

An Analysis of Product Innovation and Competitive Advantage in Selected Plastic Manufacturing Industries in Onitsha, Anambra State, Nigeria

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Abstract

This study examined product innovation and competitive advantage in selected plastic manufacturing industries in Onitsha. The precise goals of this study are to ascertain the contribution of sensing capability, seizing capability, and transformation capability to the achievement of competitive advantage. The dynamic capability theory underlies this investigation. The study used a descriptive research design for its study. Personnel from four specific Onitsha plastic factories make up the study's population of 168. Taro Yamane's formula was employed to get a sample size of 120. The study's data were produced using a structured questionnaire. Primary data were collected from the respondent. The data gathered were analyzed using multiple regression method. The study found that sensing capability, seizing capability and transforming capability had significant positive relationship with competitive advantage. The study concludes that product innovation has significant positive relationship with competitive advantage in plastic manufacturing industries in Onitsha. The study made several recommendations, including that businesses constantly strive to invest in diverse new product ideas and improve the existing products in order to get a competitive advantage over rivals.

Keywords: *Product Innovation, Competitive Advantage, Sensing Capability, Seizing Capability, Transforming Capability.*

1. Introduction

Innovation is one of the key pillars of improved market entry, market share growth, and competitive advantage strategies for businesses. To design products that may provide customers with higher value, a firm needs to understand its consumers, rivals, and markets. In order to uncover and develop new goods, it must engage in effective planning for them and establish a methodical, customer-driven development process. However, innovation is likely to be very expensive and dangerous since a new product faces significant challenges because the company gains a competitive edge through product modification, product enhancement, and new brands. Product innovation, which is integrated into the organizational structure, processes, goods, and services that are fixed in a firm, is a crucial component of competitiveness, according to Gunday, Kandah and Ranch (2011).

Product innovation is one of the crucial tools of growth strategies to penetrate new markets, raise actual market share, and provide the company a competitive edge.

It has been established that a competitive advantage is essential for business organizations to be viable in the current, globally integrated economy. A company can use a competitive edge to grow both its market share and sales. It is a competitive advantage acquired by providing customers with more value, either through lower prices or through the provision of extra benefits and services that legitimately justify equivalent or possibly higher prices (Naatu, 2016). As a result, every business strives to gain a competitive edge in the markets for the products and services it provides. Mesquita, Lazzarini, and Cronin (2007) assert that a significant component of competitive strategy for many industrial businesses is product innovation.

The rapid and unpredictable speed of technological development, combined with the failure of many businesses to take advantage of it in order to gain a competitive advantage, pose severe challenges to their capacity to remain competitive. Others countered that managerial innovations, such as strategic human resource management, or innovation-based data, such as new market research methodologies, provide more dependable pathways to competitive position than do product innovations. According to Knox (2002), in order to prevent rivals from duplicating their key competitive advantages, businesses could only concentrate on developing technologies that are essential to their sector. Finding results that are tough for other businesses to duplicate is the prevalent theme. According to Danjuma, Uzir, Maimako, and Eneizan (2021), businesses must offer the same services or goods as their rivals at a lower price. Product differentiation happens when a business creates a good or service that consumers want. It can happen through adding value to a service or good that sets it apart from its rivals, or by providing a unique service or good that no other business provides. Therefore, a competitive advantage might develop through modifications to the product development process, new channels of distribution, and adjustments to pricing points. Therefore, a competitive advantage could appear in the shape of modified products, new distribution channels, and adjusted prices.

Additionally, it can be justified in the same context as the dynamic capability approach given that an organization's capacity to consolidate, structure, and reconstitute its resources is required for product innovation. Looking at organizational skills has a number of consequences for how product innovation

activities are developed and managed. The three distinct capabilities of perceiving, grabbing, and transforming are the three categories into which Teece (2007) noted that dynamic capability is split. To find potential for product innovation, a company needs to have the ability to sense. The existence of an organization may not be maintained if it lacks a system to notice changes in the dynamic environment. On the other hand, the term "seizing capability" refers to the capacity to capture possibilities that are perceived, choose a business model for the development of a new product, and create and allocate the required resources to exploit the product. A vertically integrated supply chain with clear strategic goals, market-oriented product development plans, management leadership, and prompt decision-making are all essential components of seizing capability.

In order to adjust to environmental changes, a corporation must also modify its competitiveness-generating resources. The term "transforming capability" refers to the capacity to combine, recreate, renovate, produce, and, in some circumstances, dispose of existing resources for product production (Cepeda & Vera, 2007). Based on the aforementioned, the study looked at how product innovation influences competitive advantage in several plastic industries in Onitsha. More specifically, it examined how perceiving, using, and altering capabilities contribute to gaining a competitive edge.

Product innovation is relevant due to various issues that are arising in the industry. After innovation, probably, absent of marketing research among companies, inadequate production of required products, wrong product packaging, wrong target market, company failure to analyze and establish product production stages, product life cycle constitute a problem in the industry (Mojekeh, 2014). It is against this backdrop this study examined product innovation and competitive advantage in selected plastic industries in Onitsha.

The objective of the study is to investigate the relationship that exists between product innovation and competitive advantage in the selected plastic industries in Onitsha. Specifically, the research examined the relationship between product innovation variables (sensing capability, seizing capability and transforming capability) and competitive advantage in selected plastic industries, Onitsha, Anambra State.

2. Review of Related Literature

2.1. Conceptual Framework

2.1.1. Product Innovation

Innovation is the process of gradually introducing new goods and services to the market. Innovation has the power to drastically revolutionize industries, open up new markets, or entirely destroy them (Mauser, 2015). The study had emphasized on the importance of a business closely observing its rivals. Regardless of whether a firm is the market leader, a follower, a challenger, or a niche-grabber, it must discover the marketing plan that will best position it to compete with its rivals. Even if new product introduction statistics continue to rise annually, the failure rate of new products has not necessarily decreased over time and has continued to outpace at the same time. Only a small percentage of new products are also thought to be highly inventive.

A product is defined as something that can be provided to a market for consideration, acquisition, usage, or consumption in order to potentially meet a need or a want (Kotler, 2004). A product can therefore be a tangible item, a service, or a concept. A variety of items and services offered to customers are referred to as products in the context of this study. Product innovation is the process of creating and releasing a new product or service that is superior to an already existing one (Azaze, 2015). The key factors influencing product innovation are market factors and client needs.

To create creative products, manufacturing sectors must adjust to shifting consumer demands, changing demographics, and new entry points into marketplaces for produced goods. Innovation in products refers to the introduction of a good or service that is significantly different from or better in terms of its features or intended applications. This can include significant advancements in technical requirements, parts and materials, software integration, user friendliness, or other functional qualities (OECD Oslo Manual, 2015). Product innovations may depend on existing technologies or knowledge, or they may utilize novel applications of existing technologies or information. Products include both products and services. Product innovation is a challenging process that is fueled by developing global rivalry, changing client expectations, condensed product life cycles, and increasing technologies. Strong engagement within the company, as well as with its customers and suppliers, is necessary for success (Aksoy, 2017).

Cooper (2018) contends that product innovation is essential for the economic growth of any company, region, or nation. According to Cooper (2011), when technologies develop, the demand for outdated items declines and the size of related sectors declines. The foundations of any economic system's future are inventions and innovations. To succeed in innovation, one must comprehend the process, grasp its benefits, and manage both such that little is left to chance. The fact that managers must manage innovation against a background of continually changing markets, technologies, and rivals presents a significant challenge.

According to Ettlie (2016), creativity is a component of innovation, but it is not the same thing as it: innovation entails acting on the ideas generated by creativity to alter the environment in which it takes place in a noticeable and concrete way. This is supported by Cooper (2011), who argued that all innovations start with original ideas and defined innovation as the successful application of original concepts within an organization. A successful product innovation offers a range of goods, creating a product mix. A company's product mix is crucial, especially in a sector with many competitors vying for different consumer segments. Organizations typically need to alter their product portfolios, create new products, enhance existing products, or remove some items in order to increase the effectiveness of their offerings. A good selection of products will satisfy the needs of every customer. Any company should aim to have as many products as the market requires in its product line. A solid product selection should increase sales since the company will be able to draw in customers from all segments of the market and prevent customers from switching to a rival.

2.1.2. Competitive Advantage

The elements that provide a company the ability to offer services and create items at lower costs than competitors are known as its competitive advantage. Compared to other market competitors, productive firms can produce higher sales and margins. When none of a company's competitors—current or potential—adopt its strategy, it is considered to have competitive advantage or to have maintained competitive advantage. If firms are given the ability to seize opportunities and combat dangers in the external environment, other attributes like scarcity, firm traits, and substituted uniqueness can be sources of competitive advantage (Aziz & Samad, 2016). Management skill is one of the resources necessary for managing any plans. It is more difficult for businesses to deliver distinctive goods and services that are both high-quality and reasonably priced in marketplaces with fierce competition. Creating new products is one strategy for standing out from

rivals. In such a competitive climate, factors that fuel intense competition include new technologies, globalization, deregulation, and mergers. Companies must be able to offer their clients goods that are superior in terms of price and distinction (Ismail, Domil & Isa, 2014). Competitors are unable to copy the competitive advantage when they are unaware of our competencies and our fundamental advantages. It should be a priority to strengthen the competitive advantage of the core business in order to nurture advantage that can endure. It contributes to putting more barriers in the way of copying, giving businesses a persistent competitive edge (Al-Rousan & Qawasmeh, 2009).

The ability of a company to deliver the same results as rivals at a cheaper cost (cost advantage) or to provide benefits that outweigh those of rival products makes the presence of competitive advantage conceivable (differentiation advantage). The theory of comparative advantage responds to some of the criticisms. According to its premise, the government and business should seek policies that result in high-quality products that command high prices in the market. Porter (1995) emphasizes that national policies should be centered on production growth. Competitive advantage is based on the idea that there is always inexpensive labor available and that abundant natural resources are not required for a healthy economy. To produce items for higher revenue and please customers who will obtain higher value, competitive edge is crucial. The management complies with the owners' requests and other needs through production organization and increased use of low or production costs (Ranko, Berislav & Antun, 2008).

When a company develops a quality that gives it a competitive edge, or when a group of qualities combine to make a quality performance possible, these qualities include access to natural resources like high-grade ores or cheap power, or to highly qualified and competent human resources. According to the aforementioned writings, competitive advantage is the ability to outperform current or potential rivals; hence, superior performance is obtained through competitive advantage to ensure market supremacy. Additionally, it demonstrates how a company's resources and business strategy have a significant impact on its ability to maintain a competitive advantage.

2.1.3. Product Innovation and Competitive Advantage

The present business climate is dynamic, necessitating product development that is both market-relevant and able to keep up with changing consumer needs. One approach to make sure a firm stays current and competitive in the marketplace is to

innovate, develop, and alter commercial products. According to Minguela-Rata, Fernandez-Menéndez, and Fossas-Olalla (2014), product innovation refers to this method used to develop new company products. In order to develop a new product or service for an industry, this involves recombining organizational expertise (Michael, 2014). According to OECD/Eurostat (2005), the objective of product innovation is to modify a product's functionality in some way to raise its value for customers or an organization.

By developing new products that exceed those on the market now, product innovation enables businesses to compete in their respective market categories. According to Kanagal (2015), product innovation is crucial for businesses to adapt to market challenges, shifting consumer tastes and preferences, limited product lifespans, technology advancements, shifting demand patterns, and unique consumer needs. Product satisfies market demands. If this is done, the product will be highly sought after in the market, providing it an edge over competing goods. is in line with what the market wants. Once this is accomplished, the product may experience a spike in demand, giving it an edge over competing goods. According to Stawicki (2010), product innovation is a strategy used by businesses to prevent rivals from entering the market with fresh produce, grow their market share or their overall market, and do away with the necessity to compete solely on price.

One of the defining characteristics of a successful company is innovation. To please all customers on the market and fulfill their desires is regarded as a fundamental element. Innovation, according to Reguia (2014), is the discovery of principles that, when properly used, will give businesses a competitive advantage. Any firm that wants to succeed need to innovate its products because this is the business's main function. It creates products that, more than any other marketing strategy, inform consumers about your company. Profits rise thanks to well-made products, which are the company's sole source of revenue. In terms of deciding the future performance of the company, it is also the most crucial component of the marketing mix. Companies that can develop new products that address the ever-changing demands of dynamic marketplaces are more likely to be profitable.

A competitive advantage can be gained by an organization whose cost curve minimizes unit, cost per unit, purchasing, distribution, or transaction costs. Increasing an organization's capacity for innovation through the generation of new knowledge or through technological advancements that result in the creation of novel goods and procedures can also achieve this (OECD/Eurostat, 2005). Since

products are the foundation of your company, they serve as a direct link between your company and its primary priority, customers. An organization may choose to keep working on an altogether new product or update or improve an existing one by changing its size, certain components, or other small details (Reguia, 2014).

Thus, in a dynamic and fiercely competitive corporate environment, product innovation has emerged as a key strategic tool for managers to build sustainable competitiveness. As a result, product innovation gives businesses a chance to survive and prevail over rivals. Businesses who do not innovate their products risk losing customers to other brands. This can be a result of how frequently clients' needs change. As a result, different people associate different items with product innovation. In order to meet market demand, the company's primary goal in undertaking product innovation is to give the company something that may be exploited as a competitive advantage (Andreassen *et.al*, 2016). Companies need creative items if they want to sell a lot of them and compete well. Companies must therefore come up with fresh concepts, offer cutting-edge goods, and enhance services in order to satisfy customers. Market orientation and product innovation "have a favorable influence on competitive advantage, either concurrently or partially," according to Sismanto's (2016) research. These findings concur with those of Sugiyarti (2013), who discovered that product innovation affects competitive advantage. This indicates that the companies create their products in accordance with the preferences of the customer and will be able to endure in the face of competition.

2.2. Theoretical Framework

Dynamic capability theory is the foundation of this work. The way in which an organization uses its resource base is described by the dynamic capability theory. David Teece, Gary Pisano, and Amy Shuen defined the idea as "the firm's capability to, build, integrate, and recognize both the internal and external competences to attend to fast changing surroundings" in their 1997 paper "Dynamic Capabilities and Strategic Management". A competitive advantage in quickly changing situations is based on the principle of dynamic capacity. Understanding operational capabilities, on the other hand, relates to the current state of operations, whereas understanding dynamic capabilities refers to an organization's capacity to modify its operations and expand its resources in a responsive and effective manner. This framework's key premise is that an organization's core strengths should be exploited to forge immediate competitive advantages that can be expanded into more substantial competitive advantages in the future. According to dynamic capabilities

theory, senior managers of successful businesses must devise plans for adapting to severe discontinuous change while upholding minimal capability criteria to secure their organizations' competitive survival.

For an organization to meet new problems, it needs to have three dynamic capabilities. The ability of employees to pick up new skills quickly and develop new strategic assets is one of them. Teece, Pisano, and Shuen (1997) suggested integrating these new strategic assets into organizational processes by including capability, technology, and customer feedback. Another is the ability to reuse or transform old assets that have depreciated. According to Teece (2014), creating "organizational agility" refers to the effective application of these three steps.

This theory is pertinent to the study since it described how a corporation can develop its capabilities, seize opportunities, and avoid challenges while maintaining its competitive edge through the enhancement, fusion, protection, or reorganization of both its tangible and intangible assets. The resource creation process that businesses utilize to build new resources and maintain old ones in response to environmental changes has been used by dynamic capabilities theory to increase our understanding of innovation.

2.3. Empirical Review

An empirical analysis was done by Danjuma, Uzir, Maimako, and Eneizan (2021) on the effects of innovation on competitive advantage and product quality for long-term growth among SMEs. Partial least squares structural equation modeling was used to examine survey information from 245 Nigerian SMEs engaged in manufacturing. The findings supported those of previous researchers who found that although technology adoption mediates the relationship between consumer preferences and product quality, consumer preferences do not directly affect product quality. Product quality was found to be significantly influenced favorably by company strategy, and technology adoption also played a role in mediating this relationship.

The impact of product innovation and pricing on beer products' comparative advantage in Kabale, Uganda, was studied by Agaba, Emenike, and Olutayo (2018). The data was analyzed using a multiple regression technique. According to the research, "product innovation and prices have considerable effect on competitive advantage among beer goods and producers in Kabale Uganda." The research comes to the conclusion that "innovation and prices have a positive and

significant predictive effect on competitive advantage. By paying attention to innovation and price factors, the enterprises might thereby increase their competitive edge.

The relationship between open innovation enterprises, competitive advantage, and organizational competencies was examined by Lee and Yoo in 2019. These are the study's target populations: More than 10 people work for Korean manufacturers who were formed before 2011. 46,101 businesses in the KIS database satisfy these requirements. PLS, or the partial least squares method, has been applied to data analysis in the past. It was discovered that there was statistical significance between them as a result. According to the ideal of ability, the capacity for change is a crucial prerequisite for the capacity for perception and judgment. Take advantage of possibilities that can influence product innovation and competitiveness, either directly or indirectly. The study makes the case that securing a competitive advantage and an organization's capacity for open innovation are related.

Wuryanti and Wa (2017) looked into "the connection between sustained competitive advantage and product innovation as a driving force." 110 rabbit meat vendors from the Ngablak Magelang area made up the study's sample. Data analysis was done using a structural equation model (SEM) with partial least squares (PLS). The findings showed that product innovation has a significant beneficial influence on market drivers, competitive advantage, and sustainability. The outcome also suggests that market forces have a favorable, significant impact on long-term competitive advantage. The study's main finding is that market trends and product innovation have a big impact on long-term competitive advantage.

Among 10 chosen manufacturing enterprises in the Ibadan Metropolis, Nigeria, Adeolu and Femi (2020) conducted a study on "product innovation and its effects on sustained competitive advantage." The study's sample size was determined at 330 participants. Data analysis methods included descriptive statistics and correlation. The study discovered that Ibadan's manufacturing companies employ product innovation as a tactic to achieve a competitive advantage in the market. The study also revealed that for manufacturing companies to maintain a competitive advantage, product innovation is essential. The study comes to the conclusion that product innovation significantly and favorably impacts manufacturing enterprises' ability to maintain a competitive edge. According to the report, manufacturing companies should pay more attention to and invest more resources to product innovation in order to ensure other benefits beyond only long-term competitive advantage.

The impact of innovation on competitive advantage in fast-moving consumer products was examined by Muthoni (2017), with special reference to PZ Cussons East Africa Ltd. Employees at PZ Cussons East Africa Ltd. made up the population of this study, which used a descriptive research design. PZ Cussons East Africa personnel made comprised the study's target population. 100 respondents were collected for this study using a stratified random sample. Data were gathered via a questionnaire. Data analysis employed both descriptive and inferential statistics. Results showed that process innovation and market product innovation had a favorable and significant impact on PZ Cussons East Africa Ltd.'s competitive advantage.

A 2017 study by Farhang and Bentolhoda examined "the impact of product technology innovation on competitive advantage among Iranian small and medium sized firms." In particular, the study looked at how product technology innovation affects competitive advantage. The survey research design was employed for the study, and a questionnaire was used as the tool for gathering data. Participating in the survey were 126 Iranian small and medium-sized businesses. In order to analyze the data, descriptive and inferential statistics were used. The study discovered a favorable and significant association between product technology innovation and competitive advantage.

It is clear from the empirical assessment that the majority of the works examined were completed outside of Nigeria. Since no current study on the plastic industry was done, the empirical evidence in the Nigerian data source is glaringly insufficient. The requirement for this research resulted from this. Therefore, the purpose of this study was to analyze product innovation and competitive advantage in a few Onitsha plastic industries.

3. Methodology

This study adopted descriptive research design. This study was carried out in Anambra State in selected plastic manufacturing Industries, Onitsha, Nigeria. The population of the study is made up of 168 employees of four distinct plastic industries in Onitsha. Taro Yamane's formula was employed to get a sample size of 120. Questionnaire was employed as the instrument of data collection. The primary data were collected from the respondent in Matonia Plastic Industries Ltd, Ano Plastic and Metal Industries Nigeria Ltd, Ezenwa Plastic Industries Nigeria Ltd and Icon Plastic Ltd Onitsha. The data generated were analyzed using regression

analysis with the use of SPSS version 23. The accompanying regression model is stated below:

$$CA = a + \beta_1 TC + \beta_2 SC + \beta_3 SC + e$$

Where;

CA = Competitive Advantage

TC = Transforming Capability

CD = Career Development

SC = Seizing Capability

SC = Sensing Capability

a = constant

β_1 - β_3 = beta coefficients

e= error term

4. Data Analysis and Interpretation

In this study, efforts were made to analyze data mainly obtained from primary source. In addition to analyze respondents personal data, the main research questions were analyzed in two sections namely; answer to research questions and test of hypotheses. Also, regression analysis was used to verify the hypotheses formulated to guide the study.

4.1. Demographic Characteristics

Table 1: Distribution of Respondents by Gender

S/N	Gender	Frequency	Percent	Valid Percent	Cumulative
1.	Male	74	62	62	62
2.	Female	46	38	38	100.0
	Total	120	100.0	100.0	

Source: Owner's Computation.

Table 1 shows that 74 percent of the respondents in the sample are male, while 46 percent are female, thus, showing that there are more male than female in the composition of workforce in the plastic industries sampled.

Table 2: Distribution of Respondents by work experience

Relevant years of experience	Frequency	Percent	Valid Percent	Cumulative
0 – 10	47	39.2	39.2	39.2
11 – 20	56	46.7	4.76	85.9
21 – above	17	14.1	14.1	100.0
Total	120	100.0	100.0	

Source: Owner’s Computation.

The distribution of respondents according to experience shows that 39.2 percent of the respondents have less than ten years work experience in the plastic industry. 46.7 percent have more than ten years but less than twenty one years’ experience in plastic industry while 14.1 percent have more than twenty one year’s work experience in plastic industry. The table indicates the level of experience of workers in the sampled industries; this may have influence on the Innovation and quality of job done by the sampled industry beside qualification.

Table 3: Distribution of the Respondents by Educational Qualification

S/ N	Highest Educational Qualification	Frequency	Percent	Valid Percent	Cumulative
1.	SSCE/OND/NCE	33	27.5	27.5	27.5
3.	B.Sc/HND/B.ed	54	45.0	45.0	72.5
4.	M.Sc/Ph.D	19	15.8	15.8	88.3
5.	ICAN/ANAN/NCORREN/ OTHERS	14	11.7	11.7	100.0
	Total	120	100.0	100.0	

Source: Owner’s computation.

From Table 3, respondents that have high school certificate (SSCE/OND/NCE) in the sampled industry are 33 only and it represents about 27.5 percent of the sample. Those with university degree, higher national diploma certificates are 54 and they represent about 45.0 percent in the sampled population, those with second and third degree (Master, Ph.D) are 19 and they represent about 15.8 percent. While, those with other certificates outside the categories stated above, that is those with professional qualification in their respective field, professional like the ICAN, ANAN, CORREEN are 14 respondents, representing about 11.7 percent of the

sampld population. The implication of this analysis is that the sample consists of those that are highly literate.

Table 4: Distribution of the Respondents by Department/Unit

S/N	Department/Unit	Frequency	Percent	Valid Percent	Cumulative
1.	Management	41	34.2	34.2	34.2
2.	Accounting	19	15.8	15.8	50.0
3.	Marketing	38	31.7	31.7	81.7
4.	Supply Chain	22	18.3	18.3	100.0
Total		120	100.0	100.0	

Source: Owner's Computation.

The distribution of respondents Department/Unit in Table 4 shows that 34.2 percent of the respondents are in management cadre of the sampled industries. 15.8 percent respondents have worked in accounting department, 31.7 percent of the respondents work's in the marketing department/unit. While 22 respondent representing 18.3 percent of the sampled respondent's works as Supply Chain/production unit.

4.2. Results

The regression results are presented in tables 5, 6 and 7 below:

Table 5: Summary of Regression Result

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.889 ^a	.790	.777	1.577	2.429

a. Predictors: (Constant), Sensing Capability, Seizing Capability, Transforming Capability

b. Dependent Variable: Competitive Advantage

Table 6: ANOVA Result

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	431.159	3	143.720	57.759	.000 ^b
Residual	114.461	117	2.488		
Total	545.620	120			

a. Dependent Variable: Competitive Advantage

b. Predictors: (Constant), Sensing Capability, Seizing Capability, Transforming Capability

Table 7: Coefficients of the Model

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.284	1.979		.143	.887
Transforming Capability	.768	.135	.497	5.694	.000
1 Seizing Capability	.492	.087	.495	5.681	.000
Sensing Capability	.095	.070	.292	3.359	.001

a. Dependent Variable: Competitive Advantage

Source: SPSS Ver. 23

Table 5 above indicates that R^2 recorded value of 0.790. This implies that 79% of the variation in competitive advantage in selected plastic industries in Onitsha was accounted for by the variations in capability, sensing capability, seizing and capability transformation. This was supported by adjusted R^2 of 77.7%.

In table 6 above, with a probability value of 0.000, the f-statistics value of 57.759 shows that the independent variables has a significant relationship with the dependent variable. This indicates that capability sensing, capability seizing and capability transformation can collectively explain the variations in competitive advantage in plastic industries in Onitsha. It also indicate that product innovation

has significant positive influence on competitive advantage in selected plastic industries in Onitsha

Table 7 indicates that sensing capability has a t-value of 3.359 and a probability value of 0.001 which is statistically significant. This implies that sensing capability help in realizing competitive advantage in selected plastic industries in Onitsha. Seizing capability has a t-value of 5.681 and a probability value of 0.000 which is statistically significant. This implies that seizing capability help in achieving competitive advantage in selected plastic industries in Onitsha. Transforming capability has a t-value of 5.694 and a probability value of 0.000 which is statistically significant. This implies that transforming capability help in achieving competitive advantage in selected plastic industries in Onitsha.

4.3. Discussion of Findings

This study looked into how product innovation affects competitive advantage in a few Onitsha plastic businesses. Following statistical analysis of the generated data, the study found that certain Onitsha plastic industries can achieve competitive advantage by using their sensing capabilities. This is in line with Kanagal's (2015) argument that product innovation is crucial to business, since it depends on factors such as competitive pressures, taste preference control, short product life cycles, technology advancement, volatile demand patterns, and unique consumer needs. This supports Agaba, Emenike, and Olutayo's (2018) findings that product innovation significantly increased competitive advantage. It also in consistent with Lee and Yoo's (2019) findings that sensing capability significantly influences a company's competitive advantage. Further, it concurs with Muthoni's (2017) findings that product innovation greatly enhances competitive advantage.

The study also discovered that in a few Onitsha plastic businesses, seizing capabilities results in a competitive advantage, this is in line with Stawicki (2010). Innovation is used to defeat rivals who launch new products on the market. Companies are not required to extend their market share or capture the entire market in order to compete only on price. This concurs with Lee and Yoo's (2019) findings that a company's competitive advantage has a substantial relationship to its capacity to seize opportunities. Similar findings were made by Adeolu and Femi (2020), who discovered that product innovation has a sizable positive impact on maintaining a competitive advantage.

The outcome also shows that, in certain Onitsha plastic businesses, having the ability to adapt gives one an advantage over rivals. This supports Nadar's (2013) assertion that product innovation generates competitive advantage in a fast-paced, fiercely competitive global business context. This is consistent with the findings of Lee and Yoo (2019), who found that a company's ability to transition has a considerable impact on its competitive advantage. Similar findings were made by Wuryanti and Wa (2017) who discovered that product innovation has a positive, significant impact on long-term competitive advantage.

5. Conclusion and Recommendations

In a few Onitsha plastic businesses, the study looked into "the effect of product innovation as a tool of achieving competitive advantage." According to the study, having good detecting abilities can provide you a competitive edge. This study also discovered that leveraging capabilities and develop ability to transformation can provide a competitive edge. Based on the aforementioned, the study concludes that product innovation is a useful instrument that produces a competitive advantage in particular Onitsha plastic industry.

The study recommends that companies continually work to invest in various new product ideas and enhance the current items, so as to get a competitive edge over rivals. In order to gain and maintain a competitive advantage, the managers should give priority to product innovation. Product innovation requires more focus and dedication from marketing managers in order to ensure additional benefits beyond only long-term competitive advantage. The study further recommends the following:

- 1. Investment in Innovation Capabilities:** Policy makers should encourage and support initiatives that promote innovation capabilities within the plastic manufacturing sector. This might include offering grants, tax incentives, or research and development support to companies willing to invest in product innovation.
- 2. Training and Skill Development:** Developing a skilled workforce that can facilitate product innovation and the transformation of capabilities is crucial. Policy makers could collaborate with educational institutions and industry associations to offer training programs and workshops.
- 3. Promotion of Collaboration:** Encouraging collaboration and knowledge sharing among plastic manufacturing companies can foster a culture of innovation and the adoption of best practices. This might involve setting up industry networks or innovation clusters.

- 4. Support for Research and Development:** Policy makers can provide financial incentives for companies to invest in research and development activities, as these are often essential for enhancing innovation capabilities and maintaining a competitive edge.
- 5. Monitoring and Evaluation:** Regular monitoring and evaluation of the impact of policy interventions on competitive advantage within the plastic manufacturing industry should be conducted to ensure that policies are effective and adaptable to changing circumstances. Sustainability Considerations: Policy makers may also need to consider sustainability in innovation and competitive advantage strategies, as the plastic manufacturing industry faces increasing environmental and regulatory pressures. Encouraging eco-friendly innovations could be a priority.

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