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ADVANCING COMPETITIVE ADVANTAGE IN MANUFACTURING FIRMS THROUGH COMPETITIVE INTELLIGENCE

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Abstract

This study investigated the relationship between Competitive Intelligence Practices and Competitive Advantage in Manufacturing Industry: A study of selected Aluminum Firms in Nigeria. The specific objectives of the study are to ascertain the effect of the selected measures of Competitive Intelligence, namely; Strategic Intelligence (SI) and Innovative Intelligence (II) on Competitive Advantage (CA). The responses from the respondents were collected with the aid of five (5) Likert scale questionnaires and descriptive survey research. A total of one hundred and sixty-nine (169) questionnaires were administered, out of the one hundred and sixty-nine (169) questionnaires administered to staff of selected registered Aluminium Firms. One hundred and forty-six (146) were retrieved and properly filled. These one hundred and forty-six (146) respondents represent 86.39 per cent of the total questionnaire administered, which shows that one hundred and forty-six (146) respondents are sufficient for the study. Thus, the sample used for the study was the one hundred and forty-six (146) respondents from the staff of Aluminium Industries used. The questionnaire was coded with the aid of an excel spread sheet, the respondent's profile was analyzed with manual simple percentage, and the research questions were analyzed with the aid of descriptive statistics, correlation matrix and multiple regression statistical tools with the aid of SPSS version 23 as the basis of testing hypotheses. The findings revealed that Strategic Intelligence (SI) and Innovative Intelligence (II) have a significant relationship with Competitive Advantage (CA). From the findings of the study, it can be concluded that overall the competitive intelligence practices had a positive significant effect on the competitive advantage in selected Aluminum Firms. Thereby the study recommends that there should be adequate investment in the competitive intelligence process, facilities, and activities by the manufacturing firms to be innovative in their product, services and competitive dispositions.

Keywords: *Competitive Advantage, Competitive Intelligence, Manufacturing Firms, Strategic Intelligence, Innovative Intelligence.*

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1. Introduction

Globalization introduces new issues that significantly enhance the complexity of the environment in which businesses operate. In particular, the global economy has had a direct impact on competitiveness and security, causing both concepts and approaches to alter (Benedicta, 2021). Today's commercial climate is far more complicated, with other operators' interests creating a dynamic environment (Chaki, 2015).

Any business organization's effectiveness and long-term viability are determined by how well it understands its environment and makes strategic decisions that will allow for proper adaptation or response in the face of hostile competition (Kafi, 2017). It is often claimed that once one understands where they are going, they may plan the best and most appropriate route to get there. The appropriate identification and evaluation of an organization's rivals–their personnel, their product, and their operating styles–will assist the organization in positioning itself to be able to compete favourably with its competitors (Irenaus, Ikechukwu and Ndubuisi, 2021).

In this context, Competitive Intelligence (CI) is presented as a strategic discipline that assists organizations in adapting to environmental changes and dealing with industry disruptions (Vriens & Silen, 2014), as cited in Benedicta (2021). CI enables an organization to gain a better understanding of its business and industry environment, as well as to learn from competitors' corporate and business strategies continuously (Calof & Sewdass, 2020).

Through competitive intelligence, stakeholders such as managers can learn about and understand past and present events within and beyond their corporate environment. Production, security, marketing, sales, information technology, and finance are just a few examples. Furthermore, competitive intelligence is not commonly used by industrial enterprises in underdeveloped economies, particularly in Nigeria (Neizhelele & Pellissien, 2014; Awosejo, Lynnette & Mphahlele, 2015, Khalifat & Gimira, 2017).

Quality, cost reduction, flexibility, and delivery are all factors that might influence competitive advantage. Scholars such as Stefankov, Rypakova, and Moravikova (2015) and Mirkhan, et al. (2017) have proven that competitive intelligence and business performance indicators have a favourable association. However, competitive advantage was not included as a dependent variable in this research, which was measured by quality, cost, flexibility, and delivery. As a result, our current study differs from previous studies in terms of contributing to knowledge.

Hence, this study will examine the relationship between competitive intelligence practices and competitive advantage in the manufacturing industry.

The Problem

The failure to recognize that the business environment has become increasingly competitive and dynamic and that only those organizations with the necessary information capabilities can succeed in modern times is the major problem in the Nigerian manufacturing industry. As a result of this dilemma, many firms failed to take intelligence seriously and so failed to establish a competitive intelligence department. It was determined that it is either not functioning or not completely engaged in the activities of information gathering, analysis, and dissemination of intelligence required for effective competitiveness in most businesses where it exists, which is a severe challenge in the manufacturing industry.

As a result of the insufficient generation of intelligence, most organizations lack in-depth knowledge about existing products, customers, competitors, stakeholders, and other environmental relationships that are required to enable managers and business executives to make quality strategic decisions. This, in turn, has resulted in a culture of poor innovation, customer dissatisfaction, poor product quality, and high costs of goods and services production. This experience has harmed industrial businesses' ability to compete favourably to achieve high performance. There is a lack of understanding of competitor orientation and the related process of organizational learning capabilities, as well as how this might improve the quality of competitive intelligence, resulting in increased organizational performance and overall competitive advantage. It is against this background that the study will be carried out. The research seeks to investigate the relationship between competitive intelligence practices (proxy with strategic intelligence and innovative intelligence) and competitive advantage in the manufacturing industry.

Study objectives

1. To examine the strategic intelligence on competitive advantage in manufacturing Firms.

2. To ascertain the effect of innovative intelligence on competitive advantage in manufacturing Firms.

Research Hypotheses

$H0_1$: There is no significant effect between strategic intelligence and competitive advantage in the manufacturing industry.

HO_2: There is no significant effect between innovative intelligence and competitive advantage in the manufacturing industry.

2. Review of Related Literature

Conceptual Review

Concept of Competitive Intelligence

Competitive intelligence signifies having knowledge and foreknowledge of the whole business environment that may result in effective decision-making (Sharp, 2009). Competitive intelligence is a process in which an organization collects information about competitors and the competitive environment to be used in planning and decision makings with the aim of performance improvement (Wright, Fleisher & Madden (2008). According to Kotler & Keller (2009), competitive intelligence is a process that improves planning and decision-making through gaining information from competitors and the industrial environment.

According to Oladimeji, Eze, and Akanni (2019), knowledge management (Gross, 2000) is a helpful catalyst for determining the information that is required and delivering critical initiatives for strategic and tactical decisions across the functional domains of an organization. To support senior management in making strategic decisions for a business, competitive intelligence is the process of defining, gathering, evaluating, and disseminating data about products, customers, competitors, and any other part of the market (Ezigbo and Uduji 2013). Competitive intelligence is a process by which a business gathers data on its rivals as well as the competitive landscape to be used in decision-making with the goal of performance improvement, according to Wright et al. (2008), as cited in Muritala & Ajetunobi (2019). Actionable intelligence is created and released through planning, lawful and ethical information collection in a competitive environment, information processing, and analysis to help decision-making and create competitive advantage in an organization (Pellissier and Nenzhelele, 2013). In order to help managers make better decisions, this intelligence presents

a thorough overview of the nature of competition in the market both now and in the future (Muritala, et al, 2019).

Dimensions of Competitive Intelligence Practices

There are various measures of competitive intelligence practices but this study adopted strategic intelligence and innovative intelligence, as discussed below;

Strategic Intelligence and Competitive Advantage

The concept of intelligence lies in the attempt of individuals to control problem-solving in the environment in which the organization works and the ability of individuals to use their experience to create concepts in theory and practice to define the relationship, whether it is apparent or hidden (Al-Ghanudi, 2017). Others argue that strategic intelligence relates to focusing on products today and shortly, to provide information to stakeholders in the planning process to take them into account about existing products to make the appropriate change and take these things into the organization's strategies (Duczynski & Knight, 2016).

Strategic intelligence is what the company needs to know in the current business environment to determine what operations and procedures it should do today and what changes it wants to make in the future (Tham & Kim, 2002). Strategic intelligence is also seen as consisting of four basic elements that are knowledge management, as well as foresight in addition to reference comparison, and finally, economic intelligence all of the above contribute to strategic decision-making in organizations working in the business sector (Muhammad, Al-Tayyib & Abdali, 2012).

Strategic intelligence is seen as the ability to form an image in which to view the environment in which the organization operates remotely, by looking at the information and data available in this environment (Alnoukari & Hanano, 2017). Hollensen (2010) believes that strategic intelligence directs the organization toward looking to the future, whether it is far or near, and helps it in making important decisions that are based on knowledge, and at the same time are concerned with the future conditions and conditions of the organization (Knosch, 2015).

Strategic intelligence includes collecting, and analyzing the environmental data and distributing this information on the strategy of the organizations (Kuosa, 2011). The strategic intelligence includes rules, functional affairs and tax, political and economic extent, and human

resources categories of the organizations. In order words, strategic intelligence considers and analyzes the social, political and economic behaviour of the organizations. Strategic intelligence is evaluated with the factors such as the strategy's vision, human and social resources, and the economic and political issues of the organizations (Gabber, 2007).

One of the main reasons behind the importance of organizational transformation and recyclability is to increase the intelligence of the organization Kifordu (2022). Organizational intelligence refers to a set of rules with added value derived from the intangible assets of the organization, which together represent the knowledge that consists of employees, management, stakeholders and clients (Liebowitz, 2006). To increase the intelligence in the organization, you must first build a hierarchy of components that contribute to the intelligence of the organization. Benefits that can be obtained from the organization's use of intangible assets, which have been mentioned previously, show a new type of intelligence that helps the organization in the process of organizational transformation of the continuity of its presence within the markets, where intelligence can be classified according to the view of Liebowitz (2006), into several types with the emergence of developments modern technology and the use of technologies to do business instead of the human element, these have increased organizational competitive advantage.

Innovative Intelligence and Competitive Advantage

"A new or significantly improved product (item or service), procedure, marketing strategy, or organizational strategy that is applied in business operations, workplace structure, or corporate communication is referred to as an innovation (OECD, 2005). Process innovation has been characterized as the production and use of novel techniques and concepts in manufacturing firms. Process innovation is a subset of systems integration, which is the advancement of something like a firm's production processes (Frishammar & Hörte, 2013). This entails a variety of diverse activities, including the adoption of new management techniques, the introduction of technology, and adjustments to the production process (Reichstein & Salter, 2006). The firm's capacity for process innovation can be defined as its capacity to obtain, absorb, convert, and employ technically resources required, practices, and knowledge. Businesses that quickly and effectively create innovative process technologies get an advantage over its rivals, for instance, by being shielded from imitation (Pisano, 1997).

Four distinct advantages of successful process development activities are listed by Wheelwright (2010). The benefits of the business's market position, which allows it to define the industry practice and serve as a deterrent to rivals, come first. The second advantage is the utilization of new technology, which allows the company to overcome its earlier shortcomings and reach its full potential. A simple way to describe it is to use resources. The third benefit, organization renewal and change, stresses organizational benefits. Positive process outcomes showcase the organization's dedication, creativity, and innovation as a whole. It also promotes innovative thinking and increases a company's ability to recruit top people. The opportunity to postpone development in order to gather more detailed information and entrepreneurship education before delivering, which offers you a strategic advantage, is a fourth benefit, Kifordu et'al. (2017).

Conception of Competitive Benefit

The idea of competitive benefit is due to profitability as a long-term concept, that is, there is continuity in achieving profits, and the performance of the organization is above average in the industry to which it belongs, and this is sufficient to be evidence of its superiority and sustainability, therefore the concept of sustainability and excellence is always linked to long-term, as for time Its indication of sustainability and competitive advantage, so if the organization seeks to maintain its position and multiply efforts to continue to excel and progress, it maintains its competitive advantage among organizations in the same sector (Al-Alaq, 2016). Some writers believe that the progress and failure of some organizations depend on competition, and setting the competitive strategies of the organization that lead it to dominate the market, as it works diligently to increase its market share (Clar et al., 2008).

Some explain the competitive advantage as a type of competence that the organization performs to distinguish from other organizations, which leads to providing a new addition to customers in a way that leads to a difference from others or competing organizations in the same sector and this leads to access to excellence in these markets (Shafiq, 2010). To conduct this study, the four main dimensions were approved, namely:

1. **Quality:** quality is one of the main factors that organizations use to confront competitors, through the process of choosing new ways to do business and using new communication methods, modern and advanced technologies, attracting people with

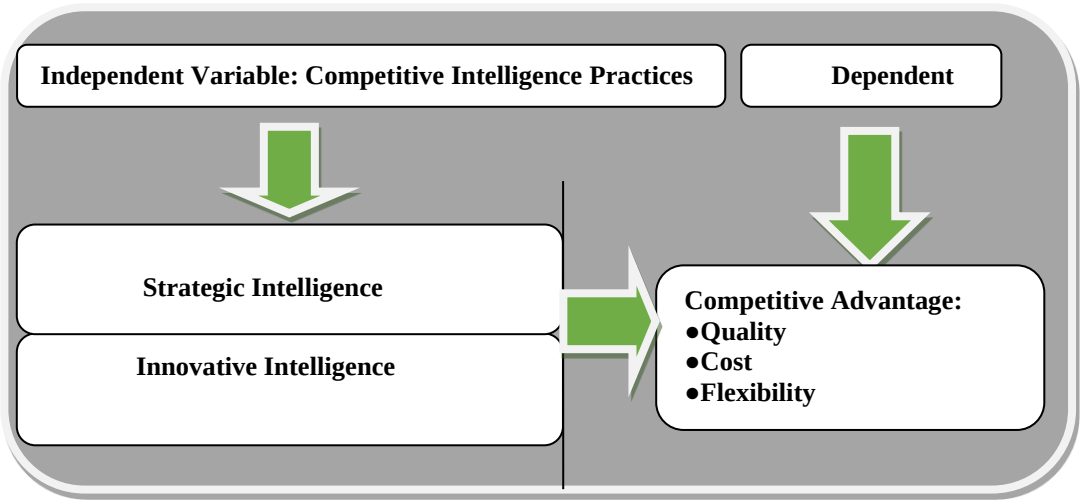
expertise, and using modern methods such as advanced software and new methods in dealing with customers (Al-Awawdeh, 2019).

2. **Cost:** cost is an important factor in achieving competitive advantage for organizations as it always seeks to reduce costs to the extent that does not affect the nature of the product and the goal of its production (Aghajani, & Loudon, 2012).
3. **Flexibility:** flexibility is seen as the ability of the organization to respond to the desires and needs of customers through its ability to change the procedures and processes it has, as well as the commitment to achieve the desires and requests of customers by making changes that require and warrant to be made as well as providing the best products, whether goods or services with appropriate quality and cost (Al-Lami, 2008).
4. **Delivery:** time is very important to customers, as it is considered an important component of the competitive advantage that all organizations are trying to reach, so it is drawn into the strategic policies of organizations by reducing the period from the customer's request to the delivery gene, and that is as quickly as possible and that requires reducing the product's life cycle to the lowest degree possible while maintaining the characteristics of the product and its performance (Falaq, 2016).

Conceptual Model of the Study

The conceptual model of the study incorporated the independent and dependent variables of the study, which is illustrated with the aid of the diagram below;

Figure 2.1: Conceptual Framework



Source: Researcher Conceptual Model, 2022.

Theoretical Review

Open System Theory

This study is anchored on open systems theory which was initially developed by Karl Ludwig von Bertanlanffy (1956), a biologist. It defines the concept of a system as one, where "all systems are characterized by a combination of parts whose relations make them interdependent". In other words, it explains that organizations are strongly influenced by their environment (Muritala and Ajetunmobi, 2019). About competitive intelligence in the manufacturing industry, Open system theory, therefore, explains how organizations interact with their environment through competitive intelligence to collect data about stakeholders in the manufacturing industry in Nigeria (i.e. competitors, customers, suppliers, government etc.) and analyze such data to improve products and services that meet or even exceed customers' expectations. The open-systems theory assumes that all firms involve multiple subsystems, each of which obtains inputs from other subsystems and turns them into outputs for use by other subsystems (Muritala, et al, 2019).

Presently, organizations exist in competitive global environments where there is strong competition for resources, markets, skilled employees, new technologies and innovations. At the same time, many organizations confront environments that are unpredictable and complex. Organizational environments are multifaceted and can be categorized in the following way: the competitors, customers, the technological sector, the regulatory sector, the economic sector, and the socio-cultural sector. Therefore, the relevance of this theory to the study is that organizations are highly engaged with their environments. Organizations import capability from the environment. This capability can be achieved by obtaining the information needed to transform that capability into desired outputs through competitive intelligence. The implication here is that this will enable manufacturing companies in Nigeria to develop characteristics and perform processes that will allow them to adapt to constraints, threats, and opportunities.

Competitive intelligent Theory

The theory underpinning this study is competitive intelligence (CI) theory. The theory postulates that CI enhances firms' performance thereby resulting in competitive advantage. Manufacturing firms need to learn, understand and foster interrelationships in accessing existing facts thus, guiding actions towards a desired goal (Oladimeji, Eze and Akanni, 2019). Marko's (2009) postulation underpins this study in terms of the application of competitive

intelligence as well as the initiatives to measure, manage, and improve the performance of enterprises, which in turn results in competitive advantage. For this reason, manufacturing enterprises access the required information or data to make a wide range of informed business decisions.

In their 2017 study, Koseoglu, Karayormuk, Parnelle, and Menefe utilized the CI theoretical framework to support evidence-based SMEs performance in Turkey and discovered that the implementation of CI is not affected by the industry or the number of employees. However, CI actions are carried out from a tactical or strategic perspective. Gaspareniene, Rita, and Vaidas (2013) equally adopted the CI theory to support CI in business operations and discovered that the major characteristics of CI are characterized as access to funds and knowledge of competitors' trade secrets. According to Marko (2009), the assessment of performance indicators, business knowledge discovery, strategic reporting, collaboration, innovation management, learning management, and regulatory compliance are all areas of CI in enterprise management.

By implication, the theory helps to simplify information discovery and analysis; making it possible for decision-makers at all levels to easily access, understand, analyze, collaborate, innovate and socially network towards enhancing enterprises' performance, thereby resulting in competitive advantage.

Empirical Review

Benedicta, (2021) presented an insight on the relationship between competitive intelligence and competitive advantage in the manufacturing industry, targeting f three manufacturing firms (Wonder Pack Limited, Whictech Aluminium Limited and Flight Aluminium Plc) in Asaba, Delta State, Nigeria. Adapting three measures of competitive intelligence in this study has established the influence of Strategic Intelligence (SI), Innovative Intelligence (II) and Human Intelligence Network (HIN) in enhancing Competitive Advantage (CA) in the manufacturing industry. The study targeted a sample of 153 respondents out of which 129 respondents gave their responses giving a response rate of 84%. Thus, the sample to be used for the study was a total of one hundred and twenty-nine (129) respondents from staff in three manufacturing firms (Wonder Pack Limited, Whictech Aluminium Limited and Flight Aluminium Plc) in Asaba, Delta State, Nigeria. The data presented and analyzed in this study are grouped into categories. The first is the descriptive statistics to describe the trend of movement of the data and the

correlation matrix was used to ascertain the kind of relationship that exists between the independent and dependent variables. The testing of hypotheses formulated for the study was done using multiple regression analysis with the aid of SPSS version 23. The results of the statistical analysis show that Strategic Intelligence (SI) and Innovative Intelligence (II) were significant in enhancing Competitive Advantage (CA) in the manufacturing industry while Human Intelligence Network (HIN) was insignificant in enhancing Competitive Advantage (CA) in the manufacturing industry. The results of the study showed that higher levels of competitive advantage depend on competitive intelligence. The study concluded that there is a significant relationship between competitive intelligence and competitive advantage in the manufacturing industry. Based on the analysis and findings, the following recommendations are made: There should be adequate investment in the competitive intelligence process, facilities, and activities by the manufacturing firm to be innovative, in their product, services and competitive dispositions. In implementing competitive intelligence in an organization, employees should be equipped with the knowledge, skill and technical know-how of handling intelligence products.

Advanced analytics and organisation effectiveness in small and medium-sized businesses in southeast Nigeria were assessed by Irenaus, Ikechukwu, and Ndubuisi in 2021. The specific goals were ever to examine the relationship between market intelligence and customer base in small and medium enterprises in the south east of Nigeria, to ascertain the relationship between technology intelligence and returns on investment, and to ascertain the relationship between strategic collaborations and return on sales. In this study, a survey research methodology has been used. The five southeastern states of Nigeria's population of 9731 registered small and medium-sized business (SME) owners served as that of the study's subject. Using the statistical formula proposed by Freund and Williams for calculating sample size, the community was sampled down to 328. The sample size was allocated among the five states in Nigeria's southeast using Bowley's proportionate allocation formula. The information from the participants was gathered using a standardized questionnaire. Out from the 328 questionnaires that were sampled, 318 were returned. The collected data were examined and displayed as tables and percentages. Using the Pearson product-moment correlation coefficient, the hypothesis was tested. According to the study's findings ($r = 0.530$, $p = 0.00$ 0.05, $n = 318$), there is a strong positive link between technology awareness and the return on investment in SMEs in south-east Nigeria; Business alliances and returns on sales in SMEs in southeast Nigeria have a significant positive link ($r = 0.308$, $p = 0.00$ 0.05, $n = 318$), while marketing

research and market share have a positive significant relationship (r = 0.345, p = 0.00 0.05, n = 318). It was determined that organizational performance in SMEs in southeast Nigeria used to have a favourable link with competitive intelligence. The study advocated, among other things, that businesses, even SMEs, instil in all of their employees the underlying values of comprehending and meeting consumer wants as well as the need of consistently searching for new business prospects.

3. Methodology

The descriptive survey design was employed. The population of 293 respondents was identified while a sample size of 146 using Kothari,(2014) sample size formula. simple random technique because simple random sampling is a method used to cull a smaller sample size from a larger population and use it to research and make generalizations about the larger group. A structured questionnaire with close-ended questions was used. A reliability coefficient using Crombach alpha on the instruments is greater than 0.6 at 0.887 making the instrument reliable. Descriptive statistics using SPSS version 23 was also used for analysis and interpretation.

Correlation Matrix

Correlation analysis is used to examine the relationship between dependent and independent variables. It measures the linear association between two variables. Its values lie between -1 and +1. +1 indicates that there is a positive linear sense between two variables and are perfectly related while -1 indicates a negative linear sense between two variables.

Table 1: Correlation output of the Independent and Dependent Variables

Correlations

		CA	SI	II	HI
Pearson Correlation	CA	1.000			
	SI	.227	1.000		
	II	.591	.382	1.000	
					1.000

Source: SPSS Version 23 Output, 2022.

Strategic Intelligence (SI) is strongly positively correlated with Competitive Advantage (CA) with a coefficient of correlation of 0.227. The correlation coefficient (r) of 0.227 for Strategic Intelligence (SI), indicates a strong positive correlation with Competitive Advantage (CA) because the correlation coefficient (r) of 0.227 is greater than 0.05.

Innovative Intelligence (II) is strongly positively correlated with Competitive Advantage (CA) with a coefficient of correlation of 0.591. The correlation coefficient (r) of 0.591 for Innovative Intelligence (II), indicates a strong positive correlation with Competitive Advantage (CA) because the correlation coefficient (r) of 0.591 is greater than 0.05.

4. Discussion of Findings

Table 2: Multiple Regression Analysis of Measures of Competitive Intelligence and Competitive Advantage of Selected Aluminum Firms

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.827	1.644		4.153	.000
	SI	.774	.183	.772	4.230	.001
	II	.515	.098	.509	5.255	.000

a. Dependent Variable: CA

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.926[a]	.857	.863	1.609	1.445

a. Predictors: (Constant), SI, II,
b. Dependent Variable: CA

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	176.994	5	35.399	13.666	.000[b]
	Residual	274.569	106	2.590		
	Total	451.563	111			

a. Dependent Variable: CA
b. Predictors: (Constant), SI, II

Source: SPSS Output, 2022.

The results from the multiple regression analysis recorded the effect of competitive intelligence on the organizational performance of selected Aluminum Firms in Nigeria. The two variables to measure competitive intelligence, namely; [Strategic Intelligence (SI), and Innovative Intelligence), exhibited a statistically significant positive effect on the Competitive Advantage (CA) of selected firms, in Nigeria.

The Multiple Regression results in Table 2 above, the regression coefficient of Strategic Intelligence (SI) is 0.772 with a t-value of 4.230 and the associated p-value (sig. value) is 0.001. This suggests that Strategic Intelligence (SI) has a positive effect on Competitive Advantage (CA). This means that the effect is significant given the fact that the p-value of 0.001 is lesser than 0.05 (5%) level significance, thus the study rejects the null hypothesis which says that there is no significant relationship between Strategic Intelligence (SI) and Competitive Advantage (CA) and accepts the alternate which says otherwise. The regression coefficient of Strategic Intelligence (SI) is 0.772; meaning that Strategic Intelligence (SI) has a positive trend with Competitive Advantage (CA). One per cent (1%) movement in Strategic Intelligence (SI) would lead to a 77.2% increase in Competitive Advantage (CA). Strategic Intelligence (SI) has a significant influence on Competitive Advantage (CA) in selected Aluminum firms. These findings are in line with the findings of Benedicta, (2021), Irenaus, Ikechukwu and Ndubuisi (2021) and Khaled and Shaker (2020).

The Multiple Regression result in Table 2 above, the regression coefficient of Innovative Intelligence (II) is 0.509 with a t-value of 5.255 and the associated p-value (sig. value) is 0.000. This suggests that Innovative Intelligence (II) has a positive effect on Competitive Advantage (CA). Meaning that the effect is significant given the fact that the p-value of 0.001 is lesser than the 0.05 (5%) level significance. The regression coefficient of Innovative Intelligence (II) is 0.509, meaning that Innovative Intelligence (II) has a positive trend with Competitive Advantage (CA). One per cent (1%) movement in Innovative Intelligence (II) would lead to a

50.9% increase in Competitive Advantage (CA). Innovative Intelligence (II) has a significant influence on Competitive Advantage (CA) in selected Aluminum firms. These findings are in line with the findings of Benedicta, (2021) and Irenaus, Ikechukwu and Ndubuisi (2021)

Also, Table 2, which is the model summary table shows the correlation coefficient (R) of the regression is 0.926(93%) which indicates a very strong positive relationship between the dependent variable [Competitive Advantage (CA)] and the independent variables [Strategic Intelligence (SI) and Innovative Intelligence)]. The coefficient of determination (R^2) is 86% (0.857) showing that 86% of the variation in the dependent variable [Competitive Advantage (CA)] has been explained by the independent variables [Strategic Intelligence (SI) and Innovative Intelligence,]. While 14% remain unexplained in the model. An R^2 value of 86% showed that the strong positive relationship is further confirmed. The adjusted R^2 measures the goodness or fit of the model. This shows the goodness of fit of the model and also explains the dependent variable about the independent variables in 86ways (0.863). The 14% left is known as the error term and other variables outside the model. From the above, there is conclusive evidence of serial or autocorrelation since the Durbin Watson calculated value of 1.445 is less than "2".

Lastly, from table 4.4.1, the Anova table revealed that the significance F-change value (13.666) is estimated overall p-value of 0.000 revealing that all the independent variables [Strategic Intelligence (SI), Innovative Intelligence and (II), Human Intelligence (HI),] jointly influence the dependent variable [Competitive Advantage (CA)]. This indicates that the model is fit. This falls below the 5% generally acceptable level of significance.

4. Conclusion and Recommendations

From the findings of the study, it can be concluded that overall the competitive intelligence practices had a positive significant effect on the competitive advantage in selected Aluminum Firms in Delta State, Nigeria. Specifically, Strategic Intelligence (SI) has a significant positive effect on Competitive Advantage (CA). This study concluded that strategic intelligence is an essential strategy for firms to use in widening the market, hence, resulting in a competitive advantage. Innovative Intelligence (II) has a significant positive relationship with Competitive Advantage (CA). Similarly, innovative intelligence strategy positively enhances the competitive advantage of the firms. This is achieved through the introduction of the firm's product, thereby expanding its market. The study also concluded that market intelligence

contributed positively to the overall competitive advantage of the firm. This is because the adoption of this strategy enabled firms to lower their transaction costs and increase their market power.

Therefore, it is suggested that;

1. There should be adequate investment in the competitive intelligence process, facilities, and activities by the manufacturing firm to be innovative, in their product, services and competitive dispositions.

2. In implementing competitive intelligence in an organization, employees should be equipped with the knowledge, skill and technical know-how of handling intelligence product

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