EFFECT OF INNOVATION ORIENTATION AND MARKET INTELLIGENCE ON THE PERFORMANCE OF SELECTED MANUFACTURING FIRMS IN NORTH CENTRAL, NIGERIA

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Abstract
The increasing rate of manufacturing firm's failure in North central is worrisome and the multiplier effect could be damning to the economy and this propelled the need for this study. This study examined the effect of innovation orientation and market intelligence on performance of selected manufacturing firms in North central, Nigeria. Survey design was adopted and primary data was collected using 5-point Likert scale structured questionnaire from a census sampling of 264 manufacturing firms in North-central. The study employed the Partial Least Square Structural Equation Modeling (PLS-SEM). The data collected found that innovation orientation has positive and significant effect on performance of selected manufacturing firms in North-central while market intelligence has positive and insignificant effect on the performance of manufacturing firms in North-central. Based on the foregoing, the study recommends Manufacturing firm owners/managers should reevaluate their entire market intelligence process. This involves conducting a thorough review of how they gather, analyze, and utilize market information. In addition, Managers/owners of manufacturing firms should prioritize and invest in key innovation activities that offer clear benefits, while also integrating these efforts with other strategic initiatives to improve overall performance.
Keywords: *Innovation Orientation, Market intelligence and Performance*

INTRODUCTION

In the contemporary global business landscape, top managers strive to improve firm performance through execution of organizational strategies and as a result, market orientation becomes a crucial strategy of an organization to stay competitive in the current uncertain business environment (Goldman & Grinstein, 2023). Also, the manufacturing firms face challenges such as fluctuating customer demands, technological advancements, and intensifying competition. These challenges necessitate adopting market-oriented strategies to sustain and enhance performance.

Market orientation is a critical strategic approach in emphasizing customer focus, competitor awareness, and inter-functional coordination. It reflects the extent to which firms innovate and respond to market intelligence to meet customer needs effectively and gain competitive advantage (Ram & Pradeep, 2022). This has been attributed to the view that in contemporary business environment, customers prefer companies that can deliver coordinated long-lasting satisfaction and value through the products they offer (Jawad et al., 2023). As such, there is need for businesses to continuously generate information about the current and future customer needs and wants, disseminate this information to all departments and respond to changes promptly.

In Nigerian, the importance of market orientation has gained prominence as businesses navigate the country's rapidly evolving economic landscape. Nigeria, being Africa's largest economy and a hub for diverse industries, faces challenges such as fluctuating market demands, stiff competition, and an unpredictable environment. These factors necessitate the adoption of market-oriented practices to enhance organizational performance (Osuagwu, 2023). As global and local markets become increasingly competitive, adopting a market-oriented approach becomes essential for manufacturing firms to remain relevant, meet changing customer demands, and leverage emerging market opportunities. Understanding the relationship between market orientation and firm performance becomes particularly crucial.

According to Slater and Narver (2012) cultural aspect of market orientation consists of two major dimensions, that market intelligence and innovation orientation. However, Kohli and Jaworski (2019); Homburg and Pflesser (2020) also stated that market orientation comprises two key components,

innovation orientation and marketing intelligence or intelligence generation. Each of these dimensions is used to achieve enhanced performance and long-term profitability.

Furthermore, the strategic focus on fostering a culture that values creativity, experimentation, and the adoption of new ideas to enhance performance is innovative orientation or sometimes called innovation or innovativeness. This orientation is crucial as it enables firms to adapt to rapidly changing market dynamics, develop innovative products and services, and maintain competitive advantage in diverse industries (Ayyagari et al., 2021). Firms that prioritize innovation are better equipped to respond to consumer needs, leverage emerging technologies, and differentiate themselves from competitors. By fostering innovation-oriented practices, organizations not only enhance their market relevance but also ensure resilience against external uncertainties, thereby achieving sustainable growth and performance (Srivastava et al., 2015).

Marketing intelligence plays a pivotal role in enhancing firm performance by leveraging the systematic gathering, analysis, and dissemination of market data to inform strategic decisions. It is a process through which firms acquire insights into customer preferences, competitor strategies, and broader market trends, enabling them to stay ahead in a competitive environment (Wangsankaew et al., 2018). Marketing intelligence fosters better customer satisfaction by tailoring products to meet specific needs, often utilizing tools such as social media analytics and sentiment analysis to fine-tune offerings based on real-time feedback (Vishnoi et al., 2020). Firms that employ robust marketing intelligence practices are better equipped to adapt to emerging challenges and exploit new opportunities, thus ensuring sustained performance (Rahchamani et al., 2021).

Firm performance assessed how well a company achieves its objectives, it is essential for assessing an organization's success, market position, and sustainability because It reflects financial health, and operational efficiency. Evaluating firm performance provides insights into resource utilization, and serving as a foundation for decision-making and long-term planning (Omar & Zineb, 2019). Strong performance ensures a firm's resilience and adaptability in dynamic business environments. Therefore, a firm's performance is measured based on its established goals and objectives. Measuring performance has indicators financial and nonfinancial measurements or indicators. The financial performance indicators include profitability, return on assets, return on investment, return on equity while the nonfinancial indicators comprise customer retention, customer satisfaction, market share, employee turnover, new product development and innovation (Ndubuisi et al., 2022; Bature et al., 2024). Thus, this study will assess the effect of market intelligence and innovation orientation on the non-financial performance indicators of selected manufacturing firms in North Central Nigeria.

Statement of the Problem

In the contemporary business environment, manufacturing firms operate in highly dynamic and competitive markets. Market orientation, characterized by the continuous gathering, dissemination, and responsiveness to market intelligence, is considered a critical strategy for sustaining competitive advantage. Despite its recognized importance, many manufacturing firms struggle to effectively implement market-oriented practices, leading to declining productivity, low patronage, and subsequently leading to decline in their overall performance (Gumel & Bardai, 2023). It is also worrisome that government provide also provide favorable policies, regulations and support aimed at improving the performance of manufacturing firms, the sector still experience inconsistency in their performance which has led to most of the firms folding up. Therefore, it becomes imperative to investigate the effect of market intelligence and innovation orientation on the performance of selected manufacturing firms in North Central, Nigeria.

Statement of Hypotheses

To realize the objective of the study and to provide answers to the research question, the following null hypotheses were formulated to guide the study:

Ho_1: *Innovation orientation has no significant effect on the performance of selected manufacturing firms in North Central, Nigeria.*

Ho_2: *Marketing intelligence has no significant effect on the performance of selected manufacturing firms in North Central, Nigeria.*

LITERATURE REVIEW

Market Orientation

The concept of market orientation is defined as the way businesses manage all their multiple stakeholders and examine the extent to which businesses behave or are inclined to behave, in accordance with the marketing concept (Shehu & Mahmood, 2014). It can also be described as a means to ensure the timely identification and satisfaction of customer needs. Firms following the market orientation strategy go along with an open system which allows them to have an active interaction with the external environment while firms that remain focused on their internal systems, try to develop a defensive system against environmental shocks. Market orientation thus involves the process of integrating activities with emphasis on delivering superior customer value rather than focusing on costs (Awwad, & Agti, 2011).

In other words, market orientation can be considered as the tendency of organizational activities to respond to the market demand well than competitors and predict market changes well to create a sustainable competitive advantage and high profits (Jeong, 2017). Market oriented organizations make efforts to actively cope with market responses by establishing an open communication system for sharing market information through functional coordination among the members (Schlegelmilch & Ram, 2020). According to Mustari et al. (2021) market orientation is the process of acquiring, disseminating, and applying diverse customer related knowledge. In addition, this market orientation is conducted to anticipate business competitors.

However, market orientation is an internal asset that helps companies gain sustainable competitive advantage by incorporating superior consumer value into new goods and services, this value can be achieved by taking into account customers' current and future needs, organizational knowledge and abilities, and the external environment, as well as involving all departmental functions in customer-focused activities and strategies (Saleh (2015). Market orientation is such a knowledge-based resource supporting new product development processes and resulting in superior new product performance outcomes (Dogbe et al., 2020).

Additionally, Becherer et al. (2011) defined market orientation as the internal culture and norms of an organisation that aim to generate exceptional value for consumers by prioritizing their demands and long-term profitability. More so, market orientation refers to the ability to identify and address client needs and competitor strategies. Therefore, the potential to capture market share is the most advantageous prospect for companies. If a corporation possesses a strong market orientation, it continuously examines the demands of customers and endeavours to identify solutions that address those needs, ultimately achieving exceptional performance in a volatile market (Fink et al., 2017).

Based on the preceding discussion, this study defines market orientation as an organizational culture and strategic approach focused on identifying, understanding, and satisfying the needs and preferences of customers, while continuously monitoring competitors and responding to changes in the market environment to create superior value for customers and achieve sustainable business performance.

Innovation Orientation

Innovation orientation sometimes called innovativeness or innovation is the capability of organizations to disrupt established routines and adapt to evolving technological and market trends (Autio &Thomas, 2021). It is also a continuous and adaptive approach where organizations integrate new ideas into their products, services, and business models to generate value. Innovation orientation focuses on transforming creative ideas into practical solutions that create measurable value in processes, products, and services (Taylor, 2021). According to Kumar et al. (2020), it involves fostering a culture that

prioritizes creativity, risk-taking, and the integration of innovative processes across all levels of an organization.

Innovation orientation also encapsulates the strategic alignment of an organization's goals with technological advancements to remain relevant in competitive markets (Osborne & Brown, 2020). Similarly, it is described as a strategic principle for decision-making and implementation, aiming to enhance organizational innovativeness and adaptability to market needs (Manu et al., 2021). Rhee et al. (2019) also maintained that Innovation orientation is a strategic organizational capability that reflects a firm's proactive and comprehensive approach to developing and implementing novel ideas, technologies, and processes that create sustainable competitive advantages through continuous learning, risk-taking, and market exploration.

According to Sok and O'Cass (2018) Innovation orientation represents an organizational capability that strategically aligns entrepreneurial mindset, technological competence, and market responsiveness to continuously generate breakthrough innovations that challenge existing paradigms and create sustainable competitive advantages. Wang and Hu (2020) opined that Innovation orientation is a systematic approach to identifying, developing, and commercializing novel ideas, technologies, and business models that fundamentally transform organizational performance and market positioning. Furthermore, it is a dynamic organizational capability that integrates knowledge management to proactively create, acquire, and transform knowledge into innovative products, services, and processes that generate sustainable competitive advantages (García-Morales et al., 2018).

Innovativeness enhances fast reaction to changing conditions in that companies are facing great challenges as a result of ever faster change (Lussier, 2020). This study defines innovation orientation as firm's focus on creating and implementing new ideas, products, processes, or services to meet customer needs, stay ahead of competitors, and drive business growth.

Marketing Intelligence

Marketing intelligence as Igbaekemen (2024) explained is everyday information about development in the marketing environment that helps managers prepare and adjust marketing plans. The marketing intelligence system determines the intelligence needed and collecting same by searching the environment and deliver to the marketing manager who needs it. Donthu et al. (2021) provide a definition for marketing intelligence, which involves the methodical gathering and examination of data pertaining to the market landscape. They suggest that marketing intelligence can help organizations to stay ahead of their competitors and make informed decisions.

Bader et al. (2023) posited that marketing intelligence refers to the systematic collection and interpretation of market data, competitor data, and customer data to understand and anticipate consumer behavior and market trends. Marketing intelligence is becoming more and more important in today's dynamic and competitive business landscape (Karami & Hossain, 2024). Organizations are facing increasing pressure to differentiate themselves from their competitors and reach their target customers effectively. Marketing intelligence can help organizations achieve these goals by providing them with the insights they need to develop and execute effective marketing strategies.

Market intelligence provides bird's eye view about the industry and helps the organisation to identify new opportunities for expansion. Its emphases on external information, counting customer demographics, trends, consumers buying behaviour, their geographic information and market opportunities. It reduces the uncertainties and barriers linked with business environment (Cadogan et al., 2022). This study considers marketing intelligence as the process of collecting, analyzing, and using information about customers, competitors, and market trends to make better business decisions and improve marketing strategies.

Performance

Performance is the long-term wellbeing of an enterprise compared to those of competitors; it explains the degree of fulfilment of managerial goals in business practices and realized outputs of these goals by the end of a specified period. Performance is the outcome of work because they provide the strongest linkage to the strategic goals of the organization, customer satisfaction, and economic contributions (Umoh et al., 2020). Performance plays a major role to companies in order to succeed in the competitive business field nowadays and because of that constitutes an important of the studies' interests (Cheese, 2020).

According to Ogundele (2023) performance entails how an enterprise identifies with their customers' needs and expectations, and it reflects in what way an enterprise makes use of its resources in order to ensure its objectives achievement and the attainment of its set goals. An enterprise is effective when it attains an assigned market share or sales growth goals in an efficient manner, and thus, the organisation is referred to as effective if it makes the most of its resources in order to achieve high performance level (Adeleye et al., 2018).

Organizational performance refers to the overall effectiveness, efficiency and achievement of an organization in meeting its objectives and delivering desired outcomes, it is also the capacity or an organization to achieve its objectives and maximize outcomes (Miles, 2022). Performance as the ability to meet planned output quantities, meet market demand for product or service, to deliver quality products or service to customers and to meet planned profit levels. Performance of an enterprise is generally centered on either efficiency or effectiveness since the business enterprise must eventually be profitable to survive (Nwokocha & Madu, 2020).

Presently there is greater emphasis on non-financial and multi-dimensional performance measures to understand and manage the performance of the organization to achieve its goals (Downey, 2017). While the nonfinancial dimensions comprise customer retention, customer satisfaction, market share, employee turnover, new product development and innovation (Ndubuisi et al., 2022). Based on this research context, this study defines performance as the measurable outcomes or results achieved by an organization in relation to set goals, objectives, or standards. Furthermore, the study used the non-financial dimension of performance for measurements.

Innovation Orientation and Performance

Ede (2024) evaluated the effect of innovation process on the performance of SMEs in Ebonyi State. The area of the study was Abakiliki Metropolis. Two hundred and eighty-three (283) business owners and employees were selected for the study. Descriptive survey design was used. The primary source of data was administration of questionnaire. Two hundred and fifty-three (253) owners and employees returned their questionnaire and accurately filled. Data was analyzed by mean score and standard deviation. The hypotheses were analyzed using Z - test. The findings indicated that innovation had significant positive effect on the performance of SMEs in Ebonyi State. The study was specific to SMEs in Ebonyi State, and therefore its findings may not be directly applicable to manufacturing firms. This research addresses this limitation by focusing on North Central Nigeria.

Islam and Mohamed (2024) conducted a study on the effect of innovation orientation on firm performance in a Malaysian-based ICT Companies. Data were collected via electronic survey from 115 small and medium enterprises operating in the ICT industry in Malaysia. Specially designed questionnaire was used to measure the research constructs. The sampling frame consists of 1488 small and medium-sized firms listed in the National ICT Association of Malaysia's (PIKOM) directory. The study found that innovation orientation was positively related to company performance which was measured in terms of both market and financial metrics. The study, conducted in Malaysia within a different sector, may not be directly relevant to the Nigerian context due to significant economic, cultural, and sectoral differences. Therefore, this needs for this new tailored study.

Marketing Intelligence and Performance

Yusuf et al. (2024) studied the effect of marketing intelligence on the performance of listed consumer goods companies in Nigeria, employing a descriptive survey research design. The sample consisted of 126 purposively selected respondents, representing marketing/sales departments within 21 consumer goods firms listed on the Nigerian Exchange Group Ltd (NGX). The data collected underwent analysis using Partial Least Square Structural Equation Modeling (PLS-SEM) Smart PLS 3.5 software, which revealed a significant positive effect of marketing intelligence on the performance of consumer goods companies listed in Nigeria. This study focused on listed consumer goods companies in Nigeria, while the current study focuses manufacturing firms in North Central.

Mary and Stephen (2024) explored whether markets intelligence practices affect the performance of Air Kenya Express Ltd; the study employed a descriptive research design. The study target population was 150 employees of Air Kenya Express Limited head office in Nairobi. A sample of 25% was selected from within each group in proportions using stratified random sampling method to select 38 respondents. Questionnaires which contained both open and close-ended questions were used. Descriptive analysis was used to analyze the data collected, which included both qualitative and quantitative data. For further analysis of responses, tables and figures were used. Relationship between variables and their strength was shown using multiple regression analysis. The regression results revealed that market intelligence has a positive and significant influence on performance of Airlines in Kenya. The study's limited sample size may restrict the generalizability of its findings.

Resource-Based View (RBV)

This study will be underpinned by Resource-Based View (RBV) which was propounded by Barney (1991) According to RBV theory, a company's success and its capacity to maintain a competitive edge over the long term are mainly influenced by its internal resources. These resources consist of assets, capabilities, organizational procedures, company characteristics, information, and knowledge that are managed by the company and facilitate the creation and execution of strategies to improve efficiency and effectiveness (Coates & McDermott, 2002). Essentially, RBV theory argues that a company's internal resources and capabilities are the most significant factors for gaining a competitive advantage when compared to other companies. Within this perspective, employees are regarded as strategic assets possessing distinctive competencies that can generate superior value.

By maintaining the uniqueness of these competencies within the firm, they can be leveraged to establish a competitive advantage (Pearce & Robinson, 2011). The Resource-Based View (RBV) theory posits that organizations ought to prioritize the utilization of their internal resources and capabilities in order to attain a competitive edge, rather than relying solely on external factors. Despite its significance, the resource-based view (RBV) theory is not immune to criticisms. One particular critique raised by Kozlenkova et al. (2014) is that the RBV places excessive emphasis on value creation, which can be static and neglects to consider how resource effectiveness evolves over time.

This study aligns with the RBV theory as it emphasizes the importance of possessing valuable resources to achieve a competitive advantage. In this context, marketing intelligence can be considered a valuable resource for firms. It provides valuable insights that enable firms to identify and understand customer needs and preferences. By leveraging these insights, firms can develop and market products and services that effectively meet customer demands, leading to superior returns and competitive advantage.

METHODOLOGY

The study adopted a survey design to examine the relationship between market orientation proxy by competitor orientation, inter functional coordination and customer orientation (independent variables) and performance (dependent variable). The study population comprised of all the manufacturing companies in North Central Nigeria that are registered with the Corporate Affairs Commission (CAC) and the Manufacturers Association of Nigeria (MAN), each having at least five years of operational experience. This selection criterion aims to include well-established firms, improving the reliability of the

findings. A total of 264 firms meets these criteria, and the respondents will be the owners or managers of these companies. The study adopted the use of census sampling which is employment of the entire research population as the sample size are not much (Parker, 2011). All the 264 questionnaires were distributed however 213 questionnaires were duly completed and returned and was used for data analysis. Primary data was collected using 5-point Likert scale structured questionnaire for the study. The questionnaire items were adapted from the works of Frankline and Donald (2020); Bowen (2019); and Bekata and Kero (2024) and designed using 5-point Likert scale structure ranging from "strongly agreed to "strongly disagreed. The study adopts convenience sampling technique which is well-justified for the study. The study employed the Partial Least Square Structural Equation Modeling (PLS-SEM) to model the regression analysis. The PLS path modeling method was developed by Wold (1982). The PLS algorithm is a sequence of regressions in terms of weight vectors. The weight vectors obtained at convergence satisfy fixed point equations. PLS-SEM is a non-parametric method that does not require that the data meet certain distributional assumptions. However, the parametric significance tests (e.g., as used in regression analyses) cannot be applied to test whether coefficients such as outer weights, outer loadings and path coefficients are significant. Instead, PLS-SEM relies on a nonparametric bootstrap procedure to test the significance of various results such as path coefficients, Cronbach's alpha, HTMT, and R^2 values. (Efron & Tibshirani, 1986; Davison & Hinkley, 1997). The model for the path analysis is specified thus:

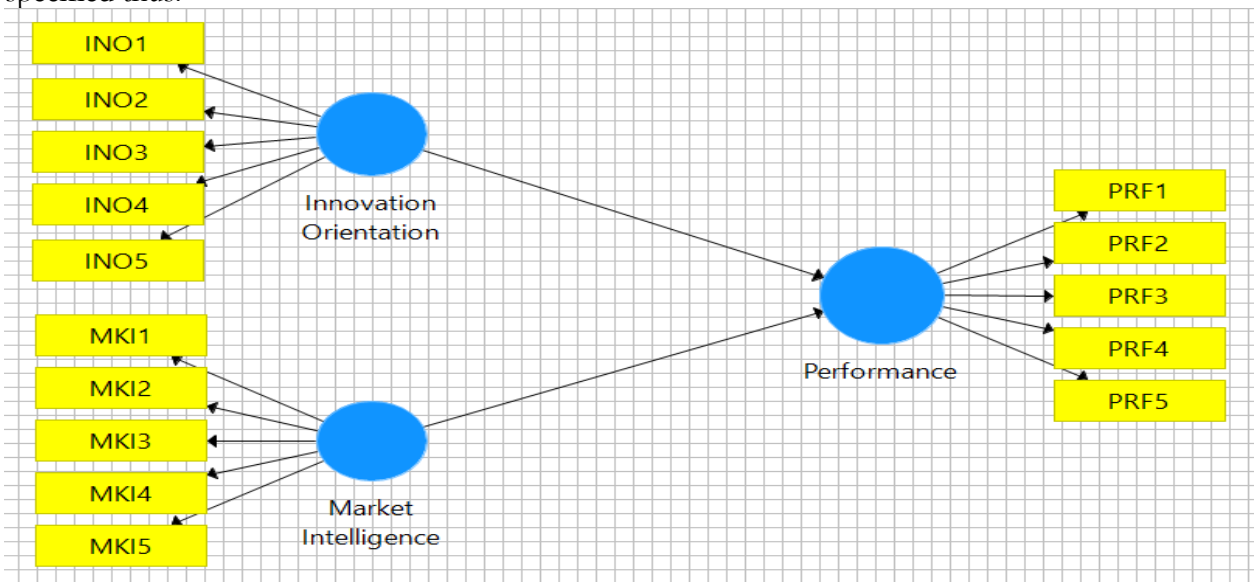


Fig. 1 Theoretical Model on effect of innovation orientation and market intelligence on performance of selected manufacturing firms in North Central, Nigeria.

Results and Discussion

Out of the two hundred and sixty-four (264) distributed questionnaires, 213 were properly filled and returned giving a response rate of 81%. Subsequently, all further analyses were done using 213 response data.

Assessment of Measurement Model

In assessing the measurement model, we begin by assessing the item outer loadings. As a rule, loadings above 0.708 are recommended, as they indicate that the construct explains more than 50 percent of the indicator's variance, thus providing acceptable item reliability (Hair, et al., 2019). However, Hair, et al., (2019) posited that low but significant indicator loading of 0.50 can be included hence justifying why indicators with loadings less than 0.708 and above 0.50 were not deleted from the model as seen in figure 2 below; However, according to Hair et al. (2019) loadings less than 50 percent will be deleted this justify the reduction in number of indicators for some latent variables.

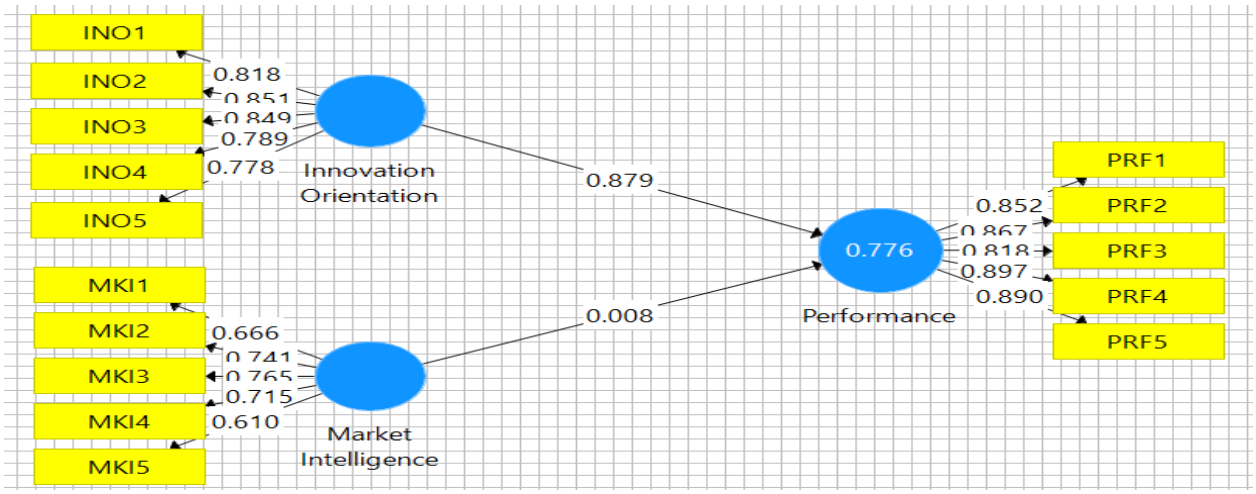


Fig 2: Indicator Loadings

Table 2: Factor Loadings of the Constructs

Items	Loading
INO1	.818
INO2	.851
INO3	.849
INO4	.789
INO5	.778
MKI1	.666
MKI2	.741
MKI3	.765
MKI4	.715
MKI5	.610
PRF1	.852
PRF2	.867
PRF3	.818
PRF4	.897
PRF5	.890

Source: SMART-PLS Output, 2025

To establish internal consistency of the study constructs, the Cronbach's alpha and composite reliability were examined. According to Hair, et al., (2019) the minimum threshold for measuring composite reliability (CR) and Cronbach's alpha is 0.7. Also, the minimum value of the AVE should be higher than 0.50. All the constructs satisfied this requirement as shown in table 3 and as such are valid for the study.

Table 3: Construct Reliability and Validity of the Indicators

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Innovation Orientation	.889	.839	.755
Market Intelligence	.862	.814	.679
Performance	.819	.726	.716

Source: SMART PLS Output, 2025

Discriminant validity is the extent to which a construct is empirically distinct from other constructs in the structural model. To assess discriminant validity, Henseler et al. (2015) proposed the Heterotrait-monotrait (HTMT) ratio of the correlations. They explain that discriminant validity problems are present when HTMT values are higher than 0.90. This is not the case in this study as shown in table 4 below

Table 4: Heterotrait-Monotrait Ratio (HTMT) Criterion

	Innovation Orientation	Market Intelligence	Performance
Innovation Orientation	1.00		
Market Intelligence	.588	1.00	
Performance	.723	.523	1.00

Source: SmartPLS Output, 2025

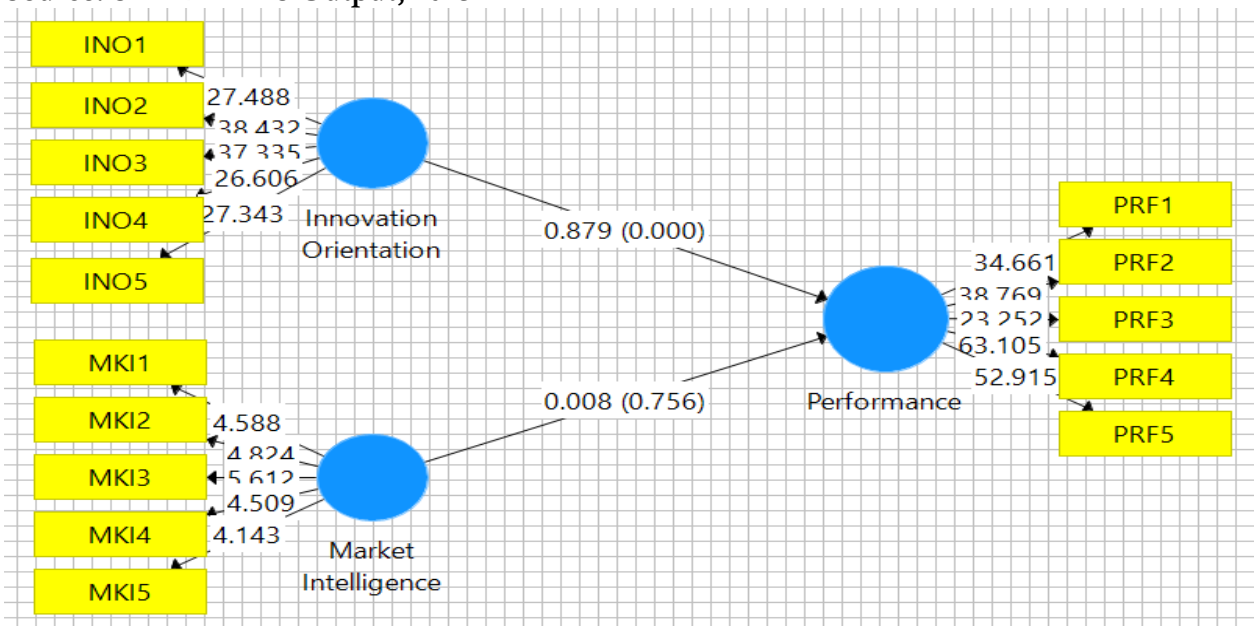
Assessment of Structural Model

The coefficient of determination, R-Square value on table 5 show 0.778, meaning that 77.8% of employee productivity were influenced by age diversity and functional diversity. Meanwhile, the remaining 12.2% was affected by other factors not mentioned in the study. Also, the **Q^2** value of 0.765 indicates high predictive relevance.

Table 5: Coefficient of Determination (R^2) and Predictive relevance ($Q^{2)}$

	R Square	R^2Adjusted	Q Square
Performance	0.778	0.776	0.765

Source: SMART-PLS Output, 2025



Test of Hypotheses

Table 6 shows the path coefficients, t-values and p-values used to test the hypotheses of the study:

Table 6: Path Coefficient of the Model

Variable	Beta	T Statistics (|O/STDEV|)	P Values	Decision	F^2 value
Innovation Orientation -> Performance	0.861	38.064	0.00	Rejected	0.108
Market Intelligence **-> Performance**	0.057	1.948	0.052	Accepted	0.206

Source: SmartPLS Output, 2025

Hypothesis One

H_{01}: Innovation orientation has no significant effect on performance of selected manufacturing firm in North-Central, Nigeria.

The result from table 6 shows that innovation orientation has positive and significant effect on performance of selected manufacturing firms in North-central, Nigeria, with $\beta = 0.861$ and $p = 0.000$. Thus, null hypothesis one which states that innovation orientation has no significant effect on performance of selected manufacturing firms in North-central, Nigeria was rejected at 5% level of

significance. Thereby accepting an alternative hypothesis which states that innovation orientation has significant effect on performance of selected manufacturing firms in North-central, Nigeria.

This implies that the more a manufacturing firm emphasizes and prioritizes innovation, the better its performance outcomes tend to be. This suggests that a strong innovation orientation is a critical factor contributing to the success and competitiveness of these organizations. This finding is consistent with that of Ede (2024) who found that innovation orientation has positive and significant effect on performance of selected manufacturing firms in North-central. However, the finding disagrees with that of Islam and Mohamed, (2024) who found negative but significant effect on performance of selected manufacturing firms.

Hypothesis Two

H_{O2}: Market intelligence has no significant effect on performance of selected manufacturing firms in North-central, Nigeria.

The result from table 6 shows that market intelligence has positive and insignificant effect on performance of selected manufacturing firms in North-central, Nigeria with $\beta = 0.057$ and $p = 0.052$. Thus, null hypothesis two which states that market intelligence has no significant effect on performance of selected manufacturing firm in North-central, Nigeria was accepted at 5% level of significance. The alternative hypothesis which states that market intelligence has significant effect on performance of selected manufacturing firm in North-central, Nigeria will therefore be rejected.

This implies that factors other than market intelligence may be more crucial in determining the success and competitiveness of these manufacturing organizations. Aspects such as technological innovation, operational efficiency, product development, or strategic decision-making could be the primary drivers of performance, rather than the firms' ability to gather and leverage market-related data. This finding is consistent with that of Igbaekemen, (2024) who found that market intelligence has positive but insignificant effect on performance of selected manufacturing firms. Also, the finding is inconsistent with that of Mary and Stephen, (2024) who found positive and insignificant effect on performance of selected manufacturing firms.

The f^2 examines the effect caused on the endogenous construct's R^2 value as a result of removal of a certain predictor construct. Cohen (1988) guideline was used to measure the effect size which revealed that all relationships were either small or medium effect.

CONCLUSION AND RECOMMENDATIONS

This study examined effect of innovation orientation and market intelligence on performance of selected manufacturing firms in North Central, Nigeria. Based on the research findings, the study concluded that market intelligence has positive and insignificant effect on performance of selected manufacturing firms, while innovation orientation has significant factors which affect performance of selected manufacturing firms in North Central, Nigeria. The study also concludes that market intelligence is a factor that influences a reasonable level of performance in manufacturing firms.

Based on the findings and conclusions above, the study recommends thus:

i. Manufacturing firms' managers/owners should allocate adequate resources to support their innovation efforts. This includes dedicating a portion of the budget and resources specifically for research and development activities. Investing in the latest technologies, tools, and infrastructure can enhance the firm's innovative capabilities.
ii. Manufacturing firms' owners/managers should reevaluate their entire market intelligence process. This involves conducting a thorough review of how they gather, analyze, and utilize market information. By identifying any gaps or inefficiencies in this process, the firms can implement improvements to streamline the market intelligence function and ensure it is more closely aligned with their strategic objectives.

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APPENDIX I: RESEARCH QUESTIONNAIRE

Instruction: kindly tick ☑the appropriate box.

Key: *SA = Strongly Agree, A = Agree, U = Undecided, D = Disagree, SD = Strongly Disagree*

S/N	Innovation Orientation (INO)	SA	A	U	D	SD
1	The firm actively seeks out new ways to do things					
2	The firm regularly introduces new product and services					
3	We always update our processes and methods of operations					
4	Employees are encouraged to share creative ideas and experiment with new approaches					
5	We are quick to adapt to changes in technology, market demands, and industry trends					
	Marketing Intelligence (MKI)					
1	The firm regularly evaluate the existing and upcoming market trend					
2	The firm is quick in responding to competitors' actions					
3	The firm disburses acquired information with all levels on a regular basis					
4	Regular research is conducted to gather insights about customer needs					
5	The firm is quick in responding to changes in business environment					
	Performance (PFM)					
1	There has been an improvement in customer satisfaction					
2	There is increase in sales growth from our product					
3	The firm has recorded decreased in employee turnover					
4	Increased in market shares over the last three years					
5	The firm regularly introduces new and improved products to meet market demands					