, effectiveness and efficiency and the industry output generally (Okwo, Ugwunta, & Nweze, 2022). The industry serves as a source of economic transformation and diversification, playing a crucial role in the economy. Thus, the value of manufacturing to the economy cannot be overstated, especially in light of its role in the process of economic growth and development. Any country's ability to experience significant economic growth is hampered, if not impossible, in the absence of a thriving and developing manufacturing sector. According to development literature, the manufacturing sector is a means of producing goods and services, creating jobs, and raising incomes (Olorunfemi et al., 2018). The manufacturing sector, in particular Nigeria, has been referred to as the manufacturing industry's heart and engine of growth by Kayode (2019) and Libanio (2016). Evidence from developed nations around the world, practically all of which have industrialized with the manufacturing sector at the forefront of the process, supports this claim (World Development Indicators, 2012). Accordingly, the researchers claim that manufacturing has a unique need for penetration strategy since it is a production- and technology-based firm. A freshly introduced product or technology only lasts a very short time on the market before being replaced by the next. For these production- and technology-based commodities, the manufacturing industry's sole option in this situation is to rely on the market penetration approach.

By expanding with their current products in their current market categories, businesses can increase their market share. This is done using the market penetration technique. Selling more of your present goods or services to your current target market is referred to as market penetration and is a growth strategy (Robertson, 2013). As soon as a business enters a new market, according to Luo and Zhao (2014), it tries to gain market share. The introduction of a product, a swift entry into the market, and ultimate market share appropriation are the main goals of the market penetration strategy. In light of this, one could claim that market penetration serves as a gauge for determining whether or not a product is a success. The study's concept of market penetration strategy also encompasses price, product, distribution, and promotional strategies.

Due to the intense rivalry in the market, business owners must come up with strategies to increase the market share of their products if they want to survive. According to academics, spreading what a manufacturing industry is now doing to a larger pool of potential customers is necessary for growth. No company can serve the whole market in which it operates, thus it follows that other companies that deal in comparable items may enter the market and compete for the same market share with other businesses that are operating in the same market segment. As a result, there is fierce competition among businesses to see which one can control the highest market share of the goods or services that they are offering to the market. This means that in order for the manufacturing sector to thrive in this intensely competitive climate, they must develop a viable penetration strategy that will allow them to significantly increase the market share of their products and services. Market segmentation is required to do this since it divides markets into groups where markets with like characteristics are grouped and best served (Aremu & Adeyemi, 2011).

Despite this, one is left to ask if the entrepreneurs are using the proper market penetration techniques given the failure rates of the manufacturing sector in North-West Nigeria. The inability of the manufacturing sector to effectively employ penetration tactics to get a greater market share for their products and services in North-West Nigeria has been proved to be the cause of the sector's poor performance. This is due to the failure rate still being high despite concerted efforts from government intervention.

Due to the volatility of the Nigerian economy, pressure is mounting on the industrial sector in North West Nigeria to contribute to the nation's overall GDP. In order to grow these in the most effective and profitable way possible, the manufacturing sector must identify the aspects that consumers think to be most important, with pricing, product, and promotion being a vital factor. However, the manufacturing sector in North West Nigeria is not operating at its peak potential despite the emphasis placed on penetration strategy (pricing, product, and promotion), the researcher has found through a pilot study. Another issue is that the majority of North West Nigeria's manufacturing sectors do not use penetration strategies when marketing and distributing their products, which has a negative impact on how well they do in the market. In light of this, the study's goal is to evaluate how penetration strategy has impacted the manufacturing sector's performance in North West Nigeria.

This study's primary goal was to determine how the penetration technique affected the industrial sector's performance in North West Nigeria. The performance of the manufacturing sector in North West Nigeria is another connected goal, as is assessing the effect of product strategy, promotion strategy, and price strategy. The study's hypotheses are expressed in null forms and evaluated using the goals of the study.

Ho_1: Pricing Strategy has no significant impact on the effectiveness of manufacturing industry in North West Nigeria.

Ho_2: Product Strategy has no significant impact on the effectiveness of manufacturing industry in North West Nigeria.

Ho$_3$: Promotion Strategy has no significant impact on the effectiveness of manufacturing industry in North West Nigeria.

Ho$_4$: Distribution Strategy has no significant impact on the effectiveness of manufacturing industry in North West Nigeria.

The two main contributions of the paper are as follows. In order to determine which penetration strategy was most effective for the Nigerian manufacturing industry in North West, it first fills in gaps in the literature, especially with regard to the Nigerian manufacturing sector in that region of the country. It does this by using an analysis tool called SPSS that has largely been overlooked by earlier studies. Second, utilizing the current and accessible industries from the six North West states, it uses a cross sectional data model as a methodological innovation to examine the performance of the Nigerian manufacturing industry in the North from (2019-2022).

2. Literature Review

2.1. Concept of Penetration Strategy

According to Payne et al. (2018), penetration strategy is a tactic used by businesses to draw customers to a new good or service. As part of a penetration strategy, a new good or service is first offered at a cheap price. The decision to drop the price below the product incentive to customers is known as penetration pricing, which also ensures a larger customer base. This occurs when a company trades off increased profits for higher margins to provide bigger volumes (Reen et al., 2017). Setting an item's price low at first helps a penetration approach quickly capture a significant section of the market and launch an unofficially. The procedure takes a shot at the desire that customers will change to the new brand in light of the lower cost (Repetti et al., 2015). Penetration strategy is a measure of the percentage of the market that organizational product or service is able to capture (O'Regan, 2012). Pearce and Robinson (2015) observe that to be successful at market penetration a business must be aware of what has made the product a success in the first place, this can be done through attracting customers who have not yet become regular users, attacking competitors' sales and increasing consumption amongst existing users perhaps by reducing the price or offering promotions.

Businesses who aim to expand with their current products in their current market segments and boost their market share use the market penetration strategy. "Market penetration" (Robertson, 2013) is the process of selling more of your current products or services to your current target market. As soon as a company enters a new market, Luo and Zhao (2014) claim that their goal is market penetration. Three main goals of the market penetration strategy are product launch, swift market entry, and eventual market share appropriation. It is therefore reasonable to assert that market penetration is used as a barometer to evaluate a product's success on the market. Pricing, distribution, diversity, and promotion are also included in the notion of market penetration strategy in this study.

2.2. Dimensions of Penetration Strategy

2.2.1. Pricing Strategy

Pricing strategy describes the process a company uses to determine the price of a good or service. It is based not only on the product's cost but also on the profit margin, a comprehensive analysis of the market, and the product's long-term viability (Gaudillat & Quelin, 2013). Pricing strategy is beneficial in light of the various purchasing behaviors of various clients. Dudu and Agwu (2014) note that a price strategy helps to distinguish one good or service from another with comparable qualities. The most effective tactics and essential goals serve as the basis for pricing decisions. The price target is made up of the following elements: survival, quality leadership, quantity maximization, and profit and revenue maximization.

2.2.2. Product Strategy

Product strategy is the process of developing new products or modifying existing products, and offering those products to current or new markets (Mosiria, 2012). Njomo and Oloko (2016) posit that some of the factors that may drive a firm to develop new products are changing consumer preferences, technological advancement, shifts in manufacturing costs and competition from existing brands. Any manufacturing industry keen on its future must make the strategy of innovative products and systems a priority.

2.2.3. Distribution Strategy

In order to introduce new items to the market and increase market share inside a company, distribution strategies are critical, according to Mahendra (2013). Because distribution affects a new product's accessibility to clients, it is essential to the eventual acceptance and sales of a new product in the market. According to Khandelwal (2013) distribution strategies have a far-reaching effect in an organization because changing them is both resource and time demanding and hence firms have to take great care in designing their distribution system s during the launch of products.

Goi (2011) stressed that, distribution strategy ensures that products are convenient, accessible and available to customers at all times. In addition, it also ensures that the company has a market-focused strategy to satisfy customer wants and acquire a lot of outlets. As a result, outside distributors are prevented from gaining access to a company's clients. Kotler (2011) stressed that, with this strategy, a product is available at maximum number of retail outlets, carried by numerous retailers in a defined area. As many places as are practical are used to advertise products. Therefore, it ensures high sales volumes, robust product awareness, and spontaneous purchase. The low prices and poor margins of the products necessitate rapid turnover. Due to the abundance of retailers, manufacturers give up considerable control over product pricing and display.

2.2.4. Promotion Strategy

As stated by Zeithaml et al. (1988), the goal of a promotion strategy is to specifically entice clients to recommend their services to others. According to Duncan (2005), promotion is the key to the market exchange process that communicates with present and potential stakeholders, and the general public. Each business or establishment must adopt the position of promoter and communicator. Hakansson and Waluszewski (2005) also reports that promotion appears as an issue of how to create an optimal mix of marketing communication tools in order to get a product's message and brand from the producer to the consumer. Borden (1984) defines promotion as sales promotion, advertising, personal selling, public relations and direct marketing. Kotler (2007) discovers that Promotions have become a critical factor in the product marketing mix which consists of the specific blend of advertising, personal selling, sales promotion, public relations and direct marketing tools that the company uses to pursue its advertising and marketing objective. Previous researches (Amine & Cavusgil, 2001; Francis & Collins-Dodd, 2004) have established significant relationship between promotion and business performance.

2.3. Concept of Performance

The ability of a corporation to adopt optimal organization with the goal of delivering a good or service that meets customers' and consumers' expectations determines performance, which is strongly related to commercial effectiveness (Riberolles, 2022). To use more mathematical or scientific terminology, effectiveness is the level of performance that requires the fewest inputs while delivering the highest outcome. The ability of a certain application of effort to produce a specific product with the least amount of waste, cost, or unnecessary labour is frequently specifically mentioned (Sickles & Zelenyuk, 2019). The term "effectiveness" refers to quite a wide range of inputs and outputs in many different professions and businesses.

Therefore, a variety of combinations of financial and non-financial performance metrics have recently been adopted by academics in their ongoing research. For example, new product launches, market development and penetration, quality improvement, and customer satisfaction combined with a firm's sales growth, profitability, and return on investment have all been investigated (Wang et al., 2016; Oroh, 2016) against the conventional financial return on sales, profit growth, return on assets, sales, market share growth, and cash flow. Furthermore, other researchers are measuring firm performance by using non-financial indicators when respondents were asked to rate the degree to which survey questions are a current concern to their companies compared to the industry average (Oroh, 2016).

Efficiency

Efficiency measures whether SMEs resources are being used to get the best value for money (Williams, 2018). In the sense of being a tool for achieving better living conditions, SMEs can be seen of as an intermediary product. The connection between cost-based resource inputs (labour, equipment, or capital costs) and either intermediate outputs (numbers treated, wait times, etc.) or final product results is what efficiency is all about. Although many evaluations use intermediate outputs as a measure of effectiveness, this can lead to suboptimal recommendations (Mooney, Russell, & Weir, 2016). Ideally economic evaluations should focus on final efficient outcomes. Adopting the criterion of economic efficiency implies that society makes choices which maximise the SMEs outcomes gained from the resources allocated to SMEs (Weinstein & Stason, 2017). When resources may be deployed in a way that would reduce the results generated by SMEs, inefficiency arises.

The phrase "technical efficiency" describes the direct link between resources (labor and capital) and SME results. Technical efficiency is reached when the product is improved to its fullest potential by a group of resource inputs. If less of one form of input can produce the same (or greater) result than the intervention, then the intervention is technically inefficient. Thus, productive efficiency selects different resource combinations to maximize the benefit to SMEs for a given cost, while allocative efficiency determines the ideal combination of SMEs programs to maximize the firm's output. Technical efficiency deals with the issue of making the best use of the resources that are already available. Both technical and allocating efficiency entail both, but none of the alternative conclusions is certainly accurate. When resources are scarce, the idea of productive efficiency causes certain technically efficient resource input combinations to be discarded as "inefficient," but the idea of allocative efficiency causes some allocations of productively efficient resources to be eliminated.

However, when one intervention results in the same (or better) advantages for SMEs with less (or more) of one resource and more of another, the technical and productive efficacy of several treatments cannot be directly compared. Think about the initiative to move agricultural away from rural areas and toward mechanized or industrial farming. Since several input combinations are being used, the decision of which interventions to use is based on the relative costs of these various inputs. The word "productive efficiency" is used to describe the process of increasing SME production for a given cost or minimizing cost for a given outcome. The new biochemical screening program is less productively effective than the maternal age program if its overall expenses are lower than or equal to that of the latter and its results are on par with or superior.

Conceptual Hypotheses

The conceptual review in **Figure 1** was used in this study to emphasize the flow of the penetration strategy and to identify the penetration strategy technique that performs better in various organizational settings and stages. The management policy implications of this study are advantageous for an organization's penetration strategy. The elements are included into a model that can aid businesses in enhancing their performance, although the model requires additional case studies or empirically quantitative research to be confirmed. In order to analyze the many issues related to penetration technique that are studied in

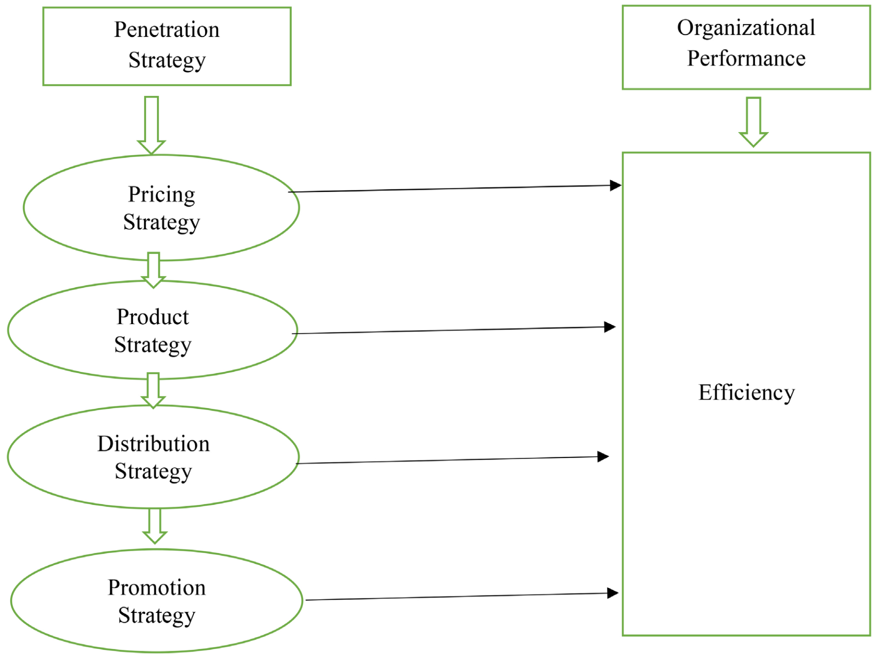

Figure 1. Relationship between penetration strategic and organizational performance with their various proxies.

this study, a significant body of literature is reviewed, primarily from several periodicals. Once all of the issues have been identified, each one is utilized as a keyword to search the relevant literature. Only research published in the last two decades are considered, and those published in the most recent decade are given priority in order to keep the study up to date. Table 1 lists the papers that have been written about the components of penetration strategy.

2.4. Theoretical Framework

Product Life Cycle Theory

The study adopted the product life cycle theory as put forth by Vernon (1979). The hypothesis states that after passing through five stages in their lifespan, products become obsolete and irrelevant if no changes are made. Businesses and the industrial sector must actively participate in market research projects to keep up with shifting consumer expectations as a product moves through its useful life. According to Vernon, goods through a number of stages during their productive lives, from conception to maturity to decline, culminating in a clear cycle in the goods' lives. The characteristics of these stages can be used to identify them, and the duration of each stage's existence is determined by the marketing techniques used.

2.5. Empirical Review

Ngugi, Muchemi and Maina (2022) assessed how chosen Kenyan telecommunication application service companies' performance was affected by their niche market penetration approach. Goal setting theory and game theory served as the

Table 1. Article published on various dimensions of penetration strategy.

S/N	Dimensions	Authors	Citations
1	Pricing	Gaudillat & Quelin (2013); Dudu & Agwu (2014);	12
2	Product	Mosiria (2012); Njomo & Oloko (2016);	10
3	Distribution	Mahendra (2013); Khandelwal (2013); Goi (2011); Kotler (2011);	15
4	Promotion	Zeithaml et al. (1988); Duncan (2005); Hakansson & Waluszewski (2005); Borden (1984); Kotler (2007); Amine & Cavusgil (2001); Francis & Collins-Dodd (2004).	12

Source: Authors' compilation, (2023).

foundation for the study constructs. The study used an explanatory and descriptive research design. The target group consisted of 21 chosen telecom application service providers. While secondary data was gathered via the Communications (CA) Authority, primary data was gathered utilizing questionnaires. Quantitative data were analysed using descriptive and inferential statistics. *P*-value was used to determine significance when testing hypotheses at a 5% level of significance. The study's conclusions showed that specialized market penetration strategy significantly and favourably affects the performance of particular application service organizations.

Kawira (2021) assessed the effect of pricing strategy on the performance of Micro, Small and Medium Enterprises (MSMEs) in Kenya. The direction of the investigation was provided by the positivist approach to research. Descriptive survey design was chosen. There were 8526 licensed MSMEs in the Tharaka-Nithi County studied. Utilizing stratified sampling and random sampling techniques, the study sample size of 368 MSMEs was established. Data was collected by distributing and delivering surveys. The quantitative data were examined using both inferential statistics as well as descriptive statistics. The examination of qualitative data was done using content analysis. According to the findings of the simple linear regression, the pricing strategy was responsible for 39.3% of the performance variance among Kenyan MSMEs. According to = 00.62, sig value = 0.000, and 0.05, the results further demonstrated that an effective pricing strategy significantly improves the performance of MSMEs in Kenya. According to the Pearson product moment correlation coefficient at r = 0.627, there is a significant positive relationship between MSMEs' success and their pricing approach. The study thus confirmed the competing hypotheses that pricing strategy significantly improves the performance of MSMEs in Kenya.

Sande and Tabitha (2020) investigated the influence of market penetration strategy on the organizational performance of public universities in Kenya. The Ansoff growth-vector matrix served as the study's foundation. The study used a cross-sectional survey design with the 33 public universities in Kenya's entire population (census). Due to the comparative analysis among Kenya's state universities, a cross-sectional survey design was adopted. Assumptions were also supported or refuted by the cross-sectional survey. Employees from the universities' marketing, planning and strategy, finance, and administration departments made up the responders. Semi-structured research questionnaires that the respondents self-administered with the researcher's guidance were used to gather data. From the appropriate respondents, they were dropped and chosen. To determine whether there might be a relationship between the dependent and independent variables, data were analyzed using both descriptive statistics and inferential statistics, such as regression analysis and correlation. Frequency distribution tables were used to present the study results. According to the study, market penetration expansion strategy has a favourable impact on how well public institutions do.

Otieno, Momanyi, and Omari (2020) examined the effect of market penetration strategies on the performance of small enterprises in Kenya. A descriptive survey design was used in the study. The study was carried out in Kenya's Migori County. The target population in 2019 was 4997 firms that had been registered with the trade department of Migori County. Interviews with a sample of 481 people were conducted. The Yamane sampling model was used to calculate this number. A standardized questionnaire was used to gather data from business owners. Cronbach's alpha co-effect was utilized by the researcher to evaluate the validity of the study instrument. Using a social sciences statistical software application, data was sorted, sorted, and entered (SPSS). The association between market penetration management strategies and performance of small businesses in Kenya was investigated using a straightforward linear regression. In order to assess the strength of the link between market penetration management methods and the expansion of small businesses in Kenya, Pearson Product Moment correlation was used.

3. Methodology

This study employed a descriptive survey design. The design was chosen since the target audience, or six states in the North West, was distributed across a large geographic area. The design enabled the collection of both quantitative and qualitative data from the target population. Among the 81 managers or CEOs in the manufacturing sector who were the target responders were the general managers, heads of strategy and planning, marketing, sales, and finance managers of Olam flour mills, Northern Noodles Ltd., Flour Mill, and 7 up Bottling PLC. To fairly reflect the whole target group, the researcher chose 81 individuals using a stratified sampling approach. The closed-ended surveys were employed to collect cross-sectional data. The essence of using closed-ended questionnaire, was to provide the respondents with various questions and ask respondents to choose from a list of possible responses. Using the Statistical Package for Social Science version 23.0, descriptive statistics, the Ordinary Least Square (OLS) multiple regression method, and ANOVA were used to examine the data.

So, in order to collect information, a questionnaire was given to the respondents. In order to create a study of this kind and other research data that are based on unique data provided by respondents who are actively involved in the research issue, the use of primary sources of data is essential. To gather information from the respondents, a questionnaire with a five-point Likert scale was used in its creation. The investigation provides insight into how penetration strategy impacts the development of the industrial sector in North West Nigeria. Nevertheless, copies of the survey were distributed to the respondents using a straightforward random sampling process.

To ascertain how the independent variable affected the dependent variable, the study also employed the Ordinary Least Square (OLS) multiple regression technique. One of the most well-known and often employed regression analysis approaches is the ordinary least squares method. This study was conducted utilizing SPSS 23.0. The standard error, t-test, F-test, AR, and R^2 must be used when examining parameter estimations statistically. The overall regression's significance was determined by the statistical criteria test, and the economic criteria test was used to assess whether the variable's coefficients match the economic a priori expectation.

3.1. Validity and Reliability

The validity of this study was confirmed based on adoption of the questionnaire from several scholars on similar studies. Furthermore, the questions were validated by the Human Resources section of the manufacturing industry its distribution to staff. The reliability was confirmed by Cronbach Alfa (Table 2).

Table 2. Scale reliability of variables.

Variables	Number of items	Cronbach's Alpha
Penetration Strategy		
Pricing	3	0.80
Product	3	0.76
Distribution	3	0.81
Promotion	3	0.72
Performance		
Efficiency	3	0.85

Source: Researcher computation (2023).

Therefore, the Alpha values was reliable as these coefficients imply that the instruments were highly reliable.

3.2. Model Specification

In carrying out this work, the researchers adopted the model of effect of niche market penetration strategy on performance of selected telecommunication application service firms in Kenya, which was examined by Ngugi, et al., (2022) with a slight modification to suit the adaptability of this study.

$$Y = \alpha + \beta_I x$$

where y = dependent variable, α = intercept, β_I is coefficient and x is the independent variable. However, the above model is expressed as:

$$PMI = \alpha + \beta_I PRI + \beta_2 PROD + \beta_3 PROM + \mu$$

where: PMI = Performance of manufacturing industry (measured as effectiveness), β = Coefficient, α = Intercept, μ = Error terms, PRI = Pricing strategy, PROD = Product strategy and PROM = Promotion strategy.

4. Data Analysis and Results

Table 3 shows that 11.11% of respondents strongly disagree that the manufacturing industry in the North West performs better when prices are initially set low to join a competitive market then raised afterwards. 18.51% of respondents disagreed, while 1.23% were unsure, that the manufacturing industry in the North West performs better when prices are set low to join a competitive market and raised later. A low price to enter a competitive market, then raising it later improves the performance of the manufacturing industry in the North West, strongly agreed 43.20% of the respondents, and a low price to enter a competitive market, then raising it later, agreed 25.93% of the respondents.

The same table also demonstrates that, with 40.74% of respondents strongly disagreeing, pricing should be based on how much the client believes the organization selling it is worth in terms of enhancing the North-West manufacturing sector. 22.22% of respondents in North West, Nigeria, disagreed with the statement, while 6.17% were unsure. 17.28% of respondents and 13.58% of respondents strongly concurred that the manufacturing sector in the North-West could be improved by pricing goods in accordance with how much the customer thinks they are worth.

Table 3. Assessment of pricing strategy.

Items	5 (SDA)	4 (DA)	3 (UN	2 (SA)	1 (A)
The performance of the manufacturing sector in the North West is improved by setting a low price to join a cutthroat market and then boosting it afterwards.	9 (11.11)	15 (18.51)	1 (1.23)	35 (43.20)	21 (25.93)
Setting a price based on the amount the consumer thinks the product or service is worth can help the North-West industrial industry.	33 (40.74)	18 (22.22)	5 (6.17)	11 (13.58)	14 (17.28)
The manufacturing sector in the North West uses penetration pricing to provide consumers a glimpse of the standards the sector has to offer through its products.	20 (24.69)	32 (39.51)	4 (4.93)	12 (14.81)	13 (16.05)

Source: Authors' computation, (2023).

Table 3 further reveals that 24.69% of respondents strongly disagreed with the claim that the North-West manufacturing industry's penetration pricing strategy allows customers to gauge the quality of the sector's offerings through its products. The use of penetration pricing by the manufacturing sector helps consumers get a sense of the standards the sector must uphold through its products, according to 39.51% of respondents who disagreed with this statement and 4.93% who were unsure. The North-West manufacturing sector's employment of the penetration pricing technique, according to 14.81% of respondents, has improved consumers' understanding of the standards the industry has to provide through its products. 16.05% of respondents felt that consumers can get a sense of the standards the North-West manufacturing industry has to provide through its products because of the industry's adoption of penetration pricing strategy.

Table 4 shows that 24.69% of respondents strongly disagree with the claim that the manufacturing sector in the North West uses a product penetration strategy to capture market control and profit from interest generated. In order to manage the market and take advantage of growing demand, the manufacturing industry in the North West employs a product penetration strategy, according to 24.69% of respondents, with 9.88% remaining uncertain. 17.28% of respondents strongly agreed and 23.46% of respondents agreed that the manufacturing sector in the North West uses a product penetration strategy to control the market and profit from increased interest.

The same table also shows that 18.51% of respondents strongly disagree with the claim that the penetration method is superior since the North-Western manufacturing sector has a significant competitive advantage over both new and used goods. 3.80 percent of respondents were unsure, compared to 2.76 percent who agreed with the statement. In light of the manufacturing sector in the North West's significant competitive advantage over both new and old products, the penetration method is more successful, according to the 20.99% of respondents

Table 4. Assessment of product strategy.

Items	5 (SDA)	4 (DA)	3 (UN	2 (SA)	1 (A)
The manufacturing sector in the North West employs a product penetration strategy to command the market and profit from interest attracted.	20 (24.69)	20 (24.69)	8 (9.88)	14 (17.28)	19 (23.46)
Since the North West's manufacturing industry has a large competitive advantage over both new and outdated items, penetration approach is more effective.	20 (24.69)	32 (39.51)	4 (4.93)	12 (14.81)	13 (16.05)
The industrial sector in the North West develops new products as a result of product strategy.	10 (12.34)	15 (18.51)	7 (8.64)	30 (37.04)	19 (23.46)

Source: Authors' computation, (2023).

who strongly agreed with this statement and the 29.63% of respondents who agreed with this statement. As a result, our plan is more successful.

Table 4 further shows that 12.34% of respondents strongly disagreed that product strategy motivates the North-West manufacturing sector to produce new products. 8.64% of respondents were undecided, while 18.51% disagreed that product strategy influences the manufacturing industry in the North West to manufacture new products. A total of 23.46% of participants and 37.04% of participants agreed that product strategy affects the North-West manufacturing sector's ability to produce new products.

According to Table 5, 22.22% of respondents strongly disagree that offering customers reduced costs and better products has helped the manufacturing business in the North West create brand loyalty. Promotional strategies have helped the manufacturing sector in the North West establish brand loyalty by offering consumers lower costs and better products, yet 24.69% of respondents disagreed with this statement, and 9.88% of respondents were unsure. By offering customers lower prices and better products, promotion strategy has helped the manufacturing sector in the North-West build brand loyalty, according to 17.28% of the respondents who strongly agreed with this statement and 25.93% of the respondents who agreed.

The same table also reveals that 16.05 percent of respondents vehemently reject the idea that consumers in the North-West manufacturing sector increase their purchases of goods during holiday seasons due to the increased value they receive. In North West, Nigeria, respondents' opinions on the statement were divided, with 14.81% disagreeing and 4.93% uncertain. According to 24.69% of respondents who agreed and 39.51% of respondents who strongly agreed with this statement, the manufacturing sector in the North West adds value by encouraging consumers to purchase more goods during holiday seasons. This increases the efficacy of the promotion campaign.

Table 5. Assessment of promotion strategy.

Items	5 (SDA)	4 (DA)	3 (UN	2 (SA)	1 (A)
Promotion strategy has helped manufacturing industry in North West build brand loyalty by giving consumer lower prices and better product.	18 (22.22)	20 (24.69)	8 (9.88)	14 (17.28)	21 (25.93)
The added value by manufacturing industry in North West during festive periods makes consumers buy more products.	13 (16.05)	12 (14.81)	4 (4.93)	32 (39.51)	20 (24.69)
Promotion strategy by the manufacturing industry in North West persuades retailers to give shelf freedom to original products.	15 (18.51)	22 (27.16)	3 (3.70)	17 (20.99)	24 (29.63)

Source: Authors' computation, (2023).

Finally, Table 5 shows that 18.51% of the respondents strongly disagreed that the manufacturing business in the North West uses promotion strategies to convince retailers to provide original items shelf freedom. A promotion technique used by the manufacturing sector in the North West allegedly convinces shops to provide original items shelf freedom, however 27.16% of respondents disagreed, and 3.80% were unsure. A promotion strategy used by the manufacturing sector in the North West is effective at convincing retailers to give original products shelf space, according to 20.99% of respondents who strongly agreed with this statement and 29.63% of respondents who agreed.

According to Table 6, 18.51% of respondents strongly disagree that the distribution of the product placement has a way of bringing the product closer to prospective customers. The distribution of the product placement has a way of bringing the product closer to prospective customers, yet 27.16% of respondents disagreed with this statement, and 3.70% of respondents were unsure. By offering customers lower prices and better products, the distribution of the product placement has a way of bringing the product closer to prospective customers, according to 20.99% of the respondents who strongly agreed with this statement and 29.63% of the respondents who agreed.

The same table also reveals that 16.05 percent of respondents vehemently reject the idea that the distribution strategy serves in the distribution of effective goods and services to clients targeted by the manufacturing industry. In North West, Nigeria, respondents' opinions on the statement were divided, with 14.81% disagreeing and 4.93% uncertain. According to 24.69% of respondents who agreed and 39.51% of respondents who strongly agreed with this statement, the distribution strategy serves in the distribution of effective goods and services to clients targeted by the manufacturing industry. This increases the efficacy of the distribution campaign.

Finally, Table 6 shows that 12.34% of the respondents strongly disagreed that the distribution or sales of the product will expand customer coverage of the

Table 6. Assessment of distribution strategy.

Items	5 (SDA)	4 (DA)	3 (UN	2 (SA)	1 (A)
The distribution of the product placement has a way of bringing the product closer to prospective customers.	15 (18.51)	22 (27.16)	3 (3.70)	17 (20.99)	24 (29.63)
The distribution strategy serves in the distribution of effective goods and services to clients targeted by the manufacturing industry.	13 (16.05)	12 (14.81)	4 (4.93)	32 (39.51)	20 (24.69)
The distribution or sales of the product will expand customer coverage of the product itself.	10 (12.34)	15 (18.51)	7 (8.64)	30 (37.04)	19 (23.46)

Source: Authors' computation, (2023).

product itself. A distribution technique used by the manufacturing sector in the North West allegedly convinces shops to distribute items to shelf on time, however 18.51% of respondents disagreed, and 8.64% were unsure. A distribution strategy used by the manufacturing sector in the North West is effective at convincing retailers to give original products shelf space, according to 37.04% of respondents who strongly agreed with this statement and 23.46% of respondents who agreed.

According to Table 7 data, 12.34% of respondents disagreed that manufacturing industries in North West Nigeria generally increase output as a result of penetration strategies used, 12.34% disagreed that manufacturing industries in North West Nigeria generally increase output as a result of penetration strategies used, and 2.47% of respondents were unsure. The manufacturing industry in North West Nigeria typically has a rise in output as a result of the implementation of penetration methods, according to 34.57% of respondents who strongly agreed with this statement and 38.27% of respondents who agreed.

Additionally, the table revealed that 1.23% of respondents were uncertain and 29.63% disagreed that the manufacturing sector in the North West frequently applied its penetration approach to produce the desired outcome. 19.75% of respondents surveyed vehemently disagreed with the claim that the North-West manufacturing sector frequently used its penetration strategy to produce the intended results. The majority of participants (24.69%) firmly agreed that the manufacturing sector in the North West frequently used its penetration strategy to accomplish the desired outcome. Furthermore, 24.69% of those surveyed agreed that the sector frequently used its penetration strategy.

The assumption that the manufacturing sector in the North-West employs performance (effectiveness) to ensure an increase in input based on penetration strategy was strongly disagreed with by 13.58% of respondents, according to the Table 7. The assertion was also strongly agreed by 13.58% of respondents, while 7.41% of respondents were unsure. According to penetration strategy, 33.33% of

Table 7. Assessment of performance (efficiency).

Items	5 (SDA)	4 (DA)	3 (UN	2 (SA)	1 (A)
The North West of Nigeria's manufacturing sector frequently sees an increase in output as a result of the penetration strategies deployed.	10 (12.34)	10 (12.34)	2 (2.47)	28 (34.57)	31 (38.27)
The North-West manufacturing industry frequently used its penetration strategy to attain desired results.	16 (19.75)	24 (29.63)	1 (1.23)	20 (24.69)	20 (24.69)
Performance (effectiveness) is used by the manufacturing sector in the North West to assure an increase in input based on a penetration strategy.	11 (13.58)	11 (13.58)	6 (7.41)	27 (33.33)	26 (32.10)

Source: Authors' computation, (2023).

respondents strongly agreed that the manufacturing sector in the North West uses performance (effectiveness) to guarantee an increase in their input, and 32.10% of respondents also agreed with this statement.

Descriptive Statistics

Table 8 of the descriptive statistics' results, including variance, mean, range, and standard deviation, were reported in Table 8. The North-West Nigerian manufacturing industry's (PMI) averages for price strategy (PRI), product strategy (PROD), promotion strategy (PROM) and distribution strategy (DIST) are 3.22, 3.11, 2.00 and 3.41 respectively. Along with the mentioned variables' standard deviations, the table also contained their values.

Table 9 shows the regression data with $R^2 = 0.91$ in SPSS show that only 91% of the variation in penetration strategy can be used to explain the efficacy (performance) of the manufacturing business in North West Nigeria. The remaining 9% are error variables, or other elements that the regression model did not account for. The regression result demonstrates that the model is appropriate for the investigation because the f-statistics is significant at the 5% level of significance. The findings show that penetration strategy (product price promotion and distribution) significantly affects the performance (efficiency) of the manufacturing sector in North West Nigeria in both positive and negative ways.

The coefficient of penetration approach (price promotion and distribution) has increased the efficiency of the industrial sector in North West Nigeria. With every 2% increase in price promotion and distribution the manufacturing sector in North West Nigeria will perform (be more efficient), increasing by 14%, 71%, and 13% respectively, according to the formulas PRI = 0.02 + 0.14, PROM = 0.02 + 1.71 and DIST = 0.02 + 0.13. Pricing, promotion and distribution are assumed to have a positive and significant impact on the performance (efficiency) of the manufacturing industry in North West Nigeria because the *P*-value of 0.00 is lower than the *t*-statistic values of (8.32, 9.44 and 5.84) and the standard error values of 0.842, 0.708 and 0.329 are lower than the t-statistic value. As a result, we accept the alternate hypotheses and come to the conclusion that price, promotion and distribution have a positive and considerable impact on the performance of the manufacturing sector in North West Nigeria.

Last but not least, the coefficient of the penetration strategy negatively affects the productivity (performance) of the industrial sector in North West Nigeria. According to the PRO = 0.02 - 1.30, the performance (effectiveness) of the manufacturing sector in North West Nigeria will decline for every 2% rise in output. The impact of product strategy on the performance (effectiveness) of the manufacturing industry in North West Nigeria is unfavorable and insignificant, as shown by the higher standard error value of 0.584 than the t-statistic value and the higher *P*-value of 0.03 than the lower *t*-statistic value of (−10.20). We can accept the null hypothesis, reject the alternative hypothesis, and get to the following conclusion because product strategy has no impact on the performance (effectiveness) of the manufacturing sector in North-West Nigeria.

Table 8. Result of descriptive statistics.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
PMI	81	1.00	5.00	2.4561	1.62226
PRI	81	1.00	5.00	3.2218	1.43550
PROD	81	1.00	5.00	3.1113	1.55531
PROM	81	1.00	5.00	2.0045	1.42619
DIST	81	1.00	5.00	3.4193	1.32158
Valid N (listwise)	81				

Source: Authors' computation, (2023).

Table 9. Regression result.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.809[a]	0.910	0.884	0.64168

a. Predictors: (Constant), PRI, PROD, PROM, DIST.

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	534.642	2	692.444	1881.310	0.000[b]
	Residual	43.757	79	0.431		
	Total	554.112	80			

a. Dependent Variable: PMI. b. Predictors: (Constant), PRI, PROD, PROM, DIST.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	−0.021	0.065		−5.228	0.000
	PRI	0.141	0.089	0.842	8.320	0.001
	PROD	−1.300	0.053	0.584	−10.207	0.003
	PROM	1.711	0.070	0.708	9.444	0.000
	DIST	0.133	0.017	0.329	5.841	0.002

a. Dependent Variable: PMI. Source: econometric output, 2023. Decision rule: 5%.

5. Discussion of Findings

According to the study's findings, penetration strategy is thought to have a substantial impact on the manufacturing sector in North-West Nigeria. The industry uses penetration strategy to encourage a rise in sales, usage, or experimentation with their good or service. The performance (efficiency) of the manufacturing sector in North West Nigeria is greatly impacted by the penetration strategy, both favorably and unfavorably, the study claims. The performance (efficiency) of the manufacturing sector in North West Nigeria was demonstrated by additional data to be positively and significantly impacted by pricing strategy, promotion strategy and distribution strategy. It was so because the majority of manufacturing industry strategists concur that when products are introduced to the market, consumers accept their prices and marketing strategies, which helps the various manufacturing industries perform better and achieve their goals. The consequence was that manufacturing industry tactics for enhancing organizational performance highlight the significance of taking into account how pricing, promotion and distribution systems evolved through time. The outcome is consistent with Ngugi, et al.'s (2022) analysis of the performance of selected Kenyan telecommunication application service providers, which examined the impact of niche market penetration strategy on both variables.

The manufacturing industry in North West Nigeria was also determined to have been negatively and insignificantly damaged in terms of penetration strategy (product) and performance (efficiency). This disappointing result demonstrated that product strategists in the sector generally concur that most of their products don't adhere to international standards, which causes them to lose market share over time. This result does not concur with any of the study's other conclusions. According to the research, businesses or the manufacturing industry should heavily invest in market research projects in order to recognize changes in consumer needs as a progress through its useful life. This is in line with the Product Life Cycle hypothesis. The idea postulates that throughout the course of their useful existence, products go through a variety of stages, from conception to maturity and decline, resulting in a unique cycle. Therefore, depending on the marketing tactics used, a product's characteristics dictate how long it stays in a particular stage.

6. Conclusion and Recommendations

The research's conclusions indicate that the manufacturing industry in North-West Nigeria uses a market penetration strategy to benefit from low prices and increase product demand and market share. Despite rising demand, the manufacturing sector saves money on promotion and creation expenditures because to higher output volumes. The industry also uses penetration strategy as a metric to assess whether a product or service is able to claim a specific share of the market. Additionally, practically the whole industrial sector uses promotion as one of the primary communication mix methods to improve performance. At every step of the product life cycle, penetration strategy is crucial, but the early and growing stages are when it matters the most. As a result, penetration strategy has had a beneficial impact on the manufacturing sector's performance and boosted the sector's effectiveness.

According to the study, cutting costs is a successful technique for luring in new clients, thus the manufacturing sector in North-West Nigeria should continue to adapt its pricing, promotion and distribution tactics to improve performance. By cutting cost, the manufacturing industry can use one promotional technique for a long time or a year instead of applying different promotional techniques to attract the consumers. Furthermore, the distribution strategy can be by having wholesalers coming with their vehicles or trucks to acquire the goods directly from the manufacturers and distribute the products to the other channels. This will help the industry reduce cost too. Spend more energy and time on a promotion to raise brand awareness. This can be achieved by jingles and handbills adverts to the consumers and by so doing, the manufacturing industry will utilize an efficient marketing strategy to raise product awareness in specific regions due to its adverse effects.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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